DEALING WITH CHINA

AN INSIDER UNMASKS THE NEW ECONOMIC SUPERPOWER

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CHAPTER FOURTEEN

A Global Reckoning

We had decided to focus the fourth meeting of the Strategic Economic Dialogue on sustainable economic growth, and when we met in June 2008, the theme could hardly have been more appropriate. Oil prices were soaring. At $138 per barrel, crude sold for twice what it had a year earlier. Rising fuel and fertilizer costs, combined with local droughts, had hiked the tab for food, especially staples, while shortages sparked deadly riots in some poor parts of the world. The price spikes reflected in part the ever-greater demands that the rapid growth of developing countries was placing on scarce natural resources. China's success alone had lifted hundreds of millions out of poverty. Now the country's challenge was to maintain that progress without upsetting its domestic stability or causing a global calamity.

By the time we gathered at the U.S. Naval Academy in Annapolis, Maryland, for SED IV, the United States was being buffeted by the deepening financial crisis that would engulf the financial world. Much has been written about this dark period in our nation's recent history. Less well known to Americans is how profoundly the crisis would shape Chinese attitudes and policies. It exposed China's overdependence on exports and confirmed the need to rebalance its economy toward domestic consumption. Measures that China would take to withstand the worst of the crisis—particularly a massive fiscal spending program—would halt needed structural reforms and leave the country with a costly legacy of bad debts that it continues to suffer from today. China would play a stalwart, responsible role in helping us contend with rapidly multiplying problems. But the nature of the relationship between our two countries began to shift noticeably as the U.S.'s troubles brought doubt and discredit to our system in some quarters and boosted China's self-confidence.

This was brought home clearly to me along the sidelines of the SED, during a break in the proceedings, when I was pulled aside by Wang Qishan, who had moved from his post as mayor of Beijing to succeed Wu Yi as my SED counterpart. Qishan, who had been named vice premier in March, wanted me to know that the financial crisis in the U.S. had affected the way he and others in the senior ranks of the Party saw us.

"You were my teacher, but now here I am in my teacher's domain, and look at your system, Hank. We aren't sure we should be learning from you anymore."

The crisis was a humbling experience, and this was one of its most humbling moments.

I'd known Wang Qishan for nearly 15 years now and had worked closely with him on several pressure-packed occasions. He'd become a friend and confidant. He was charming and cheerful, and though he could be quite diplomatic, he was generally direct and no-nonsense with me. I appreciated that quality, and his comments, earnest and animated, did not offend me in the slightest. Instead, coming from a man who had spent the past three decades pushing for reforms at home, they told me how difficult the climate for such change had become in China. The Western financial crisis had toughened internal resistance to opening the country's capital markets.

"We've made plenty of mistakes, but you can learn from them," I responded. Our problems, I said, shouldn't lead China to conclude that it didn't need to continue to develop open, competitive markets. In any case, I added, "we are determined to do what it takes to fix our markets and protect our economy."

Still, there could be little doubt our system was under great—and increasing—stress. In March the crisis had claimed its most prominent U.S. victim to date in the investment bank Bear Stearns, an outsize player in the mortgage-backed securities markets. As housing unraveled, Bear lost the confidence of the market and fell victim to an all-out run. It would have failed had the Treasury, the Federal Reserve, and the Federal Reserve Bank of New York, working together over a frenzied mid-March weekend, not found a buyer for it in JPMorgan Chase and had the Federal Reserve not provided financial assistance.

As I have related in *On the Brink*, my previously published account of the financial crisis, Bear's collapse sent a shock wave around the world. The fallout was felt deeply in China, whose state-owned investment company, CITIC Securities, had previously agreed to buy a 6 percent stake in Bear for $1 billion; it hastily retreated as Bear fell apart. Separately, China's sovereign wealth fund, China Investment Corporation (CIC), had made high-profile investments in 2007 in Blackstone Group and Morgan Stanley, giving the country's leaders a keen interest in Wall Street's imperiled health. Moreover, China was beginning to feel the reverberations of the crisis. Though the country's banks had been spared, the downdraft in global stocks had contributed to a 45 percent drop in the Shanghai Stock Exchange Composite Index since its October 2007 peak. GDP growth was moderating, and the slowdown in economic activity in the U.S. and elsewhere threatened to reduce demand for the country's vital exports.

I had gotten a taste of China's concerns firsthand in April, when I had been in Beijing to plan for SED IV. Hu Jintao, Wen Jiabao, and Wang Qishan had all peppered me with questions about the U.S. economy, the health of our banks, and their country's money-losing investments in Morgan Stanley and Blackstone. I assured them that the U.S. responses had been swift. The Federal Reserve was providing liquidity to stressed financial markets, while the $150 billion stimulus program I had negotiated with the Democratic-controlled Congress on behalf of the Bush administration would soon put money in the hands of consumers. I noted, too, that many forecasters expected the economy to rebound in the second half.

How wrong they were!

The Chinese appreciated how openly we were communicating with them. After the Bear Stearns rescue, Neel Kashkari, a senior Treasury adviser, had led a call with officials from the Chinese Ministry of Finance. We would increase the frequency and depth of contact as the crisis escalated over the coming months. The broad-based constant communications fostered by the SED, coupled with my long-standing relationships with Wang and Zhou Xiaochuan, would prove enormously valuable in helping us manage the economic relationship with the second-biggest foreign investor in U.S. securities during this fraught period.

I had let the Chinese know during my April visit that Treasury was on high alert for more problems. It turned out, of course, that we were right to be vigilant, as one financial institution after another felt the wrath of investors suddenly worried about toxic assets, weak balance sheets, and the banks' hesitance to lend to one another. I stressed the need for more capital and greater liquidity cushions to Wall Street and banking CEOs, repeatedly encouraging Lehman Brothers CEO Richard Fuld through the spring and summer of 2008 to gird his firm for the tough times ahead by finding a deep-pocketed strategic investor or, eventually, a merger partner.

Bad news accumulated. As U.S. share prices drifted down from their record highs in October 2007, the economy continued to lose steam and unemployment climbed. At 5.6 percent in June, it was up a full percentage point from the previous year. Though checks from the federal stimulus reached U.S. citizens in record time, they barely covered the higher cost of gasoline.

China-bashing grew louder through the presidential primaries. In May the Democratic rivals, Senators Hillary Clinton and Barack Obama, endorsed legislation that would have allowed punitive duties on Chinese goods in response to currency manipulation. I spent hours on Capitol Hill with Al Holmer, Treasury's special envoy for China and the SED, trying to deflect such knee-jerk protectionism. We pointed to the progress we had made on currency valuation—the renminbi was up nearly 14 percent since July 2005—and noted that the SED was yielding tangible results, from the open-skies agreement to enhanced product safety, that we risked losing if we took a punitive turn.

I had cautioned Wang Qishan shortly before his arrival in the States in June that the mood in Congress had grown far darker and more volatile than it had been when Wu Yi had visited the previous spring. If Democrats pushed anti-China legislation, Republicans wouldn't vote against it.

"Anything could set off a cascade," I warned.

Still, I figured that if anybody in China had the charm to soothe irritated legislators, it was the vice premier. Wang Qishan was as different as yin and yang from Wu Yi, a tenacious negotiator who stuck to debating points and stayed on message. Wang Qishan held just as firmly to his country's positions, but his approach was at once expansive and subtle, intellectual but leavened by a dry sense of humor. A real people person, he welcomed almost any meeting. When asked tough questions, he relished giving as good as he got.

Wang Qishan was scheduled to meet the Capitol Hill leadership, but I'd also invited a handful of senators and members of the House to meet China's new SED leadership team for breakfast in Treasury's Cash Room. It was a magnificent, gold-trimmed palazzo-style space on the second floor of the Treasury building, where the government had once transacted such financial business as redeeming gold and silver certificates and supplying local commercial banks with coins and currency from the Treasury's vaults. Seven lawmakers attended, including Senators Norm Coleman (R-MN) and Maria Cantwell (D-WA) and House members Sandy Levin (D-MI) and Don Manzullo (R-IL). At one point, one of the lawmakers challenged the vice premier on China's lack of commitment to combating climate change.

Wang Qishan surveyed the table for a moment as if he were thinking through his response or wondering whether the guests were up to following him. Then he headed off on a lengthy discourse that touched on economics, social policy, and personal responsibility. China might have the third-biggest economy in the world, he pointed out, but it was still a poor country; by GDP per person it was ranked 125th—below Namibia. This was a standard Chinese talking point, but Wang Qishan turned it in a less familiar way.

On the one hand, he noted, some in the U.S. were criticizing China for wasting resources, damaging the environment, and contributing to global warming. On the other hand, many claimed the Chinese were hurting the U.S. by exporting too cheaply, and they were pushing China to rebalance its economy to encourage even more domestic consumption. How was China to pursue both increased consumption *and* sustainability?

"Here we are," he said. "It's a hot summer day, but it's cold in your offices because you've got the air-conditioning on. In the winter you've got the heat blasting out. For exercise you work out in air-conditioned gyms, then take hot showers, then get into air-conditioned cars. This is America! In China, we don't live that way. We can't afford to. I tell my colleagues: conservation with personal conduct! For exercise, ride your bikes to and from work."

It was quite a show. What had been meant to be a Q&A session turned into a tour de force disquisition that laid out the paradox of sustainable development for his country without a hint of the reflexive defensiveness that often colored, and weakened, Chinese arguments. I knew that Wang Qishan, as a reformer and conservationist (he had served with me on the Nature Conservancy's Asia-Pacific Council), was committed to finding solutions. In pointing out the inherent difficulties of China's situation, he was not so much lecturing U.S. lawmakers as trying to illuminate for them a thorny problem, just as he had for me a few months earlier when we met in Beijing to discuss the energy and environmental initiative of the SED.

"The world simply does not have enough resources to support another billion Chinese living the Western lifestyle," he had noted. "We have to find a new model."

I frankly thought he was right. As he spoke, I remembered that long-ago February meeting at Zhongnanhai during which I'd spied Zhu Rongji's long underwear sticking out under his pant cuffs—a precaution against the cold that our pampered leaders would never have to take.

For the June 17 and 18 SED IV, we met on the pristine grounds of the U.S. Naval Academy, which was established in 1845 where the Severn River meets the Chesapeake Bay in Annapolis, Maryland, about a half hour east of Washington. Its distance from the District was one of its attractions; we wanted to keep members of our delegation away from their offices and concentrated on SED business. But even for me, it wasn't easy to focus. A little more than a week before the meetings began, Lehman Brothers had released second-quarter earnings in a vain attempt to reassure investors. Its shares kept falling, and behind the scenes, no buyers or major strategic investors had emerged. My team at Treasury and the staff at the Fed continued to look for ways to prevent a Lehman failure. At the same time, we were becoming preoccupied with the mortgage titans Fannie Mae and Freddie Mac, which had come under intense market pressure as legislation to reform them stalled in Congress.

Just about every break was consumed with phone calls, but I made a point of not ducking out of the SED meetings and asked my fellow Cabinet members to do the same. At one point I had to negotiate with the White

House about who would attend an emergency meeting President Bush had called to deal with widespread flooding in the Midwest that demanded the administration's attention. The president's meeting was vital, but I was determined to respect the SED process as much as the Chinese did. I believed that our dedication to the SED would pay dividends.

I tried to address the fragile state of the markets head-on in my SED remarks. I explained the Bush administration's efforts to stabilize the financial system and the economy and noted that flexible, market-based prices serve as automatic stabilizers in the ups and downs of economic cycles. I also made the point that the market turmoil was no excuse for halting financial sector reform and development in China.

Most important, we signed the Ten-Year Framework for Cooperation on Energy and Environment, committing the U.S. and China to work together for the next decade on clean, sustainable energy development. The agreement, which we had begun working on during SED III, increased the likelihood that our efforts would carry over to the next administration.

Currency issues continued to give me grief. In September 2007 Dominique Strauss-Kahn, the former French Finance minister and presidential hopeful, had become head of the IMF and sought our backing to make some much-needed changes, including a plan to sell some of the Fund's gold reserves. I made clear that our support was contingent upon the IMF's citing China for currency manipulation. The undervalued renminbi was a global concern, and the IMF was the proper forum to address it. Frankly, I was also tired of the U.S.'s always having to lead on this issue.

DSK agreed that the IMF would cite China, but afterward he indulged in some backdoor maneuvering that sparked the protestations of my friend Zhou Xiaochuan, China's central bank chief. Zhou came up to me during one of the breaks in Annapolis and said, "Hank, Strauss-Kahn says he doesn't want to cite us. He wants to give us more time to make progress, but you are insisting that he act now. If the IMF acts now, it will make it harder for us to move the currency because our people will think we're bowing to outside pressure."

China was eager to avoid public criticism from a credible and independent multilateral institution, but as always, Zhou was measured and reasonable. I was a bit irritated that DSK had used me, albeit accurately, as his excuse for getting tough with China, but I didn't let on to my friend.

"The IMF needs to do its job," I told Zhou. "And if you show more flexibility with your currency, there will be no need to cite China."

Though I wished DSK had not told Zhou Xiaochuan about our agreement, I realized the Frenchman's transparency was just part of his pragmatic, straightforward nature. I always found him easy to deal with, and when he later was convinced by Zhou Xiaochuan that the Chinese needed more time, I just asked him to move as soon as reasonably possible.

As it happened, our world was about to change dramatically, and China's currency would soon become the least of our worries.

The financial crisis had deeply wounded Fannie Mae and Freddie Mac. These government-sponsored enterprises, or GSEs, owned or guaranteed $4.4 trillion in U.S. mortgages, including a big chunk of subprime loans. They were bloated, undercapitalized, poorly managed—and politically all but untouchable. Because they had been established and were regulated by the U.S. government, many investors assumed their securities were backed by the full faith and credit of the United States. They were not. Fannie and Freddie were shareholder-owned private corporations, but their perceived government backing gave them access to cheap funding and led them to take on enormous risk. I'd come to the Treasury Department determined to reform this untenable business model, which privatized profit while socializing risk. But lawmakers resisted changes; the two companies had wrapped themselves in the "American dream of home ownership" and were past masters of public relations and lobbying.

By early July Fannie Mae and Freddie Mac had come under intense pressure. We had to ensure that they got through the mortgage crisis without triggering a full-scale financial panic that could spread quickly across our borders. Many of the GSEs' biggest investors were foreign central banks. Of the $5.4 trillion in Fannie and Freddie securities outstanding, $1.7 trillion was held by foreigners.

On July 7 speculation that the two GSEs needed up to $75 billion in capital spurred investors to flee the stocks. Shares plunged again on July 9. Hoping to calm the markets, I stood on the steps of the Treasury Department on July 13 and announced that I would ask Congress to give me temporary emergency authority to increase Fannie's and Freddie's lines of credit with the Treasury and to allow us to buy equity in the GSEs if I deemed it necessary.

Two days later I was in the hot seat on Capitol Hill as members of the Senate Banking Committee pounded me over my request. I had to perform a delicate balancing act: convince skeptical lawmakers that the situation with Fannie and Freddie was so dire that it warranted government intervention without panicking nervous investors about the fragility of those institutions. Reaching for what I hoped would be a helpful analogy, I used words that made sense to me at the time but would come back to bite me.

"If you've got a squirt gun in your pocket, you may have to take it out," I said. "If you've got a bazooka and people know you've got it, you may not have to take it out."

Anyone listening to the rancorous Banking Committee response would have assumed that the GSEs, and their investors, might be abandoned by fed-up lawmakers. Worried foreign governments began calling for guidance, and I summoned David McCormick, the department's undersecretary for international affairs, to my office. A West Point graduate who had served in the first Gulf War, Dave had worked at the White House as deputy national security adviser for international economic affairs. I admired and trusted him and knew he could help me with a touchy undertaking.

We put together a list of the top 15 holders of GSE debt, and I asked Dave to work with me to reassure major foreign investors about our commitment to the agencies. This group included finance ministers and central bankers from countries like Brazil, Russia, Japan, and Kuwait. I would talk with finance ministers and central bank governors as needed, while Dave communicated with a range of government officials in many nations. One of the most important of Dave's group was Madam Hu Xiaolian, administrator of China's State Administration of Foreign Exchange, the investing arm of the central bank, which oversaw $1.8 trillion in foreign reserves. Just under $1.1 trillion were in U.S. Treasuries and agency paper. It was crucial that the countries hold on to their positions and not sell into an already weak market.

"Make sure they understand what we're doing," I said. "Let them know that, as much as possible, our government will stand behind Fannie and Freddie. Give them some confidence."

Dave kept in constant touch with the investors. He quickly discovered that although the technocrats in the ministries and central banks understood that the GSE paper they owned was only implicitly backed by the U.S. government, their bosses believed they owned the equivalent of Treasury bonds, but with higher yields. In some cases, these bosses didn't fully understand the difference between equity and debt, so when they saw the terrible headlines about GSE shares, they thought their investments were in trouble and pressured the technocrats to reduce their positions.

I called many government officials, including Wang Qishan and Zhou Xiaochuan, to reassure them.

"We're watching this carefully," Wang said. "We want to make sure you are going to protect our financial interests."

I tried to explain the contentious congressional debate to my Chinese friend. "This is political theater," I told him. "In the U.S. we always do what we need to do, and I am confident Congress is going to support Fannie and Freddie."

I only wish I'd been as confident as I sounded.

Congress finally granted Treasury 18-month emergency authority on July 30. In the first week of August, Fannie and Freddie announced awful second-quarter earnings. Combined, they had lost more than $3 billion. The calls with foreign investors became more frequent and urgent.

I decided that we had to be as open as possible in explaining the situation. David Loevinger, minister counselor for financial affairs at the U.S. Embassy in Beijing and Treasury's senior representative in China, launched a series of weekly conference calls with staffers from Treasury—and sometimes the Fed and the SEC—to post Chinese officials on any developments. The Chinese asked very pointed questions focused on protecting their assets. How could we make sure they weren't at risk? The Chinese assured us that they would not sell, but they would also not start buying again until they saw others buying as well.

On August 7 I flew to Beijing with my family for the Olympic Games, a commitment I'd made a year before that fortunately fit into a brief hiatus while the regulators evaluated the financial condition of Fannie and Freddie. Though the crisis at home was much on my mind and I had a number of official meetings, this was technically a vacation with Wendy, our children, Merritt and Amanda, and their families. I was not a part of the presidential delegation.

When we reached our hotel, the Westin Beijing Chaoyang, we found that Wendy and I had been given a suite, while Amanda, her husband, Josh, and our 14-month-old granddaughter, Willa, had been assigned to a smaller room. At Wendy's suggestion we decided, much to the consternation of the hotel's front desk, to switch rooms to give the kids more space. I didn't see what the fuss was at first, and then it dawned on me. I may have been on vacation, but to the Chinese it was business as usual, and our original room was no doubt equipped with listening devices. Once we switched, it was too late to bug our new room, because my Secret Service detachment was standing guard all of the time. Wendy and I had a good laugh at the thought of the Chinese listening to Amanda reading *Goodnight Moon* to Willa.

Wendy, the family, and I had fun watching the Olympic Games and seeing the sights—even though I gouged my head at the Great Wall when I neglected to duck for a too-low ceiling in one of the guard towers. I bled so heavily (and yelled so loudly) that the Chinese still remind me about it. But the whole time—watching the U.S. men's basketball team beat China, practicing tai chi in a park with my wife and the kids, giving interviews to the American press—I worried about the situation back home and found it increasingly hard to sleep. Just before I had left Washington, Ben Bernanke told me that his people at the Fed had found some troubling things as they inspected the GSEs' books. Ben said the review was only in the preliminary stage, and he didn't want to spoil my trip, but of course he had. I was itching to know more, but I didn't want to call him up and ask for the gory details, fearing the worst and not wanting the Chinese, listening in, to learn how bad the situation was.

While in Beijing, I received some disturbing news: I was told that Russian officials had made a top-level approach to the Chinese with the suggestion that together they might sell some of their GSE securities to force the U.S. to use its emergency authorities to support the companies. I didn't know how serious the Russians were about their proposal, which could have hurt the GSEs and the capital markets, but the thought that they might test us added to the restlessness of my sleepless nights. The Chinese had declined to go along with the plan and would show admirable resolve in cooperating with our government and in maintaining their holdings of U.S. securities throughout the crisis.

Most days I exercised in a nearby park, and one morning, I was walking briskly, mulling things over, when I stopped and pulled aside Taiya Smith. She was in Beijing negotiating with her Chinese counterparts for the December SED. "I've been thinking about Fannie and Freddie and the financial markets back home," I said. "As much as it kills me, I have to honestly say I'm not going to be able to focus on the SED. I need you to run the show and only come and get me if you've got a big problem."

I had complete confidence in Taiya, whose bright smile belied a steely determination and resourcefulness. She had worked as special assistant to Deputy Secretary of State Robert Zoellick as his policy adviser for Africa, Europe, and political/military affairs. She had been the State Department's point person on Darfur before that. I trusted her judgment and her ability to read the Chinese. Her job as SED coordinator could be painful and thankless: she had to organize the efforts of the entire U.S. government, managing Cabinet-level egos and occasionally explaining why some people's pet projects were not big priorities. She had to overcome similar challenges in China, where teamwork did not come naturally. In between SED sessions Taiya and her team spent weeks in China going back and forth among different Chinese ministries that didn't naturally work together. I kidded Taiya that she was not only running our interagency operations but those of the Chinese as well.

I returned to a full-blown crisis in Washington on August 15. That weekend, in an article titled "The Endgame Nears for Fannie and Freddie," *Barron's* predicted that the U.S. government would take over the GSEs and wipe out common shareholders. Their shares subsequently plunged to 18-year lows that Monday. The report was prescient. Examiners from the Federal Reserve and the Office of the Comptroller of the Currency, aided by outside advisers, had found huge unrecognized losses and poor-quality capital on the GSE books. With no access to the markets, the companies were doomed, and we had no choice but to take control of them, something I had not anticipated weeks earlier.

On Saturday, September 6, I took the unpleasant but necessary step of seizing Fannie and Freddie, replacing their CEOs, and putting them in conservatorship under the Federal Housing Finance Agency. The government would provide up to $100 billion to each company to backstop any capital shortfalls, and Treasury would set up new secured lending facilities for both agencies. Common shareholders would be hard-hit by the rescue, but bondholders were protected.

The following day, Sunday, I announced the actions publicly, taking care to explain why what we had done with these enormous but—to most Americans—obscure institutions was so important. I described conservatorship as a temporary "time-out" while the government decided what further steps to take. The failures of these companies, I said, would have affected "the ability of Americans to get home loans, auto loans, and other consumer credit and business finance...and would be harmful to economic growth and job creation."

I believed then—and continue to believe today—that the failure of the GSEs would have led to a global financial meltdown.

Later that day I got on the phone to walk Zhou Xiaochuan and Wang Qishan through our decision. From the start of the crisis, we had decided to be frank about any problems, and they had trusted us and helped to steady markets at a fraught time.

"I think we've put out the fire," I told Wang Qishan. "I believe this will stop the panic."

He assured me that the Chinese would continue to hold their positions and congratulated me on our moves, but he cautioned me: "I know you think this will end all of your problems, but it may not be over yet."

As we spoke, I reflected on how much Wang and I had reversed roles from a decade before, when Guangdong Enterprises ran aground. Like the GSEs, though on a smaller scale, Guangdong Enterprises had embraced an unsustainable business model in which investors thought they had Chinese government guarantees when they did not. In passing, I reminded the vice premier that Steve Shafran, who had led the Guangdong restructuring, was now a critical member of the team advising me at Treasury. Wang respected Steve enormously for his work and never failed to ask after him.

"Your investments are in good hands," I told Wang.

When I look back on that gloomy summer and fall, I recall few bright moments. One came in late August, as we prepared to seize control of the two GSEs, when Chinese activist Yang Jianli came to see me at Treasury with his wife and two young children. He wanted to thank me personally for helping to secure his release from China and return to the U.S. a year before. Though barred from China, he had remained active in human rights efforts, leading the Foundation for China in the 21st Century, a pro-democracy group he'd founded in California in 1990.

I didn't go into a lot of detail about my efforts on his behalf, simply crediting the SED for providing me with a vehicle for pressing for his release.

However, it turned out he had heard plenty—not about my jobs at Goldman Sachs or Treasury but about my work in conservation.

"I read about what you were doing in Yunnan when I was in prison," he said.

And in a gesture that struck me profoundly, Yang made a point of thanking me not just for his release but for the work we had been doing with the environment. Here was a prominent dissident thanking me for the same things, and in much the same way, as had the very leaders he protested against. His words drove home to me yet again how important it was to find common ground and identify issues that mattered to the Chinese. Showing my genuine concern for China, the well-being of its environment and its citizens, had made a big difference to people in very different walks of life there.

To my discomfort, markets weakened further even after we seized Fannie and Freddie. Unable to find new capital or a strategic partner, Lehman Brothers deteriorated sharply as nervous creditors cut their dealings with the strapped institution. Finally, after an emergency meeting in New York of the world's leading investment banks failed to devise a rescue, the storied bank, whose roots stretched back to 1847, filed for bankruptcy. Try as we could, without a buyer or a capital partner, we could find no government authority that would allow us to save an insolvent investment bank. That same weekend we learned that another major investment bank, Merrill Lynch, was also faltering. Worse, the gigantic insurer American International Group was in dire straits, weighed down by credit default swaps tied to bad mortgage investments.

Lehman's fall set off a near panic, and financial shares—led by AIG's—plunged on Monday, September 15. (Fortunately, Bank of America had agreed to acquire Merrill, averting an even bigger disaster than Lehman.) Funding sources began to dry up, hurting banks and big companies alike. Major industrial companies like Procter & Gamble and Coca-Cola began to have trouble selling commercial paper. Often bought by money funds looking for a little extra yield compared with government bills, commercial paper was a crucial short-term financing source for many companies.

A nonstop series of explosions kept detonating within the larger unfolding disaster. On Tuesday, September 16, we learned that AIG would need an $85 billion Fed loan *that day* to avoid bankruptcy. Lehman's assets had been frozen in London, causing hedge funds to pull back from dealing with even apparently healthy investment banks. A riled-up John Mack called me to report that short sellers were attacking Morgan Stanley, where he was chairman and CEO. A respected name and a stout balance sheet were no longer enough. Mack was desperate to raise capital for his firm, and he logically thought of China Investment Corporation, which managed a part of China's foreign reserves and had purchased 9.9 percent of Morgan Stanley in December 2007, after the Wall Street firm had posted its first quarterly loss ever. John knew I was close to Wang Qishan and asked me to see if I could talk to him and get the Chinese to increase their investment.

"All the signals we get are that they'd like some reassurance and encouragement from you," the Morgan Stanley CEO said.

I promised to do what I could.

The interconnectedness of markets caused problems to spread rapidly from one sector to another. The trouble with money market funds began when a few funds were hurt by their holdings in now worthless Lehman paper. Fear that they would "break the buck," or fail to pay investors 100 cents on the dollar, triggered a deluge of redemptions. This shrank their coffers, reducing the money available to invest in the commercial paper market, which soon froze up. Spooked investors shifted to safe Treasuries, creating such demand that banks and investors soon refused to lend government bonds to one another, slamming shut the doors of another crucial venue for short-term funds, the so-called Treasury repurchase market. Only an emergency guarantee the Treasury Department devised for the money market funds would prevent a catastrophic run that could take down industrial companies of all sizes and quickly spread the crisis from Wall Street to Main Street.

As all of this was unspooling, Dave McCormick rushed into my office to declare, "I've got really bad news. The Chinese are moving their money."

After one of the big money funds, the Reserve Primary Fund, had broken the buck, Dave had begun hearing from Wall Street sources that nervous Chinese banks were withdrawing large sums from the money market. We'd heard, too, that the Chinese were pulling back on secured overnight lending, afraid of counterparty risk. And they had begun shortening the maturities of their GSE holdings.

We didn't know quite what to make of this, though the implications were ominous, since the Chinese were such big investors. In my chats with Wang Qishan, he had emphasized that while China would not purchase more U.S. government and agency paper, it would also not be a seller. I asked Dave to find out what was going on. He called Chinese leaders, including Zhou Xiaochuan and Finance Minister Xie Xuren.

"You may not be giving the advice that they sell," he told Zhou, "but somewhere in the bureaucracy these decisions are being made."

Zhou said he was unaware of what Dave was describing but promised to find out. True to his word, Zhou called the next day to confirm the substance of the reports we'd gotten, but he assured Dave that none of the sales had been coordinated.

"People are making what they think are smart choices," Zhou said. "We're going to give some guidance particularly about the overnight lending and the pullback from the Reserve Fund."

Shortly afterward, nervous Chinese institutions reversed course. The irony was that Chinese banks were supposed to make independent decisions: that was what the reform and restructuring process had been about, after all. We didn't expect Zhou Xiaochuan to prevent the banks from taking measures to protect themselves, but he could point out the dangerous consequences of their actions. The truth was that the Chinese banks remained very much under the thumb of the State Council. Though they had public shareholders, they were owned by the state, and their CEOs ultimately took their orders from the government. As a result, the "guidance" given by the Chinese government stemmed some of the panic in the markets. And the financial world ought to be grateful for that.

On the evening of September 19, John Mack called me again to report that he had not made much progress with China Investment Corporation.

"The Chinese need to know that the U.S. government thinks it is important to find a solution," he said.

"I'll talk to Wang Qishan," I told him, adding that I was prepared to ask President Bush to contact President Hu if it would help. Morgan Stanley was much bigger than Lehman, and its failure would have brought down other institutions and might have caused the collapse of our entire financial system, triggering another Great Depression.

The next day I alerted the president to be ready in case he was needed to speak to President Hu. That would happen only if CIC appeared more interested in increasing its stake in Morgan Stanley. The approach would have to be careful and indirect, because the president couldn't very well ask a foreign government to invest in a U.S. company. But President Bush could thank Hu for his country's cooperation in helping us deal with problems in the capital markets to signal how important Morgan Stanley was to the financial system. My staff would make it clear to Hu's people that the thank-you concerned Morgan Stanley. President Bush asked me to work with National Security Adviser Steve Hadley on this.

That night I spoke to Wang Qishan. After the disagreement over the joint venture investment bank formed by Morgan Stanley and China Construction Bank in the 1990s, he and John Mack had become good friends, and he had a high regard for Morgan Stanley. But friendship went only so far. I concluded as we spoke that the Chinese were not quite as enthusiastic about investing as John Mack had hoped. As a matter of fact, Wang didn't seem very interested at all. It was clear he was concerned with the safety of any investment the Chinese might make. And because I couldn't give him the assurances I knew he was looking for, I moved on to the next topic. I knew there would be no need for President Bush to talk to Hu.

I wasn't surprised because I understood the Chinese concerns. They didn't want to lose any more money on Morgan Stanley. The stakes were simply too high. Our troubles had given new energy to Chinese opponents of reform, who were denouncing the U.S. and stoking nationalist sentiments. The government had been taking a public relations beating for months over its money-losing investments in Blackstone and Morgan Stanley, which were tracked meticulously every day by an army of online bloggers. If China had suffered losses on its vast holdings of Fannie or Freddie securities, there could have been a huge political problem and a loss of confidence in the government.

Morgan Stanley would end up finding a partner in a Japanese firm, Mitsubishi UFJ—which agreed to invest after some encouragement and assurances from the Treasury Department—and I certainly don't blame China for not wanting to risk putting good money after bad. Overall, its leaders were very supportive, despite frightening headlines, breathtaking market plunges, and the outright failures of major institutions. It was, as I've said, in their interest to stay the course. Though unnerved, they held firm—just as they had during the Asian financial crisis, when it was their region on the brink of collapse. Now it was the U.S. and Europe that were faltering, and China's strength of purpose and resolve would play a big role in helping the West survive and emerge from the worst of the crisis.

In my view, the relationships I had built in China, at Goldman and through the painstaking efforts of the SED, had paid off. True, I can't draw a straight line from the personal trust and frequent informal communications fostered by the SED discussions to China's restraint during the financial crisis, but there's not a doubt in my mind that there *was* a connection. This achievement may have fallen outside the list of deliverables, but its importance during a dire period for the United States is impossible to overstate.

Meanwhile, it had become clear to anyone with eyes to see that we were not going to be able to keep holding the financial system together with ad hoc measures. We would have to ask Congress to grant us extraordinary powers to deal with the worst American economic catastrophe since the Great Depression. This conclusion led us, in consultation with Congress, to craft the $700 billion Troubled Assets Relief Program, which authorized the government to buy toxic assets from financial institutions to help clean up their balance sheets.

As I remember only too well, the passage of TARP was a nail-biter; the

House of Representatives rejected it initially, triggering a week of market chaos. TARP's eventual passage—on Friday, October 3—failed to steady the markets, in part because the pervasive, global nature of the problems was becoming clearer. The following Monday, Asian, European, and U.S. shares plunged as investors worried that a squabbling Europe would be unable to fix its banks and that TARP might not be enough. The situation had worsened significantly during the two weeks we had been working with Congress to get TARP authority, and we realized that TARP's asset-buying program would not be enough. We needed something that would work more quickly to restore confidence in the markets and be more powerful. My team at Treasury began to work on a sweeping plan to inject equity and recapitalize more than 700 banks.

British prime minister Gordon Brown, whose government would unveil an $875 billion bank bailout of its own, suggested to President Bush that he call a meeting of the G20 leaders. Inside the administration we debated the merits of the idea. Though I was concerned that such a gathering could lead to a political brouhaha that might destabilize markets further, we needed a global approach to a global problem, and I advocated holding a meeting as soon as possible after the U.S. presidential election on November 4.

First, we wanted to make sure we had a productive meeting of the G7 finance ministers, who were to gather on Friday, October 10, during the annual World Bank/IMF meeting. The usual G7 format was highly scripted, with ministers reciting talking points to one another and then the group releasing highly technical communiqués understandable only to a small group of insiders and members of the press. This time we needed to come together in a serious, substantive way to communicate our resolve to the public and the markets. We got off to a bumpy start as one central banker after another rose to blame the U.S. for the global mess, tracing their countries' problems to Lehman's collapse. In truth, Europe's overleveraged and undercapitalized banks had been on the road to disaster long before Lehman fell. Still, the venting helped. In the end, the group issued a strong, clear communiqué, long on substance and short on jargon, committing us all to decisive action in dealing with the crisis.

The outcome inspired the White House to press ahead with a global leaders' summit. I pushed for inviting the G20, as did a number of the president's advisers—including chief of staff Josh Bolten, National Security

Adviser Steve Hadley, and Dan Price, who wore two hats as deputy national security adviser for international economic affairs and assistant to the president for international economic affairs. The G20's Finance ministers and central bankers met regularly, but its heads of state had never convened. I thought that should change; taken together, emerging G20 powerhouses like Brazil, India, and China represented not just the present but also the future.

Not everyone was enthusiastic. Some in the U.S. government felt 20 countries was too many to be effective and that the participation of countries like Argentina, with its populist president, Cristina Fernández de Kirchner, who we believed had a history of taking irrational, irresponsible, and anti-U.S. economic positions, might undermine the group's effectiveness. But we all saw eye to eye on one thing: if the Chinese were willing to exert a leadership role at the G20—and if the biggest developed nation and the biggest developing nation were in agreement on the issues—the G20 would be a success. Before moving ahead with our plans for the gathering, President Bush authorized me to call Wang Qishan and get a quick answer from President Hu.

We knew there was a very small risk of being rebuffed—the Chinese were still smarting over a U.S. decision to sell $6 billion in arms to Taiwan in early October—but we got a strong yes within 24 hours from an eager Hu. The Chinese leader surely realized that this emergency gathering would be an ideal showcase for China in its new role as a global power. With the Chinese on board, President Bush decided to move forward with the G20 leaders' summit.

With the exception of Gordon Brown, the Europeans resisted a group that size, fearing their influence would be diluted. In a concession, we agreed to invite Spain and the Netherlands, which belonged to neither the G8 (the G7 plus Russia) nor the G20. After much back-and-forth, a summit of G20 leaders was scheduled for November 14–15 in Washington. Dave McCormick worked with Dan Price to coordinate the effort.

China also was beginning to feel its share of pain. Its equity and real estate markets were off sharply, while export and investment growth were declining. On November 9, less than a week before the G20 leaders were to arrive in Washington, the PRC announced a large $586 billion two-year stimulus program, chiefly to build infrastructure. It was the biggest such plan the country had ever attempted. The government also eased credit and would encourage a massive $1 trillion–plus lending campaign by state-owned banks the following year. How ironic, I thought, that the very banks whose weakness had endangered China five years before were now helping to pull the country's economy—and the world's—out of the ditch.

On November 15 the G20's leaders gathered in Washington at the Great Hall of the National Building Museum, a vast space with soaring Corinthian columns that had originally been designed to house the Civil War pension bureau. An enormous square table had been set up in the hall to accommodate the large group. As I surveyed the room, I saw a vivid illustration of how the order of things was changing—for the better. Joining such European leaders as French president Nicolas Sarkozy, Germany's Angela Merkel, and Italy's Silvio Berlusconi were China's Hu Jintao, Brazilian president Luiz Inácio Lula da Silva, and Indian prime minister Manmohan Singh.

As Hu's eagerness to attend had demonstrated, China was stepping up as a major participant in the global community. This was not the scenario I had hoped for—China's emergence on the international stage being driven by a global financial disaster centered in the U.S. and Europe—but the Chinese, too, had a stake in global economic stability, and I was glad to see them playing a leading role in working to restore confidence.

During a break in the proceedings, I had an opportunity to visit briefly with Hu Jintao and Wang Qishan. We talked for a bit, and Hu said, "I bet you're glad we didn't move the currency faster than we did. I hope you now understand why. Some of the things you wanted us to do would have been dangerous. Now we're stable and can stimulate the economy, and that's helping us and the whole world."

I thanked President Hu and told him I thought the steps China had taken to begin reforming its currency had been beneficial. "It's important that you keep your economy growing," I said, adding, "but I believe that it is your fiscal spending, and not your currency policies, that has bolstered this growth."

Throughout the meeting the Chinese were accommodating on just about everything, with one notable exception: they didn't want the final communiqué to use the word "imbalances," which they viewed as shorthand for China's oversaving and the U.S.'s overborrowing. The subject had been a thorny issue for years. Citing imbalances as a cause of financial excesses leading to the crisis was the same, to the Chinese, as faulting them for something that was our doing. I had always held that imbalances worked both ways: the U.S.'s huge debts and low savings were as much a cause of the parlous state of the global economy as China's excessive savings. But the Chinese were very sensitive to any hint of blame, and Wang Qishan had cautioned me about publicly addressing the subject of China's imbalances in connection to the financial crisis.

"If you talk about this, it looks like you're pointing the finger at us," he said. "And we haven't pointed the finger at you."

Going into the G20, I'd been concerned that our efforts to deal with the financial crisis might get bogged down in petty protectionism and recrimination. But I could not have been more wrong. The developed economies apologized for their role in the current disaster, but instead of blaming the freewheeling Western financial system, the smaller economies expressed concern about overreaction. All the countries rejected protectionism and agreed that reforms would only be successful with a commitment to free-market principles. The communiqué the group released affirmed that the 20 nations would implement reforms to strengthen the global financial system and noted the importance of international cooperation.

Three weeks after the G20 leaders' summit, in early December, I flew to Beijing for what would be my last SED meeting. When the group reconvened in July 2009, president-elect Barack Obama's new team would be in place. The U.S. government transition, truly a marvel of our democracy, was under way, but markets remained tense, and we were still contending with an unrelenting series of crises. General Motors and Chrysler were teetering on the verge of failure (and would require a government loan from TARP funds to be saved). In late November we had had to rescue U.S. banking giant Citigroup with a combination of capital injections and guarantees. Citi was the largest U.S. bank, with assets of $2 trillion—and another $1.2 trillion assets off balance sheet, half of which were related to mortgages. It had begun to wobble under the weight of toxic assets and speculative attacks in the stock market. We were forced to act to prevent its failing, which would have had catastrophic consequences.

Given these persistent problems, Vice President Dick Cheney suggested that I stay home. "The president is relying on you to protect our financial system and economy," he told me on the sidelines of our weekly Wednesday lunch with the Bush administration's economic team. "This is equivalent to leaving the country at a time of war."

I argued that it would look worse if I didn't make the trip. The markets would surely see my cancellation as a sign that the situation in the U.S. was truly disastrous. "If I don't go to Beijing, or if I call off the SED, everybody will really think we're in deep trouble," I said.

The vice president was a low-key guy, and he didn't push the issue, but I could tell he was uncomfortable with my leaving the country. Despite his strong conservative principles, he never wavered in his support for TARP or any of the ugly capital markets interventions we were forced to make during the financial crisis. He was also supportive of the SED and our two-way economic relationship with the Chinese.

SED V brought home to me the value of two and a half years of effort, as issues our teams had been diligently working on bore fruit: the U.S. affirmed that it welcomed investment from China. We made sure to emphasize the link between foreign direct investment and well-paying American jobs. We didn't want anyone thinking we were trying to sell precious U.S. assets to the Chinese—or to anyone—at fire-sale prices. Our analysis showed that foreign investment had led to 5 million U.S. jobs; these paid, on average, 30 percent more than the going rate nationally.

At SED V we also signed the EcoPartnerships agreement as part of the Ten-Year Framework, ensuring that local institutions would work together to address environmental issues. We built upon the successes of past SEDs by organizing technical training to promote food and product safety and improving our ability to jointly deal with emergencies. To critics of the SED, some of these achievements—from increasing and expediting the number of Chinese tourists visiting the U.S. to agreeing to work together to combat illegal logging—might have seemed less than spectacular. But there were hundreds of them, they added up to a lot of progress, and they would not have been achieved without the SED. I saw each one as a brick in a strong structure that we were building—a structure that would withstand the winds of future tensions and crises.

At the first SED, back in December 2006, Wu Yi had used her opening speech to underscore the extent to which Americans failed to understand China. In her view, China was a developing country not respected by the world powers, which failed to treat it as a strategic partner. Now, two years later, our countries were committed to working hard together. There was plenty we disagreed about, but we both valued the dialogue that allowed us to defuse crises and make progress on those areas where we could agree.

In my first days as Treasury secretary, we had drawn up plans for the SED with three overarching goals: to advance the economic relationship between the U.S. and China, to help bring about market reforms in China, and to encourage its emergence as a responsible global citizen. Our economic relationship with China was now on a stronger footing, buttressed by joint efforts to achieve environmentally sustainable economic growth. We had not gotten the market reforms we wanted—as I write this, China still hasn't lifted its cap on foreign investment in its financial companies, though I believe our work in this area will bear fruit—but we had won a broader latitude for U.S. firms to operate in China as well as a stronger renminbi, without destructive U.S. protectionist legislation. Finally, elevating the status of the G20 had provided the Chinese an opportunity to play a responsible leadership role in supporting the economic system from which they had benefited so much. Over time, I hoped, they would learn to do just that, because their commitment to solving problems is crucial to global stability.

As a young investment banker, I learned that the key to success was building relationships, between you and your client, between your firm and his or hers. As Treasury secretary, I had worked to build lasting relationships, this time between countries. Personalities came and went—I wouldn't be Treasury secretary much longer, and the Chinese leadership would also change. But with the SED we had created a forum for relations between our countries that would carry on after us. Indeed, the Obama administration would embrace the SED approach, while broadening it to include foreign policy and national security as the renamed Strategic and Economic Dialogue. In November 2014, building on the platform of the Ten-Year Framework, the U.S. and China reached a breakthrough agreement to limit greenhouse gas emissions, fulfilling my vision of increased collaboration to combat climate change.

I learned something else as a young investment banker: never take no for an answer. You almost never got what you asked for the first time around, especially with new clients. You had to work hard to understand their needs and frame your proposals to appeal to their best interests. Then you had to push and push, and keep asking for the same thing. With enough time and effort, the answer might just change to yes. I certainly employed that approach in China. How many times did I hear "no" or "not yet" or "not so fast" in response to my requests for the Chinese to open their markets or move their currency? Even when we didn't get the answer we wanted, we managed to wedge the door open a little further, and the next time we'd push a little more. In a country where so many people weighed in on so many issues, we were, at a minimum, helping them build a consensus for change.

As was the custom, after the rest of the U.S. delegation had met with President Hu in a formal setting, I shared a private chat with him. The Chinese leader and I sat side by side on a cushioned bench in a screened alcove behind the elaborate meeting room in the Great Hall of the People. I let him know that I remained concerned about problems in the U.S. economy, and I reminded him that the new administration would be feeling its way for a while and not to expect too much too soon.

"There's still significant anti-China sentiment in the U.S.," I noted, cautioning him that U.S.-Chinese relations would suffer if his country stopped or slowed down reform. I urged him to stay committed to the kind of engagement with the world he had demonstrated during the G20.

This was my closing official advice to China's president, and his final words to me as Treasury secretary were meant to be reassuring.

"We may not go as fast as you like," Hu said. "But the direction is always going to be forward. Our reform process is irreversible."

I certainly hoped so. In a short while I would leave Treasury, just as I had left Goldman Sachs, behind me. I had no idea what I would do next, but even as Hu spoke I knew that one way or another, I would continue to push my Chinese friends to speed up their reforms, for the simple reason that doing so would be good for China, good for the U.S., and good for the world.

PART THREE

Building Bridges

CHAPTER FIFTEEN

Darkness at Noon

I'm no fan of Beijing in the late fall or winter, but I'd never found the city as dreary and unpleasant as I did the first week of December 2011. I was there to host a conference on urban sustainability for the Paulson Institute, my newly created nonprofit organization, and not long after I'd arrived, the Chinese capital was blanketed by smog so thick and murky that airport runways were closed and hundreds of flights were canceled or diverted. Some of our later arrivals wound up being sent to Inner Mongolia.

During a break for lunch, I left our hotel to do a photo op with Los Angeles mayor Antonio Villaraigosa, one of our featured speakers, for an all-electric car that combined a Chinese-made battery and body with a proprietary drivetrain installed in L.A. I had been indoors all morning, and, boy, was I shocked to step outside. It was just after noon, but it was so dark and gloomy it might as well have been dusk. Office towers just across the street were as dim as shadows. My eyes stung and began to water.

We posed beside the Coda Automotive car with company CEO Phil Murtaugh. Then Antonio slid behind the wheel for more photos. On the spur of the moment, he slipped the car in gear and off we sped, soundlessly, down the crowded side street. Phil had taken the back seat. I rode shotgun. Even inside the car I could almost taste the grit in the acrid air. Antonio flicked on our headlights. In the blur of oncoming beams, my mind flashed to scenes from old black-and-white movies depicting the fogs of Victorian London. Beijing couldn't get cars like this on its roads fast enough, I thought.

We hadn't driven far before Antonio realized he had no idea where the street was going or how we'd get back if we went any farther. So he spun us through a quick U-turn that might well have been illegal.

"I've lived in L.A. all my life," Antonio told me. "But I've never seen smog like this."

For good reason, too: the air in L.A., the most polluted big city in the U.S., is positively pristine compared with that of Beijing, where smoke from coal-burning power plants, factories, and home furnaces mixes with exhaust from the world's fastest-growing fleet of cars and trucks in an ever more toxic combination. On average, the Chinese capital's air contains nearly seven times as many fine particulates as does the L.A. area's. Measuring no more than 2.5 microns in diameter—or PM 2.5—these microscopic bits of matter can infiltrate the body's tissues and are among the deadly by-products of internal combustion.

The day of our drive, Monday, December 5, 2011, ranked among the worst in memory. I'd have said "on record," but the Chinese government didn't release such information back then. Beijingers relied on hourly Twitter posts from the U.S. Embassy, which recorded the city's air quality through instruments on its roof. That day registered 416 on the PM 2.5 scale—deep into what the U.S. Environmental Protection Agency labels "hazardous" air quality (any measurement over 300) and nearly 17 times the World Health Organization standard for healthy air. The day before had been worse, exceeding 500. When a reading had gone that high the previous year, it had carried the label "crazy bad." The embassy quickly dropped that mischievous term, but its tweets about air quality had registered with beleaguered city residents and helped to fuel an outcry from local environmental activists, journalists, real estate developers, and concerned parents that upset China's leadership and eventually caused it to take action.

Foul air is just the most visible of the many daunting challenges China's government must address as it confronts the increasingly dark side of its extraordinary economic success. Pell-mell growth combined with a legacy of poor planning, gross energy inefficiency, inadequate regulation, and lax enforcement have ravaged China's cities and countryside. Groundwater in the arid northern half of the country—always scarce—is now all but depleted. Rivers and lakes are polluted, some so badly they are not fit to use for irrigation, much less drinking. Indeed, some 300 million Chinese do not have ready access to potable water. In many places the soil has been contaminated by industrial by-products, harming crops, livestock, and the people who eat them. Reports of rice laced with cadmium abound. In 2013 thousands of dead pigs were found floating in the Huangpu River and its tributaries, threatening Shanghai's water supply. Hundreds of so-called cancer villages have been identified whose residents suffer unusually high rates of the same cancers; the villages are usually located near polluted water or concentrations of industry.

The environmental crisis is only part of the unhappy story. The country's wealth has not been shared anywhere near equally. Corruption is widespread, and China suffers a wide gap between rich and poor, with glaring regional disparities. Its riches are concentrated in the eastern coastal cities and provinces. Rural areas, the west and the country's interior, lag badly. China's cities teem with hundreds of millions of people who—thanks to an outmoded system of residential permits—live all but illegally as second-class citizens in a land whose newfound prosperity they have labored to create.

The threats to the health, happiness, and economic well-being of China's citizens pose a serious risk of unrest. Polls show growing unhappiness among the people about corruption, the environment, and the confiscation of land by public officials to promote development. According to a 2013 survey by China Merchants Bank and the U.S. consulting firm Bain & Company, three-fifths of wealthy mainland Chinese—defined as those with investable assets of at least $1.6 million—were looking to leave the country or had already left. One-third had invested abroad, twice the level of two years before. Nationally, so-called mass incidents, a catchall phrase for protests and civil disturbances, have soared in the past decade. Complaints about environmental damage or the illegal seizure of farmland constitute the two biggest sources of local protests. The paradox, painfully obvious to the Chinese leadership, is that the very prosperity that has ensured the legitimacy of the ruling Communist Party now threatens to undermine it.

As the country's leaders also know, these pressures will only intensify. For all its success, China remains relatively poor. It may boast the second-biggest economy in the world, but measured by GDP per capita, it ranks just 80th, a notch above war-ravaged Iraq at 81st. Hundreds of millions of citizens have climbed out of poverty into a nascent middle class, but tens of millions more barely scrape by. Raising their standard of living, without a drastic change in China's growth model, will only put more pressure on the environment, exacerbate inequality, and boost the country's ravenous demand for resources—all with potentially dire consequences for China and the world.

Meantime, the country's economic engine has slowed. The double-digit average annual growth of the past 30 years fell to 7.4 percent in 2014. That's a giddy pace for the rest of the world, but it marked China's worst performance since 1999, in the aftermath of the Asian financial crisis. The slowdown was partly intentional. The government resisted the big stimulus measures it had used in 2008 and 2009 to goose growth rates. The leadership wants to wean the economy off its overreliance on exports and infrastructure-driven government investment and shift instead toward increased domestic consumption and the creation of a thriving service sector. It is banking on continued rapid urbanization to help accomplish this: since 1978, an estimated 300 million have made the trip from farm to city, and another 300 million are expected to relocate by 2030.

This coming wave of migration may well be one of the most important events shaping economic and environmental outcomes in China and throughout the world in coming years. To achieve the modernization it seeks, China needs a new urbanization model that is economically sound, socially just, and ecologically sustainable.

When I left Treasury and returned to private life in 2009, I had no set idea of what I would do next, which was just as well, because I was pretty exhausted and plenty miserable. Though grateful to have more time with my family, I was as unhappy then as I'd ever been. Even favorite pastimes that I looked forward to all year, like saltwater fly-fishing for tarpon and bonefish, left me unsatisfied. I had lost my sense of joy—and purpose.

Looking back, I'd say there were several reasons for this. For one, I took personally the continued suffering of so many Americans who, in the midst of the worst economic downturn in decades, suddenly found themselves jobless, homeless, and running out of hope. I was frustrated by my inability to do anything to help now that I was out of office. I believed I had done my best to prevent the 2008 financial crisis from turning into another Great Depression, but the withering criticism we received from the press—and some in the Obama White House—stung me deeply. (I still remember one set of polls that showed that more people favored torture than TARP!) I spent months huddled with my lawyers: complying with subpoenas, being deposed, testifying before Congress. As the Treasury secretary who had been forced to use extraordinary authorities in novel and unpopular ways, I knew it was only natural that my actions would be investigated and that I should be expected to explain them. But it's one thing to understand that in theory; it's another to have to live through it.

I didn't pretend to think that we in the Bush administration, working closely with Ben Bernanke and Tim Geithner at the Federal Reserve, had done everything right. But we had done our best, and under excruciating conditions we got the major decisions right. When we made mistakes, we corrected them quickly and prevented far worse from happening. I was proud of that record—and remain so. I began a memoir, *On the Brink*, to record the challenges we had encountered and how we dealt with them. I believed it was important to never forget the lessons we learned during the financial crisis.

Writing is said to be therapeutic for some authors. I'd like to meet one or two of them. It sure wasn't for me. Writing *On the Brink*, I found myself reliving the most harrowing moments of the crisis—complete with sleepless nights. The strain wore on my family. As a matter of fact, when I later told Wendy that I was thinking about writing another book—this one—she said simply: "Fine. And I'm going to start dating again."

After *On the Brink* was published, Wendy and I left Washington, D.C., and returned to Barrington, Illinois, our home just outside of Chicago, where we had lived before I'd moved to New York in 1994 to help run Goldman Sachs. I took a long, deep breath and began to focus on what I would do next. I had not given much thought to this—at Treasury, there had been no time. When I'd left Goldman, I knew that I would be leaving Wall Street for good. I'd loved working with both smart colleagues and demanding clients to solve complex problems, but I was ready to try my hand at something new. Wendy and I intended to devote much of our time and effort, and most of our money, to the cause of conservation. We briefly considered starting our own NGO but concluded we could be more effective partnering with established organizations. I declined offers to join the boards of directors of many public companies and nonprofits. The hands-on work of business and conservation fascinates me. Board meetings do not.

However, one thing had remained clear in my mind—I wanted to stay involved with China in a meaningful way. Toward the end of 2009, I received a call from an old friend, Zhou Wenzhong, the outgoing Chinese ambassador to the U.S. He would soon take a position as secretary general of the Boao Forum for Asia, which had been established by the Chinese as an Asian counterpart to the famed World Economic Forum in Davos. Zhou invited me to become the first U.S. trustee, and I accepted.

The forum held in Hainan in April 2010 took me back to China for the first time since I'd left Treasury 15 months before. I brought with me copies of the just-released Chinese version of *On the Brink* and made stops in Shanghai and Beijing to see a number of old friends, including current and former leaders like Jiang Zemin, Zhu Rongji, Xi Jinping, Wang Qishan, and Zhou Xiaochuan. These meetings, in which I was peppered with questions about the Obama administration and U.S.-China relations, helped galvanize my thinking. All my life I've gravitated toward big challenges, and, as my conversations with China's leaders reminded me, there were few things more important to America than getting our dealings with China right.

I was struck by a newfound sense of confidence, verging on triumphalism, among many of the Chinese I saw and spoke with. To an extent, this attitude was well earned. The West was reeling, but China's economy appeared strong; growth rates that had dipped to 6.2 percent in the first quarter of 2009 had roared back to reach 8.7 percent for the full year. Meantime, the U.S. economy had shrunk by 2.4 percent, while the Eurozone had contracted by 4.1 percent. A decade before, China's banks had been near collapse. Now they were well capitalized and thriving while many of their Western counterparts were being bailed out. Some on our shores were penning paeans to the state-directed market socialism of the Chinese economic model.

Yet I felt—as did many of my reformist friends in China—that such hosannas were misguided. If anything, the global financial crisis had laid bare China's flaws: its export businesses had collapsed as markets dried up in slump-ridden Europe and the States. China's economy was booming again, but that was thanks to massive government stimulus spending that, I feared, would lead to harmful distortions and more corruption. Crucially, major economic reforms remained stalled. Without further market-oriented initiatives, I doubted China would be able to successfully rebalance its economy. All of this made me wary, especially since—given China's seemingly unbridled self-confidence—I could see hints of future tensions with the U.S.

Some months later Chinese president Hu Jintao was scheduled to come to the States. With the assistance of my former colleagues Deborah Lehr and Taiya Smith, I offered some advice to Chinese ambassador Zhang Yesui. Among other things, I strongly encouraged an official visit to Chicago, which Hu made in January 2011. After a dinner for the Chinese leader hosted by Mayor Richard Daley, I accompanied the Chinese delegation back to the Mandarin Hotel, where I reminisced with Wang Qishan. I left his room with a clear understanding that the Chinese leaders very much wanted me to find a platform that would allow me to make a real difference in improving U.S.-China relations.

"You will always be welcomed and listened to in China," Wang Qishan assured me. "You know how to get things done."

I began kicking ideas back and forth with Deborah Lehr, in much the same way that four and a half years earlier the two of us had brainstormed the creation of the Strategic Economic Dialogue. Out of this several-month process came the Paulson Institute, a nonprofit that was to be funded initially only by me. It was officially established in June 2011 with a mission of promoting sustainable economic growth and a cleaner environment by facilitating greater cooperation between the U.S. and China. We laid down several clear goals: to encourage energy efficiency and better environmental practices, to increase cross-border investment leading to the creation of jobs, and to promote responsible executive leadership and best business practices on issues of international concern.

Today the Institute has a staff of 30 professionals in the U.S. and China engaged in thought leadership and advocacy, and we are working on several major programs to achieve our goals. Our programs—in urbanization, global leadership, climate change and air quality, conservation, and cross-border investment—have spurred a variety of initiatives, from courses for Chinese mayors on urban sustainability to a plan to map the biodiversity of China's coastal wetlands as a first step toward devising a strategy for their preservation. PI publishes the research and policy prescriptions of scholars and experts from around the world on timely issues of global importance. Topics have ranged from the environmental lending standards of China's development banks to the reform of China's state-owned enterprises.

From the beginning, I wanted the Institute to have intellectual rigor, and we were fortunate to be able to find a home at the University of Chicago, whose dynamic president, Robert Zimmer, has been developing programs to apply his institution's brainpower to solving pressing problems in the U.S. and abroad. I accepted an appointment as a distinguished senior fellow at the Harris School of Public Policy Studies, and the Institute was set up as an independent center affiliated with the university. All the same, I didn't want the Institute to be like other think tanks that only commission studies or publish reports. I wanted to get things done. In fact, I was inclined to call the institute a "do tank."

That was my plan, anyway, until I visited my former boss John Whitehead in New York. John, who passed away in February 2015, was a man of great wisdom, stature, and gravitas. He had run Goldman Sachs and then served as U.S. deputy secretary of State and overseen numerous philanthropic and civic projects, including the Lower Manhattan Development Corporation after 9/11. I described my plans for the institute and explained my aversion to the term "think tank."

"Words matter," John counseled me. "If you call it just a 'do tank,' people will say, 'There Hank goes again, acting without thinking.' Why not call it a 'think and do tank'?"

I got the point. A few weeks later I flew to Beijing for our first conference on urban sustainability, and that was exactly how I described the institute to Li Keqiang, who was then executive vice premier in charge of the economy. Li broke into a broad smile when I said we were a "think and do tank." He noted that his favorite Chinese proverb was "*zhixing heyi*," which he explained meant "uniting knowledge and action." Then in his own calligraphy he wrote the Chinese characters for the proverb, which we use on our website and letterhead in China.

Since the dawn of civilization, people have moved from farms to cities in search of better lives. Cities are richer. Their residents produce more and consume more than their country cousins do. In economic terms, urbanization increases productivity and incomes as labor is reallocated from lower-value-added traditional agriculture to higher-value-added manufacturing and service sectors. At the same time, cities generate new sources of domestic demand—for housing, public works like roads and sewers, services like education and health care, and big-ticket consumer products like cars and home appliances. Combining greater productivity and higher demand creates a virtuous cycle that generates jobs. Industrialization and urbanization, not surprisingly, have long gone hand in hand.

The extraordinary recent growth of China—throughout its history a land of poor farmers ruled by a small, educated elite—has been accompanied by a migration of people to cities on a scale and at a speed unlike anything mankind has ever before seen. The estimated 300 million Chinese who have made the journey in the past 30 years is the equivalent of having relocated nearly the entire population of the United States over that time.

This migration was initially inadvertent, the result of the stunning success of rural reforms, which dramatically increased agricultural production and created huge pools of surplus farm labor. Some peasants joined fledgling township and village enterprises; millions more streamed to the special economic zones and revitalized cities along the coast in search of newly available jobs—on factory assembly lines, on construction sites, on street corners selling steamed breakfast buns or Gucci knockoffs. The flow increased as the economy grew. The floodgates opened after China entered the WTO and became the world's factory floor. As recently as 1978, at the start of Deng Xiaoping's Reform and Opening Up, 80 percent of China's people tilled the land. Now slightly more than half live in cities.

All over China, villages have become towns, towns have become cities, and cities have built up and out to become ever bigger and more sprawling megalopolises, changing the face of the country in stunning, rapid fashion. For decades my hometown, Chicago, laid claim to being the fastest-growing city in history. From just over 112,000 residents on the eve of the Civil War in 1860, it had mushroomed to 1.1 million by the time of the World's Columbian Exposition of 1893, when it first bared its big shoulders to the world. Yet Chicago's breathtaking growth pales before that of Shenzhen, a rural community of 321,000 in 1980 that today teems with 10.6 million permanent residents. Today China has 174 cities with over 1 million people; the U.S. has nine.

As China's economy soared, so did its skylines. Six of the world's 15 tallest buildings are in mainland China (the U.S. has three). Sixty-two of the tallest skyscrapers under way are being built there, including eight of the top ten. When I first visited Shanghai in 1992, the tallest building in town was the brand-new 48-story Portman Ritz-Carlton Hotel, which reached 541 feet. Since then, no fewer than 96 new buildings have topped that height; 15 more are under construction. In seemingly every corner of the country, office towers, hotels, factories, shopping centers, and residential housing have been thrown up posthaste. From a start in 2011, the government is in the midst of putting up 36 million units of affordable housing by 2015. At an average of about three people per household, that's enough to shelter nearly the entire population of the Philippines, the world's 12th most populated country.

All manner of public infrastructure has been built to serve and link these cities. China had next to no modern motorways at the start of Reform and Opening Up in 1978; by 2013 the country's National Trunk Highway System had just under 53,000 miles of road and was expected to exceed 67,000 miles by 2015. It surpassed the U.S.'s iconic 47,000-mile interstate system in 2011. Since construction started in 2006, China has built nearly 7,000 miles of high-speed rail, used by almost 2 million people per day. The U.S. has no dedicated high-speed rail line, and the first one likely to be built, in California, won't be finished until 2028. (China should have 11,000 miles by 2020.) The list goes on: China had 77 civilian airports in 1980; it has 182 today, and the current five-year plan calls for building 82 more by 2015. China expects to have subway systems in 40 cities in 2020, up from 21 today; 15 cities in the U.S. now have metro systems.

In the process, China has created tens of millions of jobs—in construction, in the factories and office buildings being built, and in the services needed to support the workers, from food supply to janitorial work to financial advice. This development has come as a result of policies and incentives that favored growth at any price. Now the Chinese are seeing the true cost of that growth and its insatiable demands on the country's limited resources and those of the world.

China's mind-set of unrestrained development has altered public and private life in profound ways, warping incentives and distorting market mechanisms. Public officials from the lowest village leader up through provincial governors have been rewarded with promotions and, all too frequently, personal enrichment for promoting growth. It's no wonder that in addition to so many worthy public works and stunning architectural breakthroughs, China has produced so many white-elephant projects. Among these are China's so-called ghost cities, sprawling developments that are all but unoccupied; the most notorious may be the Kangbashi New Area, outside the old city of Ordos in Inner Mongolia. Built to house 1 million people beginning in 2003, it had a population in 2014 that was estimated to range from 20,000 to 70,000.

Meantime, Chinese society has steadily become more unequal, approaching levels seen in countries like Nigeria, Brazil, and South Africa and unsettling the Chinese leadership. In 2005, then president Hu Jintao advocated the creation of a "socialist harmonious society" that would shift the Party's focus from pressing for growth to addressing festering social concerns. Nonetheless, big state initiatives in areas like clean energy development were overwhelmed by the social and environmental stresses of continued growth and industrialization. Hu's harmonious society was further away than ever when he left office in 2013, bequeathing his successors an even bigger cleanup.

"To modernize, we have to take the path of urbanization," Li Keqiang told me on another visit, a year later. "But the path is so difficult that we feel like we're walking on a tightrope."

It was December 2012, and I was in Beijing for the Paulson Institute's second annual conference on urbanization. Li had been named the second-highest-ranking member of the Party a few weeks before, though he would not be installed as premier until March 2013. We were speaking about the need to balance the continued rapid pace of urbanization with ensuring food security, protecting the environment, and conserving the country's limited resources.

"It's like an acrobat walking with a bamboo stick for balance," Li told me. He stretched his hands wide apart in front of him as if holding an imaginary pole and swayed a little for emphasis. "The acrobat has to be careful. He takes one small step after another. He has to keep going forward, he can't go backward. If he stops, he'll fall off."

Few leaders are more familiar with this high-wire act than Li, who wrote his Ph.D. dissertation on coordinating rural industrialization and urban development. Like many of China's leaders, he favors conservative dark suits and sports pomaded jet-black hair, but in person the 59-year-old Li comes across as anything but a dour apparatchik. Smart, charming, with a flair for the spontaneous, he's a shrewd politician who rose through the Communist Youth League and Party ranks as one of former president Hu Jintao's protégés.

We were chatting in the Purple Light Pavilion in Zhongnanhai, the Chinese leadership compound where I had talked with Zhu Rongji the week after Deng's death nearly 16 years before. Bright, late fall sunlight streamed through translucent white curtains, silhouetting the delicate teapots and vases arrayed on shelves in front of the room's large windows. Li leaned back in his doily-covered red armchair, self-assured, relaxed, and modest as he spoke.

Like so many in the leadership who endured the deprivations of the Cultural Revolution, Li knows firsthand how starkly different life is in China's cities and in its countryside. He grew up in Anhui Province in central China, where his father was a local Communist Party official in the capital, Hefei. After graduating from high school in 1974, he was sent to work on a farm less than 100 miles away. He joined the Party two years later and served as head of a village Party committee. During the day he moderated local disputes and chased pigs from fields; late at night he read through crates of books. The hard work paid off when China's nationwide entrance exams to universities resumed and he placed into the law department at Peking University, one of China's best schools. Along the way, he helped to translate an English textbook on due process into Chinese.

After graduating in 1982, Li turned down a coveted opportunity to study abroad, choosing to head the university's chapter of the Communist Youth League, where Hu Jintao was among his first bosses. The pair worked closely together until Hu was sent to the poor southwestern province of Guizhou. Li married the daughter of a senior official of the youth league and, while working his way up, completed his doctorate in economics in 1994. Four years later Li was dispatched to serve as acting governor in Henan, a backward, crowded province of 93 million people in central China. In his six years there he helped steer the province's national GDP ranking from 28th to 18th among China's 31 provinces, directly administered municipalities, and autonomous regions. But Li was dogged by a series of crises ranging from an HIV outbreak traced to tainted serum at local plasma clinics and blood banks to a rash of fatal fires that briefly earned him the nickname Three Fires Li.

In 2004 Li was named Party secretary of Liaoning Province in China's rust-belt northeast. He began to revitalize the province, coupling market incentives with bank loans and central government funds. Among his projects, he built new housing for 1.2 million people and masterminded the "Five Points to One Line" project, which expanded five ports along the Bohai Sea and linked them through a new coastal highway. In the 2007–2008 leadership transition, Li was picked for the CPC's all-powerful Standing Committee and named executive vice premier.

Given responsibility for economic management and reform, Li has emphasized the importance of urbanization for China. In a speech to Party leaders in 2010, Li made the case that expansion of cities would not only drive growth but that it could also help alleviate inequality and create an income distribution in China that was "olive shaped," with more people in the middle class than at either extreme of very wealthy or poor.

The gap between urban and rural areas is stark. City dwellers are four times as productive as their rural counterparts; they earn three times as much and consume three to four times as much.

"The discrepancies are large, but it also means the potential is large," Li told me that afternoon. "We've come to a consensus: urbanization has the greatest potential for boosting China's future domestic demand."

Indeed, that's the premise of urbanization: reducing the income gap by bringing farmers to the city, improving their lot, and increasing domestic consumption. But there's also a nettlesome income gap inside the cities, where hundreds of millions of migrants live in a legal netherworld, tolerated as cheap labor but denied the richer benefits available to native city dwellers. This state of affairs traces to China's creaky household registration system, or *hukou*, which started in the 1950s as a way to keep farmers in the countryside to assure sufficient grain production as the country industrialized rapidly. As in the Soviet Union, Chinese government planners classified citizens as rural or urban workers and tied employment rights and social benefits to their official classification and place of residence. Hukou holders in cities received such benefits as housing, education, health care, and pensions; those in the countryside got to live on and use the land belonging to their collectives. The system effectively restricted worker movement, as it was nearly impossible for farmers to obtain urban permits, and without these they wouldn't have a place to stay or food to eat in the city, much less any of the other benefits that came with official city residence.

The success of Reform and Opening Up changed the dynamic. The business boom created cash-paying jobs that made it possible to survive in cities without an urban hukou. Officials, eager to promote growth, turned a blind eye to the farmers who poured in. Conditions were often miserable: migrants labored in stultifying or dangerous jobs and lived in packed unisex dorms in the burgeoning cities. Once a year, at Chinese New Year, they took overcrowded trains home, lugging cheap nylon bags full of gifts for the children they had left behind to be raised by their grandparents. (Today it is estimated that there are more than 60 million of these "left behind" children being raised apart from their parents.)

Even so, the opportunities were so much greater than in the countryside that farmers came in waves. Today the so-called floating population of migrant workers accounts for one-third or more of the populations of Beijing, Guangzhou, and other big cities. On its own, the pool of migrants nationally would rank among the five most populous countries in the world. This cheap and diligent labor force helped build today's China. But migrants who come to cities for a piece of this prosperity don't have a fair shot at it. They earn on average less than two-thirds of what urban hukou holders do. After they pay for their rent and food and send money back home, they've got little left to spend—or save.

In our conversation Li noted that the urbanization rate in China, officially over 50 percent, is closer to 35 percent if only those with an urban hukou are counted. In other words, in a population of some 1.35 billion people, more than 200 million migrant workers live in cities without urban residence permits. That means that nearly a third of those living in cities are excluded from enjoying the full benefits of their country's great success. This is a recipe for potential unrest.

Changing the household residency system is a crucial step that makes sense as a matter of economic wisdom and social justice. As full-fledged urban citizens, migrants would be able to build better lives for themselves and their children. China would benefit from the boost in consumption and from the free movement of labor that hukou reform would bring about. For this to happen, China will need to make it easier for migrants to obtain social services, like pensions and health care, as they move about. It will also need to take steps to reinforce the finances of its urban areas.

China would also do well to address property rights: unlike in the U.S., the state owns all the land. Since the late 1990s, city dwellers have been permitted to own their apartments (the land beneath buildings is leased from the state), but farmers are allowed only so-called land-use rights to work and live on land that is owned by local agricultural collectives and held in the state's name. Many city residents have made a killing as property values soared in recent years. Not so farmers, who can't sell or mortgage their land rights. Financially strapped cities, which can't afford to pay pension and health care benefits to armies of migrants, would be more welcoming if the farmers could turn the land they live on into capital to provide them with financial security.

The Chinese leadership is trying to make it easier for rural residents to apply for urban permits and to sell or lease out their land rights. In July 2014 the government put out guidelines for reform that would begin to ease the hukou rules. The aim is to completely lift restrictions in townships and small cities, relax them in medium-size cities, and improve the prospects for large cities, while strictly controlling the population of the biggest cities. As much as it aims to encourage continued urbanization, the government does not want migrants flocking to megalopolises like Beijing and Shanghai. The catch, of course, is that these are often the very places, with their seemingly boundless opportunities, that migrants most prefer.

Though the proposed changes are cautious in nature, the need to reform is clear. If China doesn't integrate its migrants into the urban economy, it risks creating a permanent, and restive, urban underclass living in the kind of baleful slums that plague cities elsewhere in the developing world and that China has mercifully avoided so far. That will not only be a human tragedy and a severe drag on growth, but it will also be a ticking time bomb for the government.

"The difference in standard of living between urban residents with registration permits and those without is very large," Li told me. "This is a very unstable situation."

CHAPTER SIXTEEN

Skylines and Shorelines

I got a firsthand look at one of the front lines of China's changing cities when I flew to Chongqing in December 2011 as part of our inaugural urbanization conference. I had no idea at the time just how lively things in that hilly city in southwest China would soon become.

Located on the Yangtze River at the upper end of the Three Gorges Reservoir, Chongqing is so big, and its position as the gateway to the country's vast poor hinterland so strategic, that it is one of only four municipalities that report, like provinces, directly to the central government. (The other three are Beijing, Shanghai, and Tianjin.) More than 33 million people are spread over Chongqing's nearly 32,000 square miles of farms, forests, villages, and larger urban areas: think of South Carolina but with seven times the population. Chongqing city proper accounts for some 7 million people; altogether more than 40 percent of the municipality's population lives in towns and cities. Officials aim to increase the urbanization rate to 70 percent by 2020.

When I visited, the city was in the midst of a noisy Maoist revival led by my old sparring partner from the SED, Bo Xilai. He had been moved from the Commerce Ministry to become Party boss of Chongqing in 2007, a promotion that secured him a seat on the 25-member Politburo. A charismatic populist in a country where other leaders were reluctant to stand out, he took his case directly to the people, gaining a huge following in his city and throughout China in what amounted to an unprecedented public campaign to be selected for the Communist Party's Standing Committee. He famously held mass meetings in which crowds of hundreds of thousands sang "red songs" from the days of the Cultural Revolution—a spectacle that attracted curious foreign dignitaries as well as some of China's top leaders. Bo aggressively pursued Mao-like leftist policies in a bid to win grassroots support and cultivate a national image as an unconventional leader of the people.

And Chongqing was prospering, racking up impressive growth numbers. Local GDP jumped by 16.5 percent in 2011, the highest of any province in China, and 7 percentage points above the national average. Fostering such rapid growth was the time-honored path to advancement for officials in the Communist Party, and Bo appeared determined to leverage the "Chongqing model" to the pinnacle of power. Combining a popular appeal with ruthless politics, he led a brutal, high-profile crackdown on so-called gangsters that critics charged was meant more to eliminate potential rivals than to impose law and order. Purging private entrepreneurs while expanding the power of the state sector, Bo had emerged, in the view of some admiring Chinese scholars, as the strongest leader to champion an autocratic model of state capitalism in the nation.

To be sure, Chongqing's resurgence had begun before Bo began singing songs and knocking heads. Its mayor, Huang Qifan, a protégé of former premier Zhu Rongji, had earlier paired central government money with innovative policies to achieve growth rates well above the national average. Huang had arrived as vice mayor in 2001, shortly after the city began to receive billions of dollars to serve as the "dragon head" of the central government's Go West investment plan that was meant to help the poor interior catch up with the booming coastal regions. He cleaned up state-owned enterprises and invested in modern infrastructure to attract business and industry from China and abroad. Chongqing built dozens of new bridges, more than tripled the length of its streets and roads, began operating the first section of a planned 18-line subway system, and constructed a trunk rail line to connect the city to Europe.

I caught up with Mayor Huang for lunch before the Chongqing leg of our urbanization conference got under way at the InterContinental Hotel. Inside, a gaily decorated Christmas tree worthy of a place in Rockefeller Center soared in the high, arching lobby.

"Chongqing is what Shenzhen was in the 1980s, and what Pudong was in the 1990s," Huang declared, citing two urban areas that had been at the cutting edge of innovative growth.

Amiable and incisive, he was eager to detail the city's successes, as well as to discuss broader economic issues. Christmas carols played in a loop on the sound system as we shared a traditional Italian meal in a restaurant in the hotel's basement. I chuckled to myself thinking I had come to Chongqing wondering if I would get to hear any of Mao's favorite revolutionary anthems, only to listen to Bing Crosby crooning "White Christmas."

Huang had been born in Zhejiang Province in 1952 and began working in 1968 at a Shanghai coking plant. He joined the Communist Party in March 1976 and rose through the ranks in Shanghai. He eventually played a big role in turning Zhu Rongji's vision of a new financial center for China into the stunning Pudong New District, where he served as deputy director in the mid-1990s. He subsequently became deputy secretary general of the Shanghai municipal government and was responsible for, among other things, attracting investment to the city.

The mayor had taken a page from Guangdong's playbook and set up industrial zones to attract multinationals. Nearly half of the Fortune Global 500 companies had set up manufacturing operation there, and exports were doubling every year. Roughly half of Chongqing's output was industrial; a third came from finance, trade, and logistics. In 2011 Chongqing produced more than a tenth of the world's laptops. Two years later it was up to a quarter of global production, with Hewlett-Packard, Lenovo, Acer, Asustek, Sony, and Toshiba all ensconced there.

Huang expressed concern that family incomes in China were declining as a share of GDP, a development that would hinder the increase in consumption. He saw income inequality and the inequitable distribution of wealth as threats to sustainable development.

"We are working on narrowing the gap between the rich and the poor," he said.

As one way of doing that, Chongqing was experimenting with programs to bring farmers into the city. The key was for new arrivals to pay their way and not become burdens on the government. Other cities had imposed conditions, such as requiring applicants for urban residency permits to immediately give up their rural hukou, which kept down the number of permits granted. Chongqing allowed farmers who obtained urban residency permits to retain rights to their land for three years. Chongqing also made it easier for farmers to lease out and trade their rights to farms, forest lands, and residential plots; they could even use these rights to obtain mortgages to buy homes in the city.

Altogether, Chongqing planned to convert 10 million farmers from rural to urban permits by 2020. By the end of 2011, when we spoke, some 3 million were said to have taken up the offer. Among other big cities experimenting with such reforms, only Chengdu, the capital city of neighboring Sichuan Province, had seen similar results: 2 million migrants had switched their residences. Cities like Shanghai and Guangzhou, with much stricter criteria, have seen far fewer conversions.

Newcomers to the city need jobs and homes, so Chongqing had cleared away miles of shantytowns and was in the process of building 500,000 units of subsidized housing—enough for 2 million people. The city had thrown its weight behind a program to back microbusinesses with a combination of tax breaks, direct subsidies, and bank loans. In 2011, the city seeded 50,000 small enterprises with the aim of creating 400,000 new jobs. The plan was to generate 1.6 million jobs over the next five years.

Like his mentor, Zhu Rongji, Huang is a pragmatic man, not an ideologue. He may be directing billions in subsidies toward housing and business start-ups, but he's got an eye for other approaches as well. During lunch, we got to talking about the U.S. economy and its issues, from slow growth and unemployment levels to the fiscal cliff that was then so much in the news. He surprised me with his solution.

"My preferred model," he said, "is the supply-side approach that Reagan used in the 1980s—with tax cuts."

That afternoon I drove off to another part of town to see Bo Xilai. He greeted me warmly in a graceful building he identified as having once been used by the Nationalist government of Chiang Kai-shek, which relocated to Chongqing during the war against Japan. The marble hallways were lined with historic black-and-white photos, including some of Deng Xiaoping, who after the revolution had been named the first secretary of the Southwest Bureau, which included Chongqing. There was also a famous picture of the meeting in Chongqing between Mao Zedong and Chiang Kai-shek after the defeat of the Japanese.

Bo eschewed the traditional Chinese ceremonial horseshoe, and we faced each other across a wide polished wood table, in a grand meeting room, on whose high walls I could make out bas-relief scenes of local attractions. He was well briefed, brimming with pertinent facts, and as feisty and competitive as ever. When L.A. mayor Antonio Villaraigosa, who was in our delegation, noted that his city had planted 100,000 trees in the past three years, Bo was quick to point out that Chongqing had planted 1.5 billion in that time.

"In the past Chongqing was a cement forest," he declared. "Now it's a real forest."

He recited many of the same statistics I'd heard from Mayor Huang and reminded me of the close ties the U.S. had had in the past with Chongqing, when it was Chiang Kai-shek's wartime capital, the U.S. had its embassy there, and brave American pilots flew the Hump route over the Himalayas to supply China with food and war matériel.

But as always, Bo was talking his own book. "It is my wish," he said, "that you encourage American companies to come to Chongqing."

I explained that I was no longer an investment banker and that the Paulson Institute was, in any case, a not-for-profit organization.

But he kept returning to this theme. "You can use your influence to get companies to come to Chongqing," he insisted. "Together we can do matchmaking activities!"

When I peppered him with questions about the government's current five-year plan and the push toward more domestic-led growth—would it really happen?—he deflected me with more statistics to illustrate the virtues of the city.

"My questions are for China," I said. "Not just Chongqing."

"If you want to know about China, you will have to ask Premier Wen Jiabao," he said. "I'm narrow-minded. I just focus on Chongqing."

Of course, his focus was on something more distant and enticing than his city—the walled compound of Zhongnanhai and the ultimate seat of power. It was a vintage Bo performance: he was the master of all he surveyed, in complete control, casually interrupting his translator to improve a turn of phrase. I can recall nothing now in his manner that hinted at the trouble that was soon to come. Quite the opposite. He made a point of extolling the "magical strengths" that had made Chongqing a "breeding ground for future leaders."

In retrospect, I see there were omens. Originally, Huang Qifan had been scheduled to attend our urbanization conference in Beijing, but just before it was to start, he had suddenly withdrawn. We'd subsequently heard that a team from the Central Commission for Discipline Inspection, the Communist Party arm that investigates corruption and wrongdoing, had been dispatched to Chongqing to look into some irregularities. A little while before our meeting with Bo, the *Wall Street Journal* had run a story about the lifestyles of China's princelings, the sons and daughters of high-ranking Party members. The piece had focused on Bo's son, Bo Guagua, who had attended Harrow, the elite boarding school in the U.K., then went on to Oxford and Harvard, drove a flashy red Ferrari, and had allegedly escorted the daughter of former U.S. ambassador Jon Huntsman to a popular Beijing bar.

The article had caught my attention, not so much for the sensational reporting—I assumed the *Journal* had solid substantiation—but for the timing. I thought it a prelude to jockeying for the Standing Committee. I'd seen enough stories in my day to wonder if someone weren't trying to damage Bo. But I also assumed Bo was powerful enough to prevail over whoever might be out to get him.

I sure got that wrong. Two months after our meeting, Bo's charmed life began to unravel. The first sign came in early February 2012, when the Chongqing police chief, who had been Bo's trusted protégé, was abruptly removed from his post. A few days later he fled 200 miles to seek refuge in the U.S. Consulate in Chengdu. Huang Qifan led a large convoy of police vehicles to Chengdu to try to retrieve the police chief, who agreed to exit the consulate, where he'd sought asylum and holed up overnight. He was whisked away, but not to Chongqing. Instead, he turned himself over to the Beijing authorities and to what was described as "vacation-style medical treatment." The subsequent investigation into the incident would bring Bo down.

Bo was deposed as Chongqing Party chief in March 2012. The following month his wife, Gu Kailai, was placed under investigation for the death in November 2011 of a British businessman who had worked closely with Bo's family. A steady drip of lurid details emerged through news accounts and leaks in the state-run and foreign media—and were quickly disseminated on China's hyperactive social media. It emerged that the police chief, formerly Bo's chief enforcer, had fallen out with his boss after telling him of a corruption investigation into Bo's family. The *New York Times* would report that Bo had set up a wiretapping operation that had listened into a call involving President Hu Jintao. This was soap opera elevated to the level of national security, complete with money, sex, murder, police chases, and political intrigue, a sensational tale right out of *House of Cards*, an American TV show that had lately become a favorite of many Chinese leaders.

For a time it was thought that Mayor Huang might be tarnished by his association with Bo. But in the fall of 2012 Huang was promoted to the Central Committee of the Communist Party. He remains mayor, pushing forward Chongqing's experiments. Bo, on the other hand, was systematically stripped of authority, expelled from the Communist Party, put on trial, and is now serving a life sentence for corruption and abuse of power. His wife was convicted of intentional homicide and given a suspended death sentence.

Integrating hundreds of millions of migrants into cities like Chongqing won't be cheap: the government pegs the cost at close to $6.8 trillion over the next 20 years. The big question is, who will foot the bill for the new roads, bridges, rail lines, sewers, housing, and electricity that will be needed, as well as for the social services programs like pensions, schools, insurance, health care, and prescription drug schemes that must be expanded? The cities and provinces are saddled with debt and lack the ability to increase their revenues without major reforms. The central government has little inclination to take on such a gigantic burden, although it has pledged to increase outlays to local governments.

In theory, urbanization helps pay its own way by boosting economic growth, as new urban workers produce more, consume more, and pay more taxes. But this will take time to develop, and China's tax collection system is porous. Meanwhile, China's local authorities will almost certainly continue to suffer from strained finances, partly as a result of nationwide reforms undertaken by Zhu Rongji in the mid-1990s. To shore up weak central government fiscal policies, he centralized tax collection and introduced a new value-added tax that today accounts for perhaps 60 percent of fiscal revenues. A share of the tax receipts was sent back to the provinces, but the sums fell increasingly short as local governments were required to take on more responsibilities for services that were previously provided by state-owned companies under China's old "work unit," or *danwei*, system.

Even today local officials have few ways to raise revenues to cover these unfunded policy mandates. They do not have budget accountability, they lack the independent power to impose new taxes, and they were not, until 2014, allowed to issue municipal bonds. As a result, they have resorted frequently to seizing and selling land, a practice that on average funds one-third—and in some cases nearly one-half—of local budgets. More recently, they have turned to opaque short-term borrowing arrangements in a shadow banking market that is hard for regulators to monitor.

These approaches are fundamentally unsound. Seizing farmers' land fuels widespread protests, threatens the nation's supply of productive farmland, and encourages urban sprawl. Cities become less livable, less efficient, and, ultimately, less sustainable. Not infrequently, too, the process lines the pockets of corrupt officials.

Begun decades ago as a practical adaptation to revenue constraints, so-called local government financing vehicles (LGFVs) are also risky. Cities have used them to take on much bigger debt loads in recent years. According to China's National Audit Office, local governments had racked up about $2.9 trillion in borrowings and guarantees by the end of June 2013, a nearly 70 percent jump from 2010, adding to a national debt load that has worried many financial experts.

Chongqing offers a prime example of aggressive local government borrowing and spending. Its growth in recent years has been exceptional, helped by generous infusions of cash from the central government and far-sighted policy choices. But Chongqing has also employed aggressive land sales tactics and built up massive debts through off-balance-sheet vehicles. Today Chongqing is among the most heavily indebted municipalities in

China. According to government audits, Chongqing was among the top three of China's provinces and regions when ranked both by total debt as a portion of local gross domestic product and as a portion of fiscal income. Chongqing's borrowing accelerated after Bo Xilai arrived in 2007 and ramped up spending in his doomed effort to make a showing that would elevate him to the highest reaches of power in the country. The *Wall Street Journal* calculated that Chongqing's use of LGFVs more than doubled, to some $55 billion, between 2007 and 2011.

The problem with China's borrowing isn't just the sheer amount, but the opaque nature of both the debt and how the proceeds have been spent. Poor decisions and bad management have led to overbuilding, property bubbles, and an impending environmental disaster. So the leadership is taking steps to give local governments the necessary fiscal tools to better manage their finances. In early 2014 Beijing authorized a pilot program that would allow ten local governments to sell bonds directly to the public, with the cities and provinces taking direct responsibility for repayment. Guangdong, so often a pioneer in reform, led the way in June 2014, selling more than $2 billion of bonds. That August lawmakers passed amendments to the budget law to allow local governments to sell bonds to finance public projects (bonds to finance day-to-day expenditures will still be banned).

These are important developments, but in my judgment China won't have a healthy municipal bond market until local officials gain additional sources of reliable revenues and are able to provide a clear accounting to investors and to Beijing. China should ultimately give provinces and cities independent power to tax, and it should introduce property taxes in more cities and provinces and experiment with taxing commercial real estate on an annual basis instead of the current practice of imposing levies on transactions. Once Beijing ensures they can handle the responsibility, local leaders should be given full control of their budgets and begin producing and publishing transparent financial statements, the sine qua non for prudent fiscal management and a sound bond market.

These changes require national fiscal and tax reform and an overhaul of the system of sharing revenues between Beijing and the cities and provinces. But they would provide localities with more consistent revenues, while reassuring Beijing that it will not have to be the permanent guarantor for bad decisions made at the local level. Taken together, these measures would decrease the reliance on dangerous off-balance-sheet financing vehicles, reduce land seizures, curb urban sprawl, and make it easier for cities to become more energy efficient and people friendly. In February 2014 Finance Minister Lou Jiwei told me that tax reforms were proving to be more complicated, and would thus take longer, than budget reforms. But he and his colleagues are focused on both sets of reforms. Lou said, for example, that expansion of the property tax was a big part of the government's thinking.

The good news is that these changes are under way: in June 2014 the Politburo said it aimed to have a new round of fiscal and tax reforms done by 2016 and to establish a modern fiscal system by 2020. The liberalization of municipal bond underwriting in August 2014 was part of a series of amendments to the budget law that included requiring local governments to do more long-range planning and to use accrual accounting.

That China's cities have become so unworkable is deeply ironic, because the Chinese were ahead of their time in designing livable urban areas. Advocates of sustainable development today emphasize the importance of building mixed-use neighborhoods that bring together in close proximity housing, work, education, recreation, and shopping. They press for zoning that promotes dense grids of streets and small blocks, rather than huge boulevards and superblocks, and that creates green spaces to improve air quality and give residents spots to gather. The architects of ancient Beijing might as well have inked the site plans of these so-called New Urbanists: the blocks of courtyard houses that they laid out along hutong alleys did not just house people, they provided places to shop and go to school; they were near where people worked; and their courtyards served as oases in which families could relax.

All of this began to change in 1949 when China's new Communist rulers cleared space in the old city for the factories and bureaucrats of a centrally planned economy, demolishing ancient city walls and uprooting hutongs. Their embrace of monumentality culminated in a series of big projects completed for the tenth anniversary of the People's Republic in 1959 that included the immense, Soviet-style Great Hall of the People set next to a vastly expanded Tiananmen Square. Chang'an Avenue, the city's traditional east-west axis, was stretched almost beyond recognition: from 50 feet in width and 2.5 miles in length in 1949, it is today 260 feet wide, or nearly the length of a U.S. football field, and runs 24 miles end to end.

When I first arrived in Beijing in the early 1990s, there were still many vestiges of the Mao era. Citizens rode bikes or took buses. Many of the cars on the avenues were army jeeps, police cars, or the black sedans with the white license plates of officials. "It's gray. It's dirty. It's crowded," Wendy wrote in her journal after a visit to the capital in 1994. "But it is vibrant. The streets are alive with workers, vendors, students, shoppers, and, above all, cyclists." While I worked, Wendy took off by herself to explore the hutongs. She wandered, fascinated, through narrow passages, filled with playing children and suffused with the smells of cooking, that separated the houses.

It's easy to wax nostalgic, but in truth the old neighborhoods had become badly neglected. Many courtyard houses lacked plumbing, modern kitchens, and sanitation, and they were bitterly cold in the winter. When migrants poured in, the living spaces became overrun and unsafe.

Beijing clearly had to make changes, but it made choices that destroyed much of the city's rich heritage and rent its social fabric. Blending the architectural megalomania of Soviet Russia with soul-deadening modernism, Chinese planners threw up massive office and residential towers isolated from one another in superblocks a quarter of a mile long and separated by broad arterial boulevards, which were linked by ever more distant ring roads. Beijing is now working on the seventh ring road—a nearly 600-mile-long extravaganza that will wend its way through neighboring Hebei Province to encompass an area the size of Indiana. A belated start on adequate mass transit left residents stuck with crowded and intolerably long commutes. We made similar choices in the United States, particularly in the development of our Sunbelt after World War II, but we had more time and more space to deal with the consequences—and far fewer people.

All over China, cities followed Beijing's lead. Seemingly every local official wanted a replica of Tiananmen Square and a municipal government headquarters that looked like the Great Hall of the People. Mayors and governors get promoted for pleasing their Party bosses and spurring growth, their cities make money by selling land rights to developers, and developers want to complete their work quickly, all of which leads to cookie-cutter projects thrown up hastily and often shoddily and cut off from commercial activity by wide roads.

In effect, China's planners chose to build a façade of false efficiencies and were left with sprawl, congestion, and pollution. The country is trying to undo the damage. It has spent tens of billions of dollars to clean the air—with little effect. Before the 2008 Olympics, Beijing shut or moved to Hebei more than 200 smoke-belching factories, including one of the country's biggest steel producers, which was located just 10 miles from Tiananmen on Chang'an Avenue. Officials installed scrubbers in factories within city limits and banned the burning of coal for heating. Beijing simultaneously embarked on a massive build-out of modern mass transit systems. Today, all over the country, the construction of subways, monorails, bus rapid transit lines, and high-speed rail lines is in full swing.

Yet for all these efforts, it's hard to escape the conclusion that, for now at least, China is losing a race against time and its own growing prosperity. As bad as the pollution was the week we held our first conference on urban sustainability, it has only gotten worse. In January 2013 the U.S. Embassy's rooftop instruments measured PM 2.5 levels of 886, far more toxic than the PM 2.5 levels of 416 we had contended with that week in 2011. In the wake of that "airpocalypse," as pundits called it, the government subsequently pledged to spend $280 billion to combat smog in Beijing over five years.

One big reason for the pollution is that China's rising middle class is putting cars on the road at a pace the world has never before seen. Beijing had a million cars in the late 1990s, 3 million cars during the 2008 Olympics, and 5 million by February 2012. The city instituted a monthly lottery in January 2011 to limit the number of licenses granted; by 2014 it was allowing only 150,000 new licenses per year. But the roads remain impossibly clogged with the world's worst traffic jams: one infamous snarl near Beijing in 2010 backed cars up for 62 miles and lasted 11 days. More highways aren't the solution—they just invite more cars.

Other cities are following Beijing's lead in restricting ownership—commercially minded Shanghai has resorted to auctioning off new licenses—but it's a tough battle. Autos are a huge business for China, employing millions. China overtook the U.S. as the world's biggest market for new auto sales in 2009, and it was selling 15.5 million passenger cars (and a further 4 million buses and trucks) by 2012. That's more cars than the country owned in 1999. China now has about one car for every 11 citizens, and some experts expect that rate to triple in the next few years. Imagine what China's traffic jams and air quality will be like then!

Finding a better way forward isn't easy even for cities whose leaders are deeply committed to sustainable growth. I saw this in Changsha, the bustling capital of south-central Hunan Province, where Zhang Jianfei, who was named mayor in 2008, made great efforts to clean up his city and save energy. Zhang, a rising star in the Chinese system, holds a Ph.D. in civil engineering from the University of California, Berkeley. Before this appointment, he worked in the traffic and transport division of the World Bank's China desk and in China's Ministry of Transportation. In 2013 he was promoted to vice governor of Hunan.

Changsha is tackling big and small projects with zeal. It has more than doubled its raw sewage treatment rate to 97 percent. It became the first municipal government in China to set up a waste collection system in each of the hundreds of villages and towns under its jurisdiction; households pay a fee for waste collection but get a discount if they recycle. "I'm an environmentalist from Beijing," Zhang said. "When I wash vegetables, the first round of water, we dump. But the second round, the third round, we save it for flushing. Why not?"

A Communist stronghold in the early years of the Party, Changsha was the city where Hunan native Mao Zedong first plotted revolution. Today it's a bustling transportation hub and inland port, with vibrant agricultural markets and a thriving manufacturing base. It's home to dynamic private sector companies like Zoomlion Heavy Industry Science & Technology Development Company and Sany Heavy Industry Company—two major heavy-equipment makers—and to Broad Group, the central-air-conditioning manufacturer whose flamboyant chairman, Zhang Yue, made waves when he announced his controversial and still-unrealized plan to build the world's tallest building, Sky City, in Changsha, employing modular construction techniques he's developed.

The vanguard of a province that grew on average at a stunning

14.6 percent annually for the previous decade, Changsha was a city literally in upheaval in 2013. Everywhere you looked you could see giant cranes bobbing and dipping on rising rooftops, the skeletons of the buildings below wrapped in green construction nets and encased in bamboo scaffolding. There was a very good reason for this activity. From a population of 3.7 million, Changsha expected to grow to 8 million residents by 2020. It anticipated spending $134 billion over the next decade to build new housing, widen roads, install sewer and water mains, and lay in gas and electric lines. It opened its first subway lines, with 19 stations, in 2014.

But despite Mayor Zhang's best intentions, there was no effective zoning or control over the types of buildings being built. City planners were tearing down old neighborhoods that, while in need of an upgrade, were far more people friendly and ecologically sound than what's replacing them.

Downtown on a cool, dim day in February 2013, the old and new neighborhoods stood out in vivid contrast. In the middle of an intersection filled with earthmoving equipment, work crews were digging a pit for one of the city's new subway lines. West of the intersection you could see a narrow street lined by four-story apartment buildings, with vendors selling fruits and meats from little shops and street carts. Some of the buildings were marked to be razed, others were in the process of being torn down or were already rubble. On the sidewalks, men sat on low stools playing cards, while packs of children meandered home from school.

On the opposite side of the intersection, stretching into the distance, a broad avenue loomed, flanked by brand-new 30-story residential towers, with no pedestrians in sight. These new buildings brought much-needed improvements. Their apartments were more suited to modern living—with bathrooms, kitchens, and separate bedrooms. But the overall approach to urban design was badly flawed.

At Mayor Zhang's invitation, a team from the Paulson Institute led by Deborah Lehr—working with Peter Calthorpe of the Energy Foundation, a group of energy and urban planning experts—spent time in Changsha advising city leaders. They introduced the officials to a rapid assessment tool developed by McKinsey for the Inter-American Development Bank and adapted by us for China. The tool provides a snapshot of how well a city is performing in areas ranging from water use to carbon footprint to population density to pollution. It's meant to help a city prioritize its needs. The PI team also sought to demonstrate how even minor modifications could make a huge difference in sustainability, whether that meant building more small cross streets to supplement those wide boulevards or putting more people on public transit and bikes than in cars and thus cutting air pollution and carbon emissions.

Rethinking development will be a challenge for Changsha. Like all Chinese cities, it is working from a detailed urban plan that took years to shepherd through the various agencies and departments of government. Modifying the plan would require holding up construction, but with migrants pouring in, the city can ill afford to stand still. Adjusting the official mind-set is even harder, despite city leaders who understand the importance of new approaches. Until cities—and their mayors—are truly judged on more than economic growth, it will be hard for places like Changsha to introduce the sustainable practices necessary to bring about positive change.

The Paulson Institute also did an assessment in Baoding, a municipality of some 11 million people about 100 miles southwest of Beijing in Hebei Province, that illustrates the difficult trade-offs of dealing with China's environmental problems. Baoding ranked as China's most polluted city for air quality in 2014, according to the Ministry of Environmental Protection, yet it is the leading manufacturing base for renewable energy equipment in the world. It is home to Yingli Green Energy Holding Company, the world's second-biggest solar panel maker, and scores of similar companies. Wrapped around Beijing like a horse collar, Hebei is a heavily industrialized coal-mining and iron-making center of China; it contains seven of the country's ten most polluted cities. Geography is one reason: Much of Hebei lies on the fertile North China Plain, wedged between mountains to the north and west and the Bohai Sea to the east. Frequent temperature inversions in winter trap smog for days at a time.

Beginning a decade ago Baoding aggressively pushed policies that favor makers of renewable energy equipment like wind turbines and solar panels. With backing from the central government, it became the country's industrial base for the renewable energy sector. It was selected in 2010 to be one of eight pilot cities charged with demonstrating different ways to achieve low-carbon growth while meeting stringent carbon emissions targets.

Baoding's initial push into alternative energy was a great success. From 2005 to 2008 the number of renewable energy companies more than tripled to 200, revenues shot up fivefold to $3.5 billion, and 13,500 jobs were created. The United Nations named Baoding the world's first "carbon-positive" city, noting that its products, when installed, would save more carbon over their lifetimes than Baoding itself would emit. Then the global financial crisis hit, China flooded markets with its renewable wares, causing prices to tank, and the U.S. and the European Union slapped tariffs on China's solar panel exports. Local industry reeled; many of the biggest players, including Yingli, reported quarterly losses in 2012. Before long the city's chief taxpayer was Great Wall Motors Company, China's biggest SUV producer and a local stalwart since its 1984 founding.

As it looks to triple its urban center to 3 million residents, Baoding is developing in the all-too-familiar auto-centric way of other cities in China, with superblocks of huge apartment buildings interspersed along huge boulevards. Though many buildings are equipped with solar panels or wind turbines, Baoding relies on traditional sources—coal and natural gas—for most of its power.

Getting its ongoing urbanization right is critical for Baoding, which stands to benefit from Xi Jinping's ambitious plans to knit the 130 million people of Beijing, Tianjin, and Hebei Province into one massive economic zone that will require local leaders to coordinate far better. The central government is planning to relocate a number of administrative or back-office functions to Baoding to relieve congestion in the capital and perhaps improve the economy in the outlying areas. With the proposed Beijing-Tianjin-Hebei megalopolis—or Jing-Jin-Ji, as it's popularly known, after the Chinese names of these cities—Xi Jinping sees a regional approach to solving problems as one of his legacies. As he told me simply in July 2014, "This was my own personal initiative."

Jing-Jin-Ji is meant to be a model of sustainable development. The region's rancid air shows the need for better coordination. The pollution is the nasty by-product of Beijing's cars, Hebei's coal-fired factories, and

Tianjin's chemical plants, but the three local governments have pursued competing growth policies. When Beijing's air became all but unbreathable for days on end in the winter of 2013, the central government called on Hebei and other provinces to shut down factories. Doing that, of course, hurts those areas in the pocketbook, and their officials naturally resist. Development in the region has been uneven, with Beijingers enjoying a per capita income 2.5 times that of those who live in Hebei.

When he sought our help in 2012, Baoding mayor Ma Yufeng was eager to use the Institute's assessment tool, but local bureau heads were reluctant to share information that might reflect poorly on them. The Paulson Institute had to persuade traditionally uncooperative ministries to work together. Fortunately, we have, in the China Center for International Economic Exchanges (CCIEE), headed by my friend former vice premier Zeng Peiyan, a sophisticated partner that has frequently bridged the gap between "foreigners" and "locals." Zeng played a crucial role in helping to plan and promote China's extraordinary urbanization.

Baoding would certainly benefit from innovative thinking around water. As our assessment tool confirmed, the city maintains a strong conservation effort. But it suffers from a severe water shortage, like all of arid northern China. For Baoding the shortfall is particularly harsh, because it is home to Baiyangdian, a network of 143 lakes that constitutes northern China's biggest body of freshwater and serves as the main source of water for Beijing. Baiyangdian has been steadily shrinking and becoming more polluted under the pressure of drought, development, and the demands for more water from Beijing heading into the 2008 Olympics. Water had to be diverted from the Yellow River in 2006 and 2008 to save the wetlands and with them the livelihoods of the people who live along its shores, including the local fishermen famed for using hand-reared cormorants to catch fish. Baoding stands to benefit from the completion of China's massive and controversial South-North Water Transfer Project, which will bring water from the Yangtze River Basin to Beijing and other cities of the North China Plain. The first phase of the central-line operation began delivering water to Hebei in mid-December 2014.

Baiyangdian's plight is hardly unique—for China or, for that matter, the world. From tidal mudflats on the coast to freshwater lakes and marshes, China's vital wetlands are fast disappearing. They are being drained and paved over for urban and industrial development, silted in by deforestation, deprived of water by upstream dams, or filled in to expand agricultural acreage. Between 1994 and 2010, roughly one-third of the original intertidal area of Bohai Bay, which borders Hebei, was lost.

The rapid loss of these vital areas is one reason wetlands conservation is so important to Wendy and me. Wetlands are a crucial part of our planet's life support. They protect against storms and help control flooding. Among the most diverse and productive ecosystems on earth, coastal wetlands serve as nurseries for many marine animals, including the fish, shellfish, and crustaceans that we take for granted. The biomass in these rich habitats functions as an important carbon sink. The mixture of mud, sand, and sediments on these flats acts as a filter that purifies water and helps clean the air. As President Xi Jinping commented to me in a meeting in April 2013, "We have to build more wetlands, which will be the kidneys of planet Earth."

Wendy and I are avid birders, and there are few better places than wetlands to observe the drama and diversity of creation. Wetlands serve as crucial pit stops for migrating species to find refuge, rest, and replenishment on their epic journeys between their breeding and wintering grounds. But as these habitats are lost, so, too, are the shorebirds, whose numbers are declining at shocking rates. Many global species that were thriving not many years ago today face extinction. The threat is greater in Asia than anywhere else.

Thankfully, more and more Chinese from all walks of life are becoming concerned about the environment. Protests are increasingly common, as seen in 2014's demonstrations against plans to build a petrochemical plant in Guangdong that would manufacture paraxylene, a potentially hazardous chemical used in polyester fabrics and plastic bottles, and against the construction of a waste incinerator in the city of Hangzhou. Ordinary citizens are taking to the streets to demand protection for their health and safety.

You see the newfound concern of the Chinese in other ways. Even as bird populations have come under increasing threats, for example, the number of bird-watchers in China has grown exponentially. That's a healthy development, because birders make dedicated conservationists.

I met one of this new breed of Chinese birders at the BirdLife International Congress, which Wendy and I attended in Ottawa, Canada, in June 2013. Tina Lin was all of 12, still in grade school, charming and serious and barely able to see over the podium as she gave a talk in impeccable English on ways to connect the world's youth to nature.

Tina comes from Fuzhou, a city of 2.9 million in southeastern China whose warm and rainy climate produces some of the world's best oolong tea. She had discovered birding through a local program and had become something of a celebrity in bird-watching circles for having spotted eight endangered spoon-billed sandpipers.

"I hope we can set up more nature reserves to protect the habitat for birds," she told me when we shared a stage in Ottawa. "People can stop catching or killing birds."

Wendy and I made plans to bird with Tina and her mother when we were in China at the end of the year. We had a specific place in mind: Beidagang, a coastal wetland located in Tianjin municipality, which contains China's fourth-biggest city and is a bustling industrial center some 80 miles southeast of Beijing. Tianjin abuts Bohai Bay, the westernmost part of the Yellow Sea, and was once replete with tidal flats that teemed with marine and bird life. As these wetlands have been lost to development, bird populations have been decimated.

Beidagang itself is a tidal oasis in the midst of the heavily industrial Binhai New Area district. The wetlands border a massive oil field and are surrounded by refineries, nuclear power plants, and other monuments of heavy industry. They support more than 200 species of migratory birds, from rare oriental white storks and great pelicans to small coots and bean geese, but the reserve was under intense pressure from developers and local profiteers and, according to reports, suffered from mismanagement. We had heard that fishermen, looking to maximize their daily catch, had poisoned some white storks, which can eat five pounds of fish a day, to maximize their daily catch; that water levels were being pumped artificially high to drive away wading birds and increase the value of fishing rights; and that, in some places, the rich soil was being dredged and sold.

Wetlands preservation in China is a top priority for the Paulson Institute, and we outlined two key objectives to that end. One was to identify and map the most ecologically important wetlands so that the Chinese authorities would have the best scientific information available when they made decisions about reclaiming land for development. Our idea was to submit this blueprint to the Chinese government by the end of 2014, along with recommendations for improvements to wetlands management policy based on international best practices. Then, we hoped, the government could incorporate the suggestions into the 13th five-year plan, which will run from 2016 to 2020.

Our second goal was to work with local officials to select one or two sites to protect and manage in a way that could serve as models for other preservation efforts. We hoped to make Beidagang one of these. Our initial approaches were turned aside, but I had the good fortune to be seated next to the Tianjin mayor, Huang Xingguo, at a small dinner in Chicago at the home of businessman Tom Pritzker, a longtime friend and China hand. Huang and I hit it off, and he agreed to try to find ways to work together.

Our timing was good. Xi Jinping was pressing governors and mayors to emphasize environmental protection, not just GDP growth. Though we still encountered obstacles as lower-level Tianjin officials tried to interest us in other sites, we arranged a visit to Beidagang. On a bright, windy day in November 2013, Tina and her mom joined Wendy and me in a motorcade of at least a half-dozen cars filled with government officials. Also on board were Taiya Smith, who was now working with the Institute; Rose Niu, who had joined as our chief conservation officer; and Cynthia Zeltwanger, the Paulson Institute's newly hired executive director.

Before long we realized we were headed in the wrong direction. The officials were evidently trying to take us somewhere else. We got the procession to halt on the shoulder of a busy highway, and after a heated conversation we persuaded our hosts that the only wetland we had any interest in visiting was Beidagang—not the site they had decided to take us to. It's possible that local officials truly did not understand our desire to see the reserve, but it was just as likely they did not want us to catch a glimpse of any of the untoward activities that we'd heard were taking such a toll there.

We arrived so late that I could stay only briefly before I had to leave to join the mayor for lunch. Still, we were able to get a look at oriental white storks, and I saw how spectacular Beidagang could be. Wendy, Tina, and her mother remained behind with local guides and academics while I headed to town. At lunch I relayed my concerns about Beidagang to Mayor Huang, who pledged an immediate review of the procedures and regulations governing the refuge. When I returned home, I wrote to assure him that the Paulson Institute would work with Tianjin to help provide expertise and some funds to restore, protect, and manage the refuge in a world-class fashion. He has said he would like to adopt best conservation management practices and ultimately turn the Beidagang wetland reserve into a national ecological park. The Paulson Institute is helping Tianjin and the State Forestry Administration work toward this objective by developing a master plan for the reserve.

What does the future hold for Beidagang and other coastal wetlands in China—and around the world? We are close to a tipping point, but there's still time, if we act decisively, to preserve remaining wetland habitats. I've been impressed to see Xi Jinping's sense of urgency in tackling environmental problems, as well as the growing commitment of enlightened leaders like Tianjin mayor Huang. I've seen how the efforts of forward-thinking leaders can make a difference. In 1983 officials in Hong Kong wisely brought in the World Wildlife Fund to help secure the Mai Po wetlands along the northern shore of Hong Kong's Northwest New Territories. Today they're part of a 2,700-hectare patch, or more than 10 square miles, of protected coastal wetlands and tidal mudflats that include the Futian National Nature Reserve on the Shenzhen side of Deep Bay, which lies between the Hong Kong SAR and China. The cooperation between Hong Kong and Shenzhen has been exemplary and farsighted. It ought to be maintained—and copied—by cities throughout China and around the world.

I think often of the bright morning in April 2011 when I went with Wendy to Mai Po. We hadn't been there in a decade, and I was eager to see the shorebirds. It was the height of the spring migration, and while the tide spooled in, we watched from a concealed blind as flock after flock vectored in, changing direction sharply and frequently in perfect synchronization, before landing on the mudflats, which were crawling with bivalves, worms, and crabs.

We saw several species for the first time, including a handful of young black-faced spoonbills, a spectacular large wading bird that breeds on the west coast of Korea. (It favors the demilitarized zone between North and South Korea because of the lack of human activity there.) About 400 of these birds, one-quarter of the world's surviving population, had wintered in Mai Po that year. We also saw a flock of bar-tailed godwits, famed for making the avian world's longest uninterrupted flights—more than 8,000 miles from their summer breeding grounds in Alaska and Arctic Russia to their wintering grounds in Australia and New Zealand.

As I watched these amazing birds, it occurred to me that they and their ancestors had been making their incredible journeys with no regard to boundaries or borders or any considerations of man for countless millennia—since long before our own ancestors first walked the earth, much less built the cities that were now threatening the birds' very existence. The thought was deeply humbling, and my mind turned to those stirring words from Psalm 104: "O Lord, how manifold are thy works! In wisdom hast thou made them all: the earth is full of thy riches." Extinction is a profoundly moral issue. There is no going back from it. We forget, at times, and at our peril, that we are not the sum of all of creation.

We bear a great responsibility as the first generation to understand the environmental consequences of climate change and the destruction of our natural ecosystems. We are the first with the science and the tools to address these threats by adopting sustainable practices. I'm not one to preach, but it seems to me that with such knowledge and understanding comes an obligation to act. For my part, watching the birds that day in Mai Po reinforced my determination to make conservation a key part of what we would do in the Paulson Institute. It is already the primary focus of Bobolink, our charitable foundation, which Wendy runs.

China faces tough, paradoxical choices. Its new model of growth requires more domestic consumption, a change that will be driven in good measure by continued urbanization. But boosting consumption can bring its own risks as the demand for energy and resources grows. As Wang Qishan once put it to me: "If everyone in the world, including big countries like China, India, and Indonesia, wants to live like Americans, four earths won't be enough."

I believe that it will become increasingly obvious that climate change poses the biggest environmental and economic risk to the world. We can avoid the worst outcomes only if China acts soon to curb its alarming emissions growth. Already it accounts for over 28 percent of global carbon emissions, or more than twice the level of the U.S. China takes climate change seriously and is committed to addressing it. But it sees dealing with its air pollution problem as a higher, more immediate priority. Fortunately, many of the steps to clean the air and increase energy efficiency will also reduce carbon emissions.

In September 2014 we decided to add ten new members to the Paulson Institute's Beijing office to allow us to play a small role in working to solve this monumental problem for China and the world. At the request of the Chinese government and our partner CCIEE, the initial efforts of our Climate Change and Air Quality Program will be focused on tackling the air pollution mess in the Jing-Jin-Ji region.

China is trying to craft a new approach that will allow it to grow in a cleaner, more sustainable way. In the current five-year plan, which began in 2011, the government has committed to spending hundreds of billions of dollars on, among other things, reducing sulfur emissions, building water treatment plants, and investing in clean sources of energy. After experiencing some of the dirtiest air on record in the winter of 2012–2013, the government unveiled a $280 billion plan to combat severe air pollution. In March 2014 Premier Li Keqiang famously declared war on pollution.

Beijing is not just throwing money and words at the problem. As part of its broader efforts to rebalance the economy, it is shifting growth away from traditional heavy industry and fixed asset investment toward the services sector and prioritizing seven so-called strategic emerging industries: energy-efficient and environmental technologies, next-generation information technology, biotechnology, advanced equipment manufacture, new energy, new materials, and new-energy vehicles.

Ambitious goals in the current five-year plan could make China a leader in clean technology and energy efficiency. The cost of clean technologies has dropped, not least because of massive Chinese investment in areas like solar and wind turbines. Technologies to reduce certain air pollutants by more than 90 percent, such as sulfur scrubbers for coal plants, have been commercialized throughout the world. By adopting existing technologies, and commercializing emerging ones, China has the potential to accelerate through the dirty stages of development and clean up its environment faster than many other developing countries.

Technology solutions are important, but China must also fundamentally change its energy structure and move away from coal, which accounts for nearly 70 percent of its primary energy mix. This figure isn't expected to drop much in the near term because so much new power is coming onstream to meet relentlessly growing demand. Each year through 2030 China is expected to add the equivalent of the United Kingdom's total power capacity, according to Bloomberg New Energy Finance estimates. In the meantime, the country can do a lot to clean its air and curb the growth of carbon emissions. Making prices more market based would eliminate huge subsidies for carbon-based fuel, for example. And the government can promulgate and enforce regulations that increase efficiency for new and existing buildings and motor vehicles.

Meantime, nongovernmental initiatives can also help make a difference. Let me give you one example from the Paulson Institute's latest program. The U.S.-China CEO Council for Sustainable Urbanization teams U.S. and Chinese companies to advance practical urbanization solutions through joint projects, case studies, research, and advocacy. About 40 percent of all greenhouse gases globally come from buildings, and half of the buildings under construction in the world are in China. Under the CEO Council's auspices, Honeywell International and China's state grid have been testing automated demand response (ADR) technology through a smart grid pilot project for buildings in the city of Tianjin. ADR technology tracks and controls energy use in individual buildings and provides immediate feedback that allows operators to adjust and fine-tune heating, cooling, and lighting usage, leading to cost savings and energy efficiencies. The Tianjin project has seen savings of approximately 15 percent in industrial buildings and 20 percent in commercial buildings. A second pilot project is now being launched in Shanghai.

For now, China has embraced an "all of the above" energy strategy that also employs wind, solar, biomass, natural gas, and nuclear. And the country is looking to significantly boost natural gas as a bridge fuel to a cleaner future. Natural gas isn't carbon neutral, but it is much cleaner than coal. The major state oil companies are deeply involved in producing shale gas, hoping for the kind of boom that has transformed the U.S. energy landscape. Sixty percent of Sinopec's exploration budget is now earmarked for natural gas, for example, up from 40 percent five years ago.

Since 2012 the government has announced carbon-trading pilots in seven provinces and cities, aiming to create a credible cap-and-trade program. All of this is having an effect: China leads the world in investment in, and installed capacity for, renewable energy. The country appears on track to meet its 2015 goal of having nonfossil fuels account for 11.4 percent of its energy mix, and it is working to phase in cleaner fuel targets for the five-year plan cycle that starts in 2016.

The Party is beginning to add quality of life considerations to its political platform. In his first speech as president, Xi announced the concept of "Beautiful China," which emphasized not just ecological beauty but also the importance of the environment in achieving a higher standard of living. Environmental considerations have been added to official performance evaluations. President Xi has said officials will be liable for environmental problems in cities and regions they have governed even after they have moved to new positions. In July 2014 Xi's chief economic aide, Liu He, raised the stakes when he told me bluntly that governors who did not take action would be removed from office. Nonetheless, it will take great political will not to revert to a growth-at-all-costs mentality during periods when the economy slows down.

China's willingness to be a laboratory for innovation should be a source of help. A defining feature of the country's nearly four decades of economic reforms has been a willingness to embrace pilot schemes and experiment with technologies that may be too expensive for other countries. China's considerable market power allows it to drive down prices and commercialize any advances quickly. It may not yet be pioneering and inventing cutting-edge technologies, but it has proven adept at adapting existing ones to its needs and spreading them rapidly in its huge market.

China's efforts are as important to the world as they are to the Chinese. Those magnificent shorebirds, traversing the globe, remind us how small and interconnected our world is. What happens in Bohai Bay does not stay in Bohai Bay—literally. A 2014 National Academy of Sciences study found evidence that up to one-quarter of the sulfate pollution on the West Coast of the U.S. can be linked to air pollution caused by Chinese manufacturers and borne east by the winds blowing across the Pacific Ocean. From the perspective of climate change, a ton of carbon produced in China is no different from a ton produced in America.

Balancing economic development with energy security, while transitioning to a cleaner and more efficient energy system, is a monumental challenge. China's needs dwarf those of every other country and will require ingenuity and technologies suited to its conditions and unparalleled scale.