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FINANCIAL FIXES



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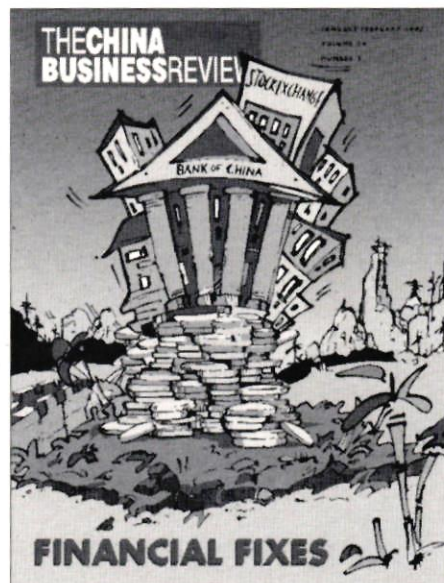
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HONG KONG GETS ITS FIRST CHINESE CHIEF

Shipping magnate Tung Chee-hwa was chosen to be Hong Kong's first chief executive on December 12, with overwhelming support from the territory's 400-member Selection Committee. Tung received 320 of the 398 valid votes cast, while former Chief Justice Yang Ti Liang received 42 votes and former civil servant and businessman Peter Woo Kwong-ching claimed 36. Since Tung has been expected to win the post ever since he was singled out for a handshake by Chinese Party Secretary Jiang Zemin at a January 1996 meeting of Hong Kong advisers to China, the announcement of Tung's selection—just 90 minutes after voting was completed—hardly came as a surprise. Indeed, the only real excitement the announcement generated seemed to be among holders of Overseas Orient Container Line Ltd. stock, which jumped 7 percent by the end of business on December 12. Tung resigned as chairman of the shipping company to run for chief executive.

Over the past few months, the amiable Tung has painted himself as a fatherly patriot with traditional Chinese values who prefers private consensus-building to public outspokenness. Opinion polls show that the Hong Kong populace accepts the 59-year old Tung as a credible leader, but many nonetheless harbor fears as to whether the Zhejiang-born, British-educated tycoon will be able to maintain Hong Kong's autonomy after

July 1. Tung's "campaign" statements indicate that he will be a politically and economically conservative leader. He accused Hong Kong's Democratic Party of being confrontational and anti-China, and indicated that he favored barring any organization supporting independence for Taiwan or Tibet from the territory after 1997. In his acceptance speech, Tung claimed that Hong Kong society has become too politicized in recent years, and called on the populace to "strike a balance between rights and obligations." However, hitting on the theme of unity, he said, "We must put aside our differences and find common ground to build Hong Kong together."

Tung also expressed his wish to retain Anson Chan as chief secretary, the post with responsibility for the day-to-day running of the government. Should Beijing, as expected, agree to Chan's continued service, the Tung/Chan duo will likely be welcomed by most in Hong Kong and abroad as capable of maintaining Hong Kong's stability and prosperity after the handover. Nevertheless, the two will be walking a tightrope between conservative political interests in Beijing and progressive elements in Hong Kong, and will also have to reassure local and foreign businesses that the territory's rule of law will be able to withstand what is likely to be an onslaught of mainland interests eager to cash in on the territory's economic strength.

It is unclear how Tung and the provisional legislature, which was chosen by the Selection Committee on December 21, will coordinate with the current government before July 1; several controversial issues currently being debated in Hong Kong seem to put them on a collision course. For instance, though Governor Chris Patten and the Democratic Party both congratulated Tung upon his selection and pledged to work with him in the future, Patten has publicly "reminded" Tung that he is in charge until July 1. Tung, nonetheless, already has called on the government to work with the provisional legislature (something Patten prohibits). Tung has also criticized the Patten government's tabling of subversion and sedition legislation before the Legislative Council (LegCo). Even if LegCo passes the legislation, China has vowed to annul it on the grounds that such legislation must be promulgated by the Special Administrative Region government.

For all practical purposes, the selection of the chief executive and provisional legislature will put an end to the electoral reforms implemented under Governor Patten. The question now is what kind of system will take their place.

—Pamela Baldinger

Pamela Baldinger is the director of the Council's Hong Kong office.

Short T A K E S

ASIA IS HOT...

A nationwide survey of 2,000 financial managers and management accountants revealed optimism among US exporters. According to a survey released last November by the Controllars Council of the Institute of Management Accountants, 67 percent of US global goods and services exporters expect to boost foreign sales over the next 12 months. Almost a third of the respondents said Asia was the region most often targeted for expanded exports.

...BUT CHINA IS NOT

Results from the second DHL Export Indicator Survey, released last October, indicate that senior executives from large exporting companies based in 15 Asian countries view the United States as the most important export market this year. Exporters based in Vietnam, India, and Malaysia were especially optimistic about 1997, but uncertainties over continuing trade disputes with the United States made senior executives in China less bullish about the prospects for exports to the

United States. Looking ahead five years, less than 50 percent of respondents were optimistic about export order levels in China, Sri Lanka, Taiwan, and Thailand, citing concerns about long-term political conditions.

EDITOR'S NOTE: Michael Dowdle, a contributing author in the November-December 1996 *CBR*, was incorrectly identified. He is currently a visiting professor on Beijing University's Law Faculty visiting from the New York University School of Law.

NEW INTERNET SITES FOR THE NEW YEAR

In the year ahead, those in search of timely China-related news might want to visit the following websites:

<http://www.amcham.org.hk/>—The American Chamber of Commerce (AmCham) in Hong Kong's website presents useful information on AmCham's Hong Kong activities, including AmCham position papers, tips on job hunting in Hong Kong, and a list of Asia-related contacts.

http://www.redfish.com/BRENT_CONSULTING/—The Brent's China Entertainment Network (CEN) website provides a lively education on the Chinese film, television, and music industries. Browsers can subscribe electronically to the CEN's China Entertainment News monthly newsletter, and can access past issues on line.

<http://www.globalvillager.com/villager/CC.html>—Career China offers job-related information for Asia, listing positions both available and wanted. Current openings range from accountant to engineer to English teacher in China, Taiwan, Hong Kong, Singapore, Japan, and other Asian countries.

—Tali Levine Kamis

PRC PRICES TAKE A HIKE

China's State Council and Ministry of Posts and Telecommunications (MPT) announced changes in postal and telecommunications charges effective December 1, 1996. Domestic postal charges increased to 50 *fen* (\$0.06) per piece of ordinary mail, up from 10 *fen* for local delivery and 20 *fen* for other domestic delivery. Prices for urban local calls went up 20 percent, reportedly in an attempt to avoid a repeat of the loss of ¥6 billion (\$723 million) posted last year by MPT and China United Telecommunications Corp. (Unicom). Charges for international calls, meanwhile, are being reduced by an average of 30 percent. The new rates for international calls are intended to make MPT's international calling rates more competitive with foreign international telephone service providers. According to *China Daily*, charges for a call from China to the United States dropped from \$3.16 per minute to \$2.21.

Prices for rural local calls also will be reduced by an undisclosed amount. Since switching equipment is often situated in urban areas, rural calls tend to be routed through the nearest city and formerly were charged at long-distance rates. These calls will now be considered local, even if routed through switching equipment in cities. Telephone installation charges are also to be reduced, and the government has encouraged local post and telecommunications bureaus to improve service and rectify instances of overcharging.

In other price-related news, in December, Beijing's civilian-use fuel prices increased by as much as 100 percent. Coal prices in Beijing rose considerably, from about ¥85 (\$10.24) per metric ton to ¥148 (\$17.83). The price of honeycomb-shaped briquettes used for cooking and heating will also increase because of a roughly 108 percent jump in the cost of raw coal since 1993, as well as other increased production costs. The costs of allocated and above-plan cooking gas doubled, jumping from ¥11.40 (\$1.37) to ¥22.80 (\$2.74) per tank, and ¥24 (\$2.89) to ¥48 (\$5.78) per tank, respectively. While the Ministry of Coal Industry has not commented on the reasons for these increases, *China Daily* and *Beijing Ribao* reported that the increases are intended to reduce heavy fuel consumption during the winter months and to reverse heavy losses in the sector. Beijing officials predicted that the city's fuel-production firms would lose ¥1.23 billion (\$148 million) in 1996.

—Iain McDaniels

Iain McDaniels, a business advisory services associate, has recently joined the Council's Washington office.

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美中商貿評論

EDITOR

Vanessa Lide Whitcomb

ASSOCIATE EDITOR

Kirsten A. Sylvester

ASSISTANT EDITORS

Catherine Gelb

Tali Levine Kamis

BUSINESS MANAGER

Caitlin Stewart Harris

PRODUCTION MANAGER

Jon Howard

RESEARCH ASSISTANT

Christopher V. Harris

1818 N St., NW Suite 200
Washington, DC 20036-5559
Tel: 202/429-0340
Fax: 202/833-9027,
775-2476

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Up and Down The Learning Curve

Robert A. Kapp

*We mourn
the loss of
one China hand,
as the window
of opportunity
for the US and
China opens*

In early December, my friend Phil Lincoln, the American consul general in Guangzhou, was killed in a head-on collision in Guangxi, the autonomous region on Guangdong Province's western border. Phil Lincoln was a highly experienced, quiet, knowledgeable foreign service officer who by today's standards went way back in his work with China; he was posted as an economic/commercial officer in the Beijing US Liaison Office in the early 1970s, and also served in Taipei, Seoul, and Sydney. I worked with Phil intensively in the glamorless preparatory tasks leading to the Seattle APEC Ministerial Meeting in 1993, and came to know well his cautious but clear-eyed approach to America's relations with Asia in general and China in particular. I was honored to lecture in the class on US-East Asia relations he subsequently taught at the National Defense University, and Council members enjoyed a wonderful session with Phil only a week or two before he headed out for his assignment in Guangzhou.

Phil Lincoln died while on duty in the service of responsible and mature relations between the United States and China. This fine man devoted many of the best years of his career directly or indirectly to this goal, and saw a lot in the 25 years from the Shanghai Communiqué to the end of his life. His career, like US relations with China, was a work in progress.

Just a day after I learned the sad news of Phil's passing, a member of Congress pointed out at a Council meeting that 229 members of the House of Representatives in the new 105th Congress have been elected since 1992. In other words, a majority of the House has been on duty only since the height of the troubled post-Tiananmen relationship between the United States and China.

At the same time, the announcement from Manila that President Bill Clinton and President Jiang Zemin would exchange state visits in the next two years has met with an extraordinary barrage of criticism and even vituperation in the American media. The anticipated presidential visits, together with the intensified round of cabinet-level exchanges under way since the summer of 1996, are a partial realization of what most of the US business community, along with a broad spectrum of American foreign policy and China specialists, have been urging for some time: the restoration of normal big-power relations between the two countries, including regular, dignified communication at the highest levels on matters of common concern.

We should applaud the decision of both countries' leaders to extend the courtesies of normal major-country relations to each other. But we had better applaud loudly. The chorus of criticism, centering on the old themes of "Kowtowing to Beijing" and "Selling Out" began before the ink was dry on the Manila announcement. Two weeks after passing that milestone on the path to restored US-China dialogue and enhanced mutual confidence, favorable commentary on the progress toward re-normalization of US-China ties was in precious short supply.

What is going on here?

First, leave partisan politics aside. The US-China Business Council is non-partisan and non-political, and so is *The China Business Review*. The China issue in recent years has not been a purely partisan one in Washington.

Rather, I think that for some Americans—and, I venture to guess, for some actors in China as well—the baseline perception of "normal" US-China relations is now the post-Tiananmen percep-

tion. Every year, more Americans in the US-China drama—journalists, public officials, even businesspeople—come to maturity on China issues in the climate of confrontation and disappointment that has so often pervaded the relationship since 1989. For those thus acculturated to stridency, brinksmanship, threats, and domestic political inflammation as the normal warp and weft of US-China relations, signs of an improvement in bilateral relations may seem a dangerous sign of either national capitulation or loss of strategic direction.

This is not to say that the past five years have not given both sides grounds for concern about each other's intentions, and that US-China relations in 1997 should return completely to what they were in the mid-1980s. The Cold War is over; China's economy and military power have grown and impressed the world; genuine disagreements have surfaced between our two countries in recent years that would have troubled the waters even if the great debacle of 1989 had not occurred. But the fact remains that the positive tone of US-China encounters in the 1980s becomes a more distant memory in the minds of veterans, and is unknown to increasing numbers of newer players in the game.

As we enter 1997, what goes up could still come down. The two governments have made a laborious and still-tentative decision to reach out to each other in civility, but the achievement of positive results in the coming year is not a certainty. Those of us who advocate most energetically for improved and stable commercial and economic ties see the beginnings of an opportunity to help move the United States away from the annual Most Favored Nation/No Special Treatment (MFN/NST) imbroglio. But close examination of the hurdles ahead precludes complacency. *IF* things go badly with Hong Kong; *IF* we see no substantive progress reasonably quickly in the WTO accession talks; *IF* congressional investigations into allegedly inappropriate Asia-connected political fundraising merge with substantive debates over US China policy; *IF* the perception takes even deeper root in either country that the ill-will of recent years is the necessary standard of normal bilateral relations; and, above all, *IF* in the political leadership on

either side of the Pacific once again concludes that the risks of reaching out outweigh the benefits, then we face a lost opportunity of major proportions.

We have said in earlier notes that both sides must act if the foundation of US-China relations is to continue to be strengthened. WTO is a case in point: if the discussions in the next few months do not yield clear and visible progress that each side can point to in its domestic discussions, early resolution of the accession problem will not occur. If strong progress on WTO is not made, US progress on permanent MFN, which would require congressional action, will be that much more difficult to achieve, and prospects for wider-ranging improvement in the vital US-China relationship will be that much poorer.

As usual, we have work to do if the progress registered in the past eight or nine months—the resumption of high-level government contacts, the resounding House vote in favor of normal trade with China after the MFN/NST debate last spring, and the evidence of renewed vigor in the WTO accession negotiations—are to be sheltered from the forces of intense animosity that produce nothing and end nowhere. Those of us who have urged, argued, and even clamored for these gains need to speak strongly in favor of continued, *realistic and clear-headed*, forward motion in US-China relations in 1997. We know from experience that vigorous advocacy of enhanced and more stable US-China relations makes a difference in the public arena. But we take nothing for granted. We have a fighting chance to show that an alternative vision of normal US-China relations—not simply the post-Tiananmen vision, but the longer-term and more balanced expectation of conflict and cooperation, retreat and advance, hard work and ultimate reward which I believe our friend Phil Lincoln shared—can again take root. Building on the dedicated work of veterans in the US-China field—in government and in business alike—we must do what we can now to support the further improvement of realistic US-China relations, and to prevent the derailment of promising initiatives that newcomers might fail fully to appreciate and entrenched detractors in both countries would be only too happy to discredit.



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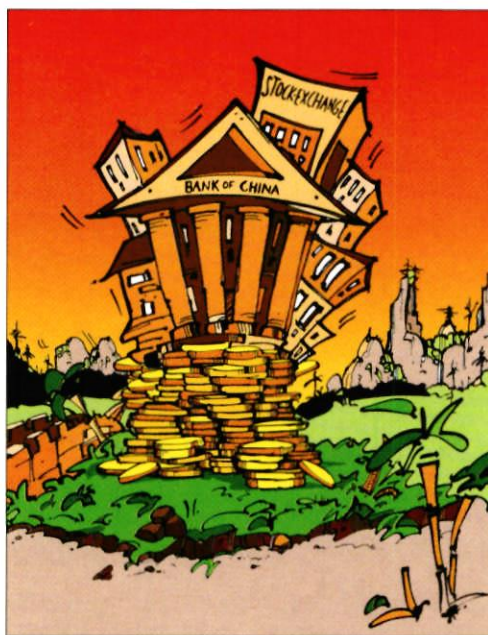
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*China is
pushing
forward with
the development
of a modern
securities
market*



Taking Stock

Ji Chen and Stephen C. Thomas

The December 1990 opening of securities markets in Shenzhen and Shanghai marked one of the most important of China's financial reforms, as the PRC government intended to use the stock markets to help medium and large State-owned enterprises (SOEs) become more competitive internationally. By listing on stock exchanges, SOEs would be able to attract domestic and foreign capital, gain access to foreign technology, and adopt international accounting and management practices. The Chinese government also hoped that shareholding would be an attractive long-term investment option for Chinese citizens, who have an estimated ¥3.7 trillion (\$445 billion) in bank savings.

The six-year history of the new Chinese stock markets has been rocky, however, and experiments with overseas listings also have met with mixed success. The poor performance of the State sector and the slow pace of SOE reforms, along with the government's frequent policy changes and unclear institutional and legal oversight, have encouraged extreme volatility and irregular activity in China's markets. Indeed, the future health of these markets depends on the government's ability to stabilize the markets by establishing and enforcing new securities regulations, speeding up SOE reforms, and eliminating political interference.

MARKET FUNDAMENTALS

Securities markets, which had last operated in China in the late 1940s, were reopened in 1981 with the issue of central government treasury bonds (T-bonds). It took nearly five more years, however, before the government established a small over-the-counter market that allowed individual T-bond owners to sell their holdings to State banks in several Chinese cities. The first publicly issued stock—for Beijing's Tianqiao Department Store—in September 1984 actually resembled a bond issue as the shares paid interest and were issued for a three-year period. Unlike a bond issue, though, the interest rate was not fixed. The first experimental government-approved securities markets were the Shenzhen Security Exchange (SZSE), opened on December 1, 1990, and the Shanghai Security Exchange (SSE), opened on December 19, 1990. Twenty-four other cities have opened regional trading floors since 1990.

Two types of Chinese company shares are available on the Chinese markets. "A" shares are common stock shares similar to shares in the United States, except that they are available exclusively to Chinese citizens and are priced in *renminbi* (RMB). "B" shares are legally available only to foreign investors and are priced in US dollars in Shanghai and in Hong Kong dollars on the Shenzhen exchange. Both types of shares represent equal ownership in Chinese companies. The separation of the two markets reflects the Chinese government's desire to minimize the possibility of foreign control of key State enterprises, and prevent foreign manipulation of China's relatively small and immature stock markets. The inconvertibility of the Chinese currency for capital account transactions also facilitates the separation of A and B shares.

Ji Chen is on the finance faculty of University of Colorado at Denver's College of Business and Administration;

Stephen C. Thomas is associate professor of Chinese politics at the University of Colorado at Denver. The authors would like to thank the Center for International Business Education and Research (CIBER) of the Institute for International Business and the College of Business of the University of Colorado for their generous support of the research that led to this article.

Other securities traded in the Shenzhen and Shanghai markets include corporate bonds (including convertible bonds); T-bonds with spot trading; repurchase agreements (repos); futures trading; other small markets for investment funds (similar to US closed-end funds); and warrants and rights. All of these instruments are traded together with A and B shares on the single trading floor of each exchange, using highly automated procedures similar to those used in the NASDAQ market in the United States.

In addition to shares available on the domestic markets, shares of 22 large Chinese companies (each with total assets of more than ¥1 billion), called "H" shares or "Red Chips," trade on the Hong Kong Stock Exchange. According to recent press reports, some H-share companies are planning shortly to issue convertible bonds in Hong Kong—bonds that can be converted into shares of common stock prior to a specified future date. One Chinese venture is listed directly on the New York Stock Exchange (Brilliance China Automotive Holdings Ltd.), and five other Chinese companies (China Tire Holdings Ltd., EK Chor China Motorcycle Co. Ltd., Huaneng Power International, Inc., Shandong Huaneng Power Development Co., Ltd., and Shanghai Petrochemical Co. Ltd.), are listed as American depository receipts (ADRs) on the New York exchange. Two Chinese companies have issued convertible bonds in Luxembourg, and an October 1996 agreement with London Security Exchange officials should allow Chinese companies to list on the London exchange in the near future.

The number of companies listing shares on China's two exchanges has been growing steadily. By the end of November 1996, though, there were only 484 A-share listings on the two exchanges—205 on the Shenzhen exchange and 279 in Shanghai. There were 85 B-share listings altogether (43 in Shenzhen and 42 in Shanghai). The total combined capitalization (the total of the market price per share of each company multiplied by the total number of outstanding shares in each listed company) for A shares was ¥1.06 trillion (roughly \$128 billion)—¥562.3 billion (\$67.8 billion) in Shanghai and ¥498.7 billion (\$60.2 bil-

lion) in Shenzhen. The combined B-share market capitalization stood at ¥33.7 billion (\$4 billion), ¥12 billion (\$1.4 billion) in Shanghai and ¥21.7 billion (\$2.6 billion) in Shenzhen.

These figures reveal that China's securities markets are relatively small, even compared to other developing country stock markets. But a large jump in market capitalization is unlikely in China, as the government's listing procedures are quite cumbersome. The State Planning Commission, the China Securities Commission (CSC) under the State Council, the China Securities Regulatory Commission (CSRC), the State Commission for Restructuring the Economy, the Ministry of Finance, and other ministries jointly set a yearly capital quota to limit the number of new listings. For example, the value of the total quota for new shares to be issued from mid-1993 through mid-1994 was ¥5.5 billion, with the par value of new shares set at ¥1 per share, so that 5.5 billion new shares could be issued during that period.

These bodies allocate part of the annual quota to each province for the issuance of initial public offerings (IPOs). The province then selects companies from among those that have applied, basing their decision on the amount of the yearly share-capital quota, and whether the company is in a sector that has been targeted by the central government as a development priority. After making their selections, the provincial authorities submit their recommendations to the CSC and CSRC for final approval. The fact that the government, rather than investment banks or other financial services firms, selects companies to be listed underscores the reality that the decision about which companies may issue shares is based less on company fundamentals than on political concerns, including the central government's desire to strengthen State-owned companies in certain strategic industries.

Until recently, the Shanghai exchange was about twice the size of the Shenzhen exchange, but is currently only about 20 percent larger in terms of market capitalization. The Shanghai exchange represents a more national market, though most of its listed companies tend to be medium-sized SOEs with total assets over

*Listed companies
are chosen by
the government based
largely on Beijing's
development goals.*

¥500 million from the Shanghai industrial region. In Shenzhen, in contrast, the listed companies tend to be slightly smaller than those in Shanghai and generally are located around the Shenzhen Special Economic Zone near Hong Kong; many of the Shenzhen-listed companies are involved in real estate. The majority of companies listed on both exchanges are State-owned, but non-State-owned companies such as the Yan-Zhong Industrial Co., and joint ventures such as Qingdao Brewing Co. and Shen-Nan Electric Power, are also listed.

In 1996, Shenzhen began to list more companies from farther afield, reportedly in an attempt to compete with Shanghai. For example, Northeast Pharmaceutical Group of Shenyang, Liaoning Province, listed shares on the SZSE in June 1996. Shenzhen is expected to attract more Hong Kong commercial and real estate investments after July 1997, when Hong Kong reverts to PRC rule. Shanghai, for its part, is home to the increasingly important Pudong New Area, which has already emerged as a leading commercial and industrial hub, and is well on the way to reclaiming its former role as the financial capital of China.

REINING IN THE MARKET

From the markets' beginning, though, Beijing has grappled with the need to pursue further reforms while keeping a tight hand on market operations. PRC leaders made sure, for example, that neither individual Chinese nor foreign stockholders would be able to gain a controlling interest in any listed company. Only about 20 percent of total shares are tradeable on either the Shanghai or Shenzhen exchanges, roughly 18 percent of which are A shares and 2 percent of which are B shares. Of the remaining untradeable

Few of China's successful private or joint-venture companies are listed on either of the two exchanges.

80 percent, 30 percent are owned by the national, provincial, and local governments ("State-owned shares"), and 45 percent are owned by Chinese institutions ("legal person shares"), usually other SOEs. The remaining 5 percent are retained by the issuing companies and their employees. Of the shares that are tradeable, 80 percent are held by the roughly 20 million Chinese individual investors, 10 percent are held by Chinese institutions such as enterprises or commercial banks, and 10 percent are foreign-owned B shares.

Because the listed Chinese companies are chosen by the government based

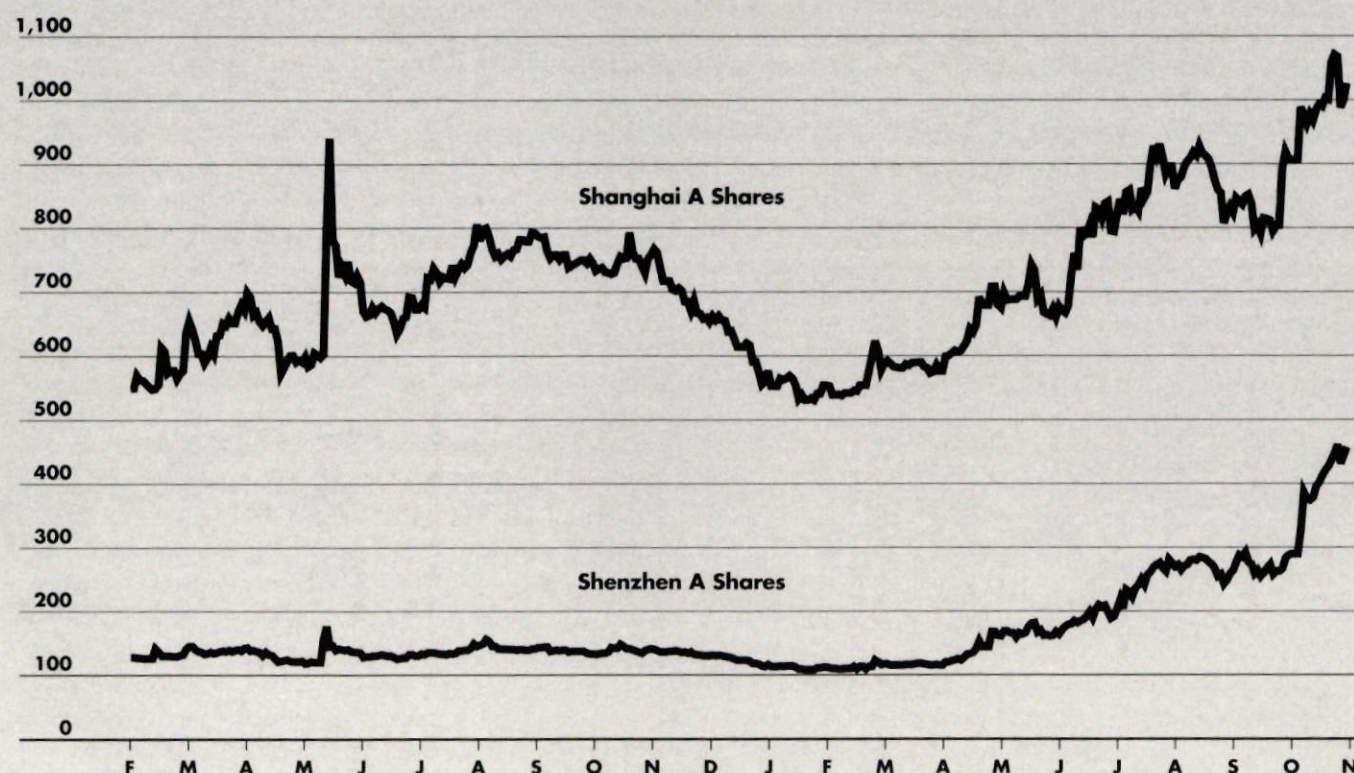
largely on Beijing's development goals, few of China's successful private or joint-venture companies are listed on either of the two exchanges. The large SOEs that are listed tend to be companies involved in heavy industry, while the medium-sized listings tend to be consumer goods companies in Shanghai or real estate firms in Shenzhen. Though the listed companies are supposed to be among the most successful State-owned companies and must have earned annual profits of 10 percent per year for three years prior to listing, the companies are still part of the slowest-growing sector in the Chinese economy, accounting for only about 30 percent of the country's industrial output, according to the World Bank. Private, joint-venture, collective enterprises, in contrast, are now responsible for nearly 70 percent of industrial output, and consistently post larger profits.

In addition to Beijing's use of the stock markets to advance political goals, SOE practices also conspire against the natural workings of China's securities markets. In

SOEs, for example, managers must adhere to State-set goals such as maintaining high employment levels, and their accounting methods often are not based on internationally accepted practices. Though shareholder meetings are held annually for listed SOEs, shareholders have relatively little input in company decisionmaking and firms generally are not very accountable to shareholders (see *The CBR*, January-February 1996, p.34).

Also, though A and B shares represent an equal amount of ownership in a company, A shares usually trade at prices 200-300 percent higher than B shares in the same company. This is because institutional investors, who tend to trade less frequently, dominate the B-share market, leading to low trading volume and, therefore, to lower prices. In Thailand, which maintains similarly bifurcated foreign and domestic stock markets, foreign shares, by contrast, trade at a premium because the Thai market has attracted larger numbers of individual foreign investors. But foreign individual purchases of B shares have

SHANGHAI AND SHENZHEN A SHARE INDICES, 1995-96



SOURCE: Dharmala Capital (Asia) Ltd., http://www.dharmala.com.hk/regional_daily/archive.html

lagged in China because of the difficulty foreigners face registering to buy shares and obtaining timely information about B-share prices. Though dividends, evidence of a company's profitability, are equal in value on both markets, A shares have an average dividend yield (the dividend divided by the stock price) of 3 percent, while B shares have an average yield of 6 percent.

A "POLICY" MARKET

One result of the unfavorable political and structural characteristics underlying the securities markets has been extreme volatility—a major problem from the start, particularly on the Shanghai floor. The fluctuations also were driven initially by a popular frenzy among Chinese investors, who looked for quick profits from IPO purchases. Periodic changes in government policies have succeeded as well in driving the markets either up or down, regardless of individual company performance or the overall performance of the Chinese economy.

Another factor contributing to volatility has been the inadequate access to information on company fundamentals, including management and accounting practices, and the dearth of news available on low profitability or management or production problems. This lack of accurate information about the fundamentals that should guide the decisions of long-term investors has contributed not only to market volatility, but also to frequent insider trading on particular stocks and movements based on rumors of changes in government policy. Consequently, few Chinese invest for the long term, but instead concentrate on earning short-term profits. Meanwhile, long-term Chinese institutional investors such as the emerging Chinese pension funds and life insurance companies are currently not permitted to invest in stocks.

And Beijing, by virtue of its power to set macroeconomic policy and to issue important national regulations and laws, continues to control the markets in both Shanghai and Shenzhen. Shenzhen, as a Special Economic Zone, perhaps has more freedom over its operations than Shanghai, and also is expected to be influenced by the Hong Kong securities market after 1997. For example, more Hong Kong investors may rush to buy

Shenzhen B shares, pushing B-share prices higher, which could encourage the Shenzhen market to adopt more international market practices. The policies or proposed policy changes of local governments also have affected market operations. For example, the SZSE unilaterally hinted in early 1996 that it might permit Chinese to buy B shares, sending B-share prices up sharply before the CSRC formally prohibited this step in an announcement in September (as of mid-December, however, the CSRC was finding it difficult to enforce the ban, and press reports suggest that PRC investors continue to purchase SZSE B shares).

A WILD RIDE

From December 19, 1990, to November 28, 1996, the Shanghai Exchange Composite Index has increased about 900 percent, or an average of about 150 percent per year—though the market has been down on average since reaching an all-time high of 1,526 in February 1993. Notwithstanding the SSE's impressive overall performance, Shanghai A shares have borne the brunt of the markets' volatility (see graph). In terms of the ratio between the high and low of the market's composite index for each year, the Shanghai A-Share Composite Index ratio went from 7:1 in 1992, down to 3:1 in 1994, while Shenzhen's A-share ratio moved from 4:1 in 1991 and 1992, down to 2:1 in 1993, 1994, and 1995. The Shanghai Exchange Composite Index, including both A and B shares, went from about 100 at the opening of the SSE in December 1990, up to a high of 1,503 on May 25, 1992, when the government first allowed security prices to rise without limit (between December 1990 and May 1992, share prices were allowed to increase by only up to 300 percent per year). The index then plummeted back to 393 in November 1992, probably because new listings created a short-term oversupply of shares. This see-sawing has continued, with highs and lows triggered by tighter or looser government controls over new listings. For example, a failed attempt in February 1995 by a number of brokerage firms to manipulate the T-bond futures market was followed by months of wild speculation; almost half of the market's

B shares are held mostly by foreign institutional investors and are not highly traded.

total capitalization flowed out of stocks and into T-bond futures. But on May 17, 1995, the CSRC suspended T-bond futures trading, which led to a sharp increase in the volume of stock shares traded.

The Shenzhen exchange, though much less volatile, also tends to be influenced by changes or proposed changes in government policy. The Shenzhen Composite Index moved from 100 in April 1991 up to a high of 352 in February 1993, and stood at 416 on November 28, 1996. This activity represents a 316 percent increase in nearly 6 years, or 53 percent per year. A and B shares on both exchanges surged significantly in 1996, but new reports of insider trading prompted new limits on daily share price movements by year's end.

B shares on both exchanges have proven far less volatile. The SSE B-Share Index, beginning on February 21, 1992, hit a high of 110 in 1993, but foreign investors likely were distracted from the China market by the H-share issues in late 1993 in Hong Kong, an older exchange with a more secure legal footing. In 1994, the SSE index hit a high of 104 but retreated to 62, then traded down, hovering in the middle 40s through 1995 and early 1996. By November 28, 1996, however, the Shanghai B-Share Index had risen to 58.82. In Shenzhen, B shares began 1993 at 112 and reached a high of 185 in February before falling to 81 that August. The index fell to a further low of 59 by the end of 1995. During 1996, though, the Shenzhen B-Share Index bounced back, reaching a high of 135 on November 28.

The B shares are held mostly by foreign institutional investors and are not highly traded. Though B shares are designed for non-Chinese investors, the same problems that deter Chinese A-share investors tend to discourage foreign

B-share investors. These problems include the lack of a legal framework, the relative illiquidity of the market because of its small size, and incomplete or opaque company and market data.

Foreign investors thus have retreated from their initial 1992-93 interest in the "China concept"—buying B and H shares to ride the wave of China's fast-paced

economic growth. Many B-shareholders sold when they realized that the China market was relatively illiquid—and that most PRC shares represented only the best firms in the State sector, the least profitable part of China's economy.

An early player in the China market, the Templeton Emerging Markets Fund purchased substantial H-share holdings

through mid-1996 and has shown the greatest interest in Chinese securities. Templeton now holds more than 10 percent of the H shares of five PRC companies. By late 1996, however, these five firms, and other H shares, had seen their market value decrease; some H shares were trading below their IPO prices. Like B shares, the H-share companies

STOCK MARKETS IN PERSPECTIVE

Richard Margolis, first vice president of equity research at Merrill Lynch (Asia Pacific) Ltd. in Hong Kong, spent 14 years in the British diplomatic service and acted as deputy political advisor to the Hong Kong government from 1981-86, where he assisted in the negotiations to transfer Hong Kong to Chinese rule. He spoke with CBR Assistant Editor Catherine Gelb in December 1996 about the consequences for the Hong Kong and Chinese stock exchanges of the July 1997 transition.

CBR: *What are the greatest strengths and weaknesses of the securities markets on the mainland?*

Margolis: From an international investor's perspective, the greatest weakness of the China markets is the low levels of liquidity in the B-share markets. Although there has been an increase in turnover, especially in Shenzhen in recent months, overall liquidity levels in the B-share markets have been very low. The markets as a whole remain volatile and speculative; Beijing has found it difficult to enforce the restrictions preventing domestic investors from buying B shares. The relevant authorities in China are known to wish to see more steady and less volatile trading patterns in the domestic equity markets. The principal strength of the market lies in the modern trading and settlement systems, combined with a nationwide satellite communication system that enables investors all over the country to deal in real time in both markets.

CBR: *What are the strengths and weaknesses in the Hong Kong stock exchange,*

in comparison? Are investors in the Hong Kong stock market likely to be jittery in the coming months because of the bandover in July 1997?

Margolis: The Hong Kong stock market, by comparison, has much greater depth, many larger companies with established reputations and track records both domestically and internationally, and is a core holding in all regional and most global portfolios. Although total turnover on China's exchanges has, in recent weeks, often exceeded that of Hong Kong, average liquidity levels over time have nevertheless been significantly higher in Hong Kong. There is no discrimination between local and non-local investors in Hong Kong, nor any limits on foreign ownership. The major weaknesses of the Hong Kong Stock Exchange in recent years have been problems over the governance of the exchange, and the tendency of the Stock Exchange and the Securities and Futures Commission to engage in public disputes on these matters. The situation has improved substantially, however, over the last couple of years.

CBR: *What types of listings do you expect to see offered in China in the next year?*

Margolis: Prospective China listings over the next year will follow a similar pattern to that in recent years. The biggest and most attractive offerings will be listed as H shares in Hong Kong, probably with a dual listing in New York in American depository receipt (ADR) form. Following the recent signing of a Memorandum of Understand-

ing with the authorities in the United Kingdom, it is possible that one or two such companies might have their second listing in London instead of New York. The authorities in China have also stated their intention to improve the size and quality of B-share offerings. In general, priority will continue to be given to the privatization of the State enterprises.

CBR: *Where do you see the two China exchanges and the Hong Kong exchanges moving over the next five years? Will they be joined somehow or will they remain separate?*

Margolis: I think it unlikely that the two China exchanges and the Hong Kong exchange will be merged in five years' time, although it is likely that there may be closer contacts and cooperation. The key to future development in China lies in unification of the A- and B-share markets and in the listed companies' ability to turn in steady increases in earnings per share. As far as Hong Kong is concerned, given the small size of the average Hong Kong enterprise, the key to maintaining and developing Hong Kong's role as the premier Asian market outside Japan will be to develop its regional role; in addition to attracting China listings, Hong Kong will also need to attract secondary or dual listings from other countries in the region and to consider what new products might also contribute to this process. The Hong Kong Stock Exchange is actively examining these possibilities at the moment.

tend to suffer from poor management, share illiquidity, and lack of reliable statistics.

INVESTORS ROLL THE DICE

Chinese investors, too, have become more cautious. In many cases, individual investors tend to treat a share purchase as akin to casino gambling and look to make short-term profits based on rumors, insider information, and/or changes in government policies, rather than on the business fundamentals of the actual companies. Probably partly because of the early volatility, particularly on the Shanghai A-share market, overall market capitalization has been stable or declining since 1993. Though the number of Chinese investors has increased substantially to the current level of about 20 million, they have yet to begin funneling large amounts of individual savings into stocks. Instead, Chinese investors have been most interested in obtaining A shares in IPOs, where there is a better chance to make a short-term profit. In 1993, profits could be as high as 300 percent on some IPOs, though the current profit level is about 50 percent on the IPO price. Currently, some IPO shares are purchased through a lottery system, in which individual investors buy a lottery coupon which, if they win, gives them the right to purchase a certain number of shares. However, only 1-2 percent of the individuals who apply to buy into IPOs through the lottery system are selected. A second system for allocating new shares has also been introduced, in which the investor deposits funds for a certain number of shares at a fixed price, but then receives pro rata shares based on the number of shares requested by all potential investors.

For investors looking at China's stock markets today, however, the news is not all negative. The volatility of the markets has decreased since 1992, when the Shanghai A-Share Composite Index high-to-low ratio was 5:1. Because A- and B-share prices are below their historic highs of February 1993, the typical price/earnings per share (P/E) ratios have improved dramatically. Since 1994, P/E ratios of both A and B shares have fallen significantly, to 10 and 7, respectively, and currently remain around these levels, assum-

ing the accuracy of earnings figures. In comparison, a typical US company has a P/E ratio of about 16.

Despite Chinese government concerns about excessive speculation if it loosens its hold on the market, the PRC government is committed to encouraging the confidence of both Chinese and foreign investors. The government recently has established various policies to try to ensure market health, including a directive issued by the CSRC ordering brokerage firms to decrease commission costs, a move that stimulated A-share purchases among Chinese individual investors.

FORTIFYING THE LEGAL FRAMEWORK

Perhaps the greatest hindrance to the market's smooth development, though, has been the government's failure thus far to pass an overarching national securities law. In the absence of such a law, a patchwork of rules and overlapping authorities guides the markets, leading to many unfair trading practices. The People's Bank of China (PBOC), China's central bank, oversaw the securities markets until October 1992, when CSC and CSRC were established. CSC, composed of high-level government officials from different ministries, is charged with establishing policies and regulations for the emerging security markets. CSRC, as CSC's executing organization, deals with the daily business issues of the exchanges and enforces CSC rules and regulations. PBOC, the Treasury Bond Division of the Ministry of Finance, the State-owned Assets Administration, the State Commission for Restructuring the Economy, and other government organizations are all involved in the development or approval of rules and regulations and the approval of applications for participation in the securities markets. The local governments in Shanghai and Shenzhen also influence policymaking and exercise some control over their respective markets.

In September 1996, the State Council took further steps to increase CSC/CSRC authority over the securities markets with the issue of the Securities Firm Management Regulations. The regulations, which took effect immediately, replaced provisional 1993 rules and shifted authority for oversight and interpretation of new regu-

lations controlling Chinese securities firms' business activities to CSRC. Despite the fact that CSC will continue to have final approval over CSRC activities, CSC members are not experts on securities matters. CSC thus can be expected to continue to follow CSRC recommendations, as CSRC officials tend to be securi-

*Brokerage firms can no longer
hold more than 80 percent of
their assets in stocks.*

ties market professionals familiar with the detailed needs of continuing reforms. In any case, under the new regulations, CSRC is still responsible for monitoring daily exchange operations, a move that likely includes the power to issue regulations.

The new regulations also formally prohibit insider trading and require public disclosure of all company information that could cause extreme share price fluctuations. Other provisions of the regulations seem aimed at professionalizing the brokerage business at trading firms. For example, the regulations state that brokerage firms can no longer hold more than 80 percent of their assets in stocks; that two-thirds of the managers of every brokerage firm must now be certified by CSRC; that 5 percent of a firm's profits must be set aside as reserves; that firms must develop adequate risk-monitoring systems; and that no firm can buy more than 20 percent of a given listed company's circulating shares in any one day. The regulations also detail a range of punishments for broker violations, ranging from warnings to fines of ¥30,000-¥500,000 (\$3,600-\$60,000), and suspensions from trading of up to one year. Though they fall short of a comprehensive national law, these new regulations, once implemented, should help increase investor confidence and could explain the market's recent upturn.

Other laws and regulations also control some aspects of market transactions, including the Company Law of the People's

Republic of China, released in July 1994 (see *The CBR*, May-June 1994, p.48); and Provisional Regulations for Stock Issuing and Trading, and Detailed Implementations of the Disclosure Requirement for Stock Issuing Companies, both issued by the CSC in 1993.

CSRC, meanwhile, has begun to take the lead in remedying some of the market's regulatory weaknesses. CSRC issued new regulations on January 1, 1996, calling for a change in trading and reporting requirements for B-share issuing compa-

fect, CSRC will still be able to regulate the total number of shares because all new issues will be subject to final CSRC approval. A joint PBOC-CSRC order also required all financial institutions, from State banks to non-bank financial institutions, to divest themselves of their brokerage businesses by the end of 1996.

The proposed securities law, however, is in its 13th (at least) draft and there is no date for its final approval by the National People's Congress. Some industry analysts have suggested that the long delay in the law's promulgation may derive from uncertainty over the effects on the markets after the 1997 return of Hong Kong to Chinese sovereignty, or from concerns about the effectiveness of the law in the face of weak enforcement mechanisms.

The unfinished legal environment presents pressing problems for the investor, the trader, and the listed companies themselves. Though few rules and regulations protect investors, traders and listed companies find that the many rules and regulations that apply to them conflict with each other. Ironically, it is probably fortunate, in this environment, that enforcement of these regulations is generally lax, leaving few of the contradictory rules to play out.

Most Chinese officials and trading firms agree that a national securities law is urgently needed to help curb unfair practices such as insider trading and ramping (market manipulation by a few large investors). Foreign investors would no doubt be reassured by regulations that place Chinese companies under greater regulatory scrutiny and impose the kind of reporting requirements widely accepted in developed markets. Nonetheless, many current Chinese practices are similar to those seen in the early stages of the development of security markets in Singapore, Hong Kong, Taiwan, South Korea, and other developing countries.

Beyond the steps being taken to create a much-needed legal framework and securities regulatory body, though, China also must develop further its financial services infrastructure to support the orderly functioning of the market. The establishment of qualified accounting firms (and the adoption of IAS by Chinese accounting firms), securities law firms, independent asset-appraisal companies, and fair

and consistent enforcement agencies and practices, would all help strengthen the rule of law. China's troubled banking sector, too, hinders the smooth development of the securities markets (see p.16). For example, banks in the West act as crucial intermediaries, bringing new investors to the securities markets and identifying new companies and instruments for listing. In China, though, banks have found that their greatest role is to funnel the nation's individual savings into loans to support ailing SOEs. In many ways, the securities markets are a reflection of the state of China's overall economic infrastructure—developing, but very much a work in progress.

BULLISH PROJECTIONS

China's markets represent an interesting and important experiment in market socialism. Although Beijing has denied repeatedly that it is moving toward full-blooded capitalism, the securities experiment is a capital market, albeit modified in important ways in terms of entry and trading. This sector holds the key to China's economic future to many, though not all, Chinese officials. And while it is still a relatively new experiment and overall market growth has been carefully controlled, the securities reforms seem to be moving forward, slowly but steadily, along with China's other reforms.

Looking ahead, some market analysts predict a merger of the A- and B-share markets in the foreseeable future. One factor in particular that might encourage such a merger is the gradual but sustained movement toward full convertibility of the RMB. Since December 1, 1996, the RMB formally has been freely convertible to foreign currency for funds under the current account (see p.20).

A major stumbling block to merging the two markets, though, will be the PRC government's wish to control foreign participation in the Chinese stock markets. Moreover, before the A and B markets can be merged, the Chinese government will need to issue new measures or regulations to substitute for the restrictions on foreign ownership that the A-share/B-share structure currently enforces. Beijing might be able to substitute regulatory limitations on foreign ownership for the current bifurcated structure. When such regulations are developed, they will very

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People's Congress.

nies. B-share companies must now have standard annual audited financial reports based on International Accounting Standards (IAS). Under the new rules, the reported annual profits of some of the B-share companies are less than 10 percent.

CSRC has also moved to clamp down on illegal practices, particularly on the Shenzhen exchange. In late September 1996, for example, CSRC reportedly forced brokers in Shenzhen to stop lending money to investors for stock purchases, and also announced the (apparently less-than-successful) formal ban on the purchase of B shares by PRC citizens, which has been rampant in Shenzhen since early 1996.

Other recent CSRC moves also could help smooth out market operations. In September, CSRC announced that it would phase out the share-quota system, in which the State Planning Commission, with the CSC and CSRC and other organizations, set the yearly quota for the number of new shares allowed to list on the exchanges. The new system, called a "company quota system," will no longer restrict the number of shares a company will be able to issue. Provinces and government ministries will still select the companies for listing, though, and, in ef-

likely be based on recent practices in other developing financial markets such as Taiwan's, where foreigners cannot hold more than 10 percent of a company's total shares. Though the current market structure makes investing rather inconvenient for foreign individual investors and too illiquid for many foreign institutional investors, a new policy merely restricting ownership levels would probably attract foreign funds quickly, up to the government-imposed limitations.

Another factor that will influence the merger of the A- and B-share markets is the effect of Hong Kong's return to PRC sovereignty, which should have a significant impact on the Shenzhen market. The familiarity of many Hong Kong residents with the Shenzhen economy could spur further SZSE B-share purchases. Once they adopt Chinese citizenship, though, Hong Kong residents should be able to purchase A shares as well as B shares. And once they are able to buy A shares, Hong Kong residents could be less willing to purchase Shenzhen B shares. In either case, enthusiastic Hong Kong participation in Shenzhen could lead to a merger of the Shenzhen A- and B-share markets, while the Shanghai markets remain separate. The H-share market, assuming that China keeps the current system in place on Hong Kong's exchange, should remain unchanged (see p.12).

Other factors that are likely to influence the A- and B-share market merger include the continuation of reforms that make China's economy ever more market-oriented, and the speed of the growth and maturity of China's securities markets.

Despite reforms that hint at a market merger, A- and B-share market indices actually have been diverging in recent months. This divergence perhaps reflects general "market sentiment" against such a merger. Nonetheless, some analysts still expect the markets to merge, with limits imposed on the level of foreign ownership. If this merger indeed takes place, the B shares currently discounted by up to 300 percent likely would prove profitable long-term investments.

The most important determinants of market development, however, are surely the attitudes of the next generation of Chinese leaders. A few key issues will likely be decided at the highest lev-

els of government, including listing stocks on the basis of economic, not political or policy, criteria; requiring companies to adhere to IAS; and permitting managers to run enterprises on the basis of market forces rather than social policy. All indications suggest that leaders such as President Jiang Zemin and Executive Vice Premier Zhu Rongji support the continuation of market reforms, in part because of their firsthand experience in guiding Shanghai's economic reforms. In particular, they can be expected to support the regulatory and procedural reforms that SSE officials and other market participants, in recent interviews, stress are crucial. The continued reforms are unlikely to permit the increase in potentially speculative markets such as futures and options, however, especially in the wake of the 1995 problems with T-bond futures.

In the short term, assuming that the Chinese economic reforms continue and the economy keeps growing at an average rate of about 10 percent per year, China's shares would seem to be relatively inexpensive compared to those in other developing countries—particularly the B shares. Also, the recent cuts in interest rates for savings accounts in banks (from about 11.5 percent down to 10 percent) may encourage more domestic investors to test the stock market waters.

Over the long term, China's domestic securities market will probably benefit not only from the ever-greater pool of domestic savings, but also from the reforms of China's retirement and unemployment systems. Pension and unemployment insurance funds have already generated an estimated ¥37 billion (\$4.4 billion) that currently can be invested only in Chinese T-bonds and bank deposits. As China's security markets—and China's investors—become more sophisticated, a rise in the numbers of longer-term investors and a more stable market seem a reasonable bet. And even if further reforms are slow in coming, the listed companies and their shares may still be a worthwhile investment, if only because they pay dividends, have increasingly attractive low P/E ratios, and provide a way for Chinese and foreign investors alike to tap into one of the world's fastest-growing economies. 完

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The Heart of Economic Reform

*China's
banking sector
is struggling to
keep up with
market reforms*

Raymond J. Blanchard, Jr.

By strictly physical measures, China already has one of the world's largest banking markets. In 1995, there were more than 2.8 million employees working in more than 500,000 PRC banking and credit institutions. The four State-owned commercial banks (SOCBs) that dominate the market—Agricultural Bank of China (ABC), Bank of China (BOC), China Construction Bank (CCB), and Industrial and Commercial Bank of China (ICBC)—had combined assets in 1994 of more than \$830 billion, on which they reported \$6.3 billion in pre-tax profits. In 1994, these banks issued just over 60 percent of China's total loans—down from about 80 percent in the late 1980s—controlled over 80 percent of the country's financial assets, owned over 70 percent of all Chinese bank branches, and employed 57 percent of all financial-sector personnel. Massive though they are, these SOCBs remain saddled with State-owned enterprise (SOE) debt and continue to perform inefficiently by international standards.

While foreign funds have contributed to China's economic growth of the past decade, the vast potential of China's household savings continues to go unrealized, as these savings are channeled largely into the State banks, which lend much of their funds out to unprofitable SOEs. Fortunately, Beijing has begun to implement gradual steps aimed at freeing the banking sector from the central credit plan and to permit the growth of banking services and foreign bank participation, two steps which are needed to commercialize the country's financial sector.

ASSIGNING RESPONSIBILITIES

Though China has had no bank runs in the last 47 years (since the government nationalized all banking institutions), the central government is becoming less willing to continue underwriting all credit risks. The reform of China's banking industry, like many other economic reforms, began in the early 1980s (see *The CBR*, November-December 1995, p.35). The People's Bank of China (PBOC) was designated as the country's central bank in 1983, after which financial institutions and products, as well as regulations, multiplied. In 1994, Beijing created three new "policy" banks—the State Development Bank, the China Export-Import Bank, and the Agricultural Development Bank—to assume the policy-lending functions of the four main SOCBs. The move was intended to allow the SOCBs to provide a wider variety of banking services, theoretically on commercial terms, while the new policy banks would concentrate on government-directed policy lending for infrastructure development in their respective sectors and for SOE operating costs.

Since the creation of the policy banks, however, the government has prevented SOCBs from operating on purely commercial terms. In 1995, for example, PBOC, under the control of the State Council, directed SOCBs to dole out 66 percent of their loans to SOEs. Further, the policy banks raise funds by issuing government-guaranteed bonds, which Beijing forces SOCBs to purchase. Such forced lending activities and bond purchases prevent the SOCBs from undertaking more lucrative revenue-generating activities.

Raymond J. Blanchard, Jr.
is currently an analyst at an investment
bank in Hong Kong and previously was
a Beijing-based financial consultant.

Existing policy loans, which generally are not expected to be repaid, have risen rapidly from about 5 percent of GDP in 1986 to about 11 percent in 1995. While the policy loan burden is gradually being fiscalized into the government's accounts, policy loans still constitute more than a third of SOCBs' outstanding loan portfolios. The government intended that the new policy banks would assume all new policy loans, but not inherit the outstanding stock of non-performing loans. Consequently, all of the non-performing loans remain with SOCBs and are simply rolled over. As long as the central government provides the guarantee that it will stand behind commercial banks in the event of a financial crisis, SOCBs are unable to refuse to renew non-performing loans. SOCBs had total non-performing loans in 1995 of about ¥805 billion (\$97 billion), or 14 percent of that year's GDP, according to the official PRC publication *China Business Week*.

Government-directed capital thus severely distorts SOCBs' cash flow. World Bank statistics also reveal that in 1995 SOCBs absorbed 85 percent of all deposits nationwide. Of the 66 percent of their total loan portfolio allocated to SOEs in the form of directed credit, 15-20 percent was used to refinance SOE interest payments. Only about 16 percent of SOCBs' portfolios was left for discretionary credit to non-SOEs. In contrast, non-State banks (a category that excludes the four SOCBs, the three policy banks, the Bank of Communications [BOCOM], and China International Trust and Investment Corp. [CITIC]), allocated about one-quarter of their portfolios to SOEs and gave more than half of their loans to non-SOEs.

China's financial resources remain excessively concentrated in the State sector. China's SOEs absorb 60 percent of national investment; receive subsidies amounting to one-third of the national budget; and employ 70 percent of the industrial labor force, or about 100 million people, of which analysts estimate that up to a third are redundant (see *The CBR*, May-June 1996, p.19). Net credit (credit to the sector minus deposits) to SOEs reached over 12 percent of GDP in 1995, while net credit to non-State enterprises was barely 4 percent of GDP. Thus, about 75 percent of household savings, mediated and directed by the SOCBs, currently

goes to finance SOE operations, according to a recent World Bank study. In spite of tight credit policies in 1995, SOCB fixed-investment loans to SOEs nominally increased 32 percent over 1994, while lending to the private sector nominally declined by 42 percent and loans to urban collectives, by 7 percent.

Further, the efficiency of investment in SOEs has been less than one-third that of non-SOEs, as measured by SOE output growth. Despite SOEs' disproportionate access to investment funds, the average annual growth of their output was just 7.4 percent between 1989-93, compared to 31 percent in non-SOEs. Nonetheless, almost all of SOEs' working capital is provided by SOCB loans, which pay for operating expenses not otherwise met. Central and local officials, fearing massive unemployment if these enterprises go under, continue to "strongly encourage" the SOCBs to keep lending funds, no matter how financially unsound the SOE may be. Most SOEs, though, can afford only about 8 percent of the annual debt service on their outstanding loans. Even worse, most SOEs pay back, at most, the interest on their loans—rarely are they able to pay back any of the principal.

In addition to SOE debt, SOCBs have been forced to operate within the central government's credit plan, which governs each bank's credit volume directly, either in aggregate (by capping different types of lending), or by directing lending into particular sectors. The loan or credit quota system not only has been Beijing's primary means of controlling the national money supply, but also has translated Beijing's investment plans into reality. The government has used the credit quota system to direct investment to priority industrial sectors, forcing SOCBs to disregard loan recipients' creditworthiness. Because smaller, non-State banks have not been subject to the tight, centrally mandated credit quotas imposed on State banks, underground lending markets—bank-to-bank, bank-to-company, and company-to-company lending—have developed in which capital can be obtained at higher than government-set rates. Underground loan transactions, potentially punishable by death, have involved banks circumventing interest rate caps by offering borrowers loans at rates that have tended to be about twice as high as official rates.

The vast potential of China's household savings continues to go unrealized, as these savings are channeled largely into the State banks, which lend much of their funds out to unprofitable SOEs.

Though the difference between official and illegal interest rates has fallen in the wake of lower inflation and more competitive official rates, black market lending reportedly continues.

PRESSING AHEAD

Though SOE debt and what remains of the credit plan hinder full commercialization of SOCBs, many recent reforms are moving China's financial system in the right direction. In 1995, Beijing promulgated the Commercial Bank Law, which introduced a greater degree of autonomy and required all banks to maintain an eight percent capital adequacy ratio. None of the SOCBs has been able to meet this requirement yet, but the Commercial Bank Law, together with the Central Bank Law (also passed in 1995), established a legal foundation for a commercial banking system and provided incentives for intermediaries such as rural and urban co-operatives to become commercial banks.

Beijing adopted several non-administrative methods to control the money supply in early 1996, including the establishment of a local currency interbank market, which created a single electronic currency trading system; the introduction of PBOC open-market operations; and an asset-liability management system that allows a maximum loan-deposit ratio of 75 percent in lieu of strict credit quotas. Implementation of these measures, however, has been on an experimental and limited basis. Also last year, PBOC cut interest rates on deposits, a move that has allowed banks to increase their profit margins and build up desperately needed capital. In August, the General Rules on Loans, the PRC's first systematic code on borrowing practices and loan management, were implemented. Designed to minimize political

APPROVED BANKING SERVICES IN CHINA BY FINANCIAL INSTITUTION TYPE

SERVICE	STATE-OWNED COMMERCIAL BANKS	POLICY BANKS	OTHER COMMERCIAL BANKS	TRUST AND INVESTMENT CORPORATIONS	URBAN/RURAL CREDIT COOPERATIVES (RCCs)	FOREIGN BANKS WITH CHINA OPERATIONS
Deposits ^a				b	c	
RMB	●	d	●	●	●	
Foreign currency	●		●	●		●
Lending						
RMB	●	●	●	●	●	
Foreign currency	●		●	●		●
Syndicated	●		●			●
Mortgages	●		●			
Settlements and remittances						
Domestic	●	●	●			
International	●	●	●			●
Foreign exchange						
Purchase	●		●			only designated banks
Sales	●		●			only designated banks
Bill/note discounts	●		only Hua Xia Bank			only designated banks
Leasing	●		only China International Trust and Investment Corp. (CITIC)	●		
Agency banking	●		only Fujian Industrial Bank		●	
Commission banking	●					●
Interbank transactions ^e						
Deposits	●		●	●		
Credits	●		●	●		
Lending	●		●	●		
Discounting	●		●			
Export credit operations						
Guarantees		●	only China Export-Import Bank and China Investment Bank			
Insurance		●				
Buyers' credits		●	only CITIC			
Sellers' credits		●				
Guarantees ^f						
Letters of credit	●		●			●
Debts/loans	●	●		●		
Securities						
Issues	●		only CITIC	●		
Trades	●		only CITIC	●	only RCCs with central bank approval	
Bonds						
Issue	●	●	●			
Trade	●					
Underwriting	●		only Hainan Development Bank			
Credit checks	●		●	●		●
Consulting	●		●	●		●
PERCENTAGE OF TOTAL SERVICES OFFERED	87%	29%	80%	42%	13%	32%

SOURCE: Raymond J. Blanchard, Jr.

^a Foreign currency deposits and loans can only be from and for State Administration of Foreign Exchange (SAFE)-approved enterprises.

^b Can only accept deposits worth at least ¥1 million and for six months or more.

^c Urban co-ops can only do business with urban customers; same standard applies to rural co-ops and rural clients.

^d Only for enterprises and organizations that have their accounts within the scope of work of the bank.

^e Refers to both domestic and international transactions.

^f Chinese banks can only give guarantees with approval from SAFE and the People's Bank of China.

interference in lending decisions, the rules standardize loan application and management procedures in an attempt to end the practice of enterprises obtaining loans through personal connections or escaping loan payments by restructuring or merging with other enterprises.

In September, monetary authorities announced that the quota system for credit and loans would be phased out in early 1997. Most recently, PBOC was invited to join the Bank of International Settlements (BIS), the prestigious club of wealthy countries' central banks that sets voluntary guidelines on capital requirements for banks and provides monetary assistance to members in times of financial turmoil. PBOC's entry into BIS, expected to be finalized this spring, should prompt China's State-owned banks to improve their financial disclosure statements and strengthen their balance sheets, as BIS member countries are required to enforce the eight percent capital adequacy ratio.

OLD—AND NEW—PLAYERS

Along with the development of new policies aimed at commercializing State banks, an increasing number of alternative financial institutions have begun to emerge over the past 15 years. In addition to the policy banks and SOCBs, China also has national and regional commercial banks, savings banks, non-bank financial institutions, joint-venture banks, and foreign banks (see chart). Together with an emerging securities market (see p.8), all of these institutions help to finance China's economic development in the following ways:

■ **Policy banks** Policy lending, a State Council-mandated, quasi-fiscal operation, currently finances agricultural procurement and development, key State investment projects (especially in the transportation, communications, and energy sectors), and foreign trade transactions. In addition to sovereign government bonds, the policy banks finance their projects through borrowing from international financial markets and capital contributions from the government, rather than with PBOC funds.

■ **SOCBs** The main purpose of both SOCBs and policy banks is to attract inexpensive, long-term capital to ensure credit for SOEs and large State projects. The

four main SOCBs primarily handle clients in their respective sectors: ABC mainly serves the agricultural sector, ICBC serves large industrial SOEs, CCB lends to construction-related companies, and BOC generally finances trade. Because the government sets interest rates, however, the SOCBs have not been able to allocate credit according to market forces or manage risk effectively, resulting in significant losses. Prior to March 1996, SOCBs were forced to pay inflation subsidies on long-term fixed time deposits (3-8 years) as a way to attract long-term nontradeable claims on their loan portfolios to ensure cheap credit for SOEs. In 1995, the average fixed time-deposit inflation subsidy was 12.75 percent. With high deposits and rising long-term deposit rates in 1995, however, monetary authorities discontinued the inflation subsidies on April 1, 1996. The real interest rate on three-year savings deposits turned positive in 1996, yielding about 2-3 percent real returns by the end of the first quarter of 1996, according to the World Bank.

Certain reforms have allowed the SOCBs to expand their business and diversify their revenue bases. SOCBs can engage in trusts and securities, leasing, agent business, foreign exchange, consulting, credit card services, and mortgages. However, SOCBs still do not lend on strictly commercial terms, though this practice should begin to change as the

government phases out the credit quotas and implements a full-scale asset-liability management system. Until the government relinquishes the administrative authority to set bank interest rates, though, SOCBs' new clients and customer fees will serve as their primary revenue sources. Before real interest rates became positive last year, SOCBs' returns on their assets were among the worst in the world, due largely to very low or *negative* net interest margins that created an interest rate wedge on their profits.

If these banks were to write off their bad loans, officially estimated at around 5 percent of their total assets (or 25 percent if rolled-over and re-financed loans that have not been officially labeled "non-performing" are included), the SOCBs would show a negative capital base. It is therefore unrealistic to expect SOCBs to reach the mandatory BIS eight percent capital-adequacy ratio until they have significant earnings to write their loan losses off and/or the Ministry of Finance allows them to write off their bad loans, which is extremely unlikely given the central government's declining revenues as a share of GDP. The last time SOCBs' debts were canceled or written off by the central government was during the structural adjustments of 1962-64.

■ **National commercial banks** China's six national commercial banks—BOCOM, CITIC, China Everbright Bank, China In-

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ON THE ROAD TO RMB CONVERTIBILITY

On December 1, China announced that the country is in compliance with Article 8 of the International Monetary Fund (IMF)'s Articles of Agreement, formally making the country's currency convertible on the current account. With the announcement, contained in a November 27 letter to the IMF from People's Bank of China (PBOC) Governor Dai Xianglong, China has removed all restrictions on payments or transfers for current account transactions (trade in goods and services, and profit remittances) and has formally eliminated discriminatory currency arrangements and multiple currency practices.

While the announcement is largely symbolic, as the *renminbi* (RMB) has been convertible in all but a few minor cases since July 1, 1996, the move appears to signal China's intention to abide by its economic reform plan. The announcement does not mean that the *renminbi* will be traded on international markets or will be valid outside of China. Chinese individuals can now obtain foreign exchange up to a certain limit for specified purposes. Most analysts predict that full convertibility—including capital account transactions—likely will not occur for at least 10 more years. A PBOC official recently stated that capital account convertibility will take "a fairly long time."

Despite China's acceptance of the obligations of IMF Article 8, little is likely to change for foreign investors in the immediate future as a result of this recent move. China's investment regulations still require investors to balance their own foreign exchange, meaning that for every dollar they spend in China they must, in theory, earn a dollar of hard currency. Other administrative procedures and controls on the holding and conversion of foreign exchange—an annual audit, an initial approval by the State Administration of Foreign Exchange (SAFE, previously known as the State Administration of Exchange Control [SAEC]), limits on the number of settlement accounts a foreign-invested enterprise (FIE) can hold, and a ceiling on the amount of foreign exchange a FIE may hold before being obligated to change it into RMB—may

continue to vex foreign investors.

In practice, though, the foreign exchange balancing regulation is seldom enforced, and since late 1993 investors have encountered few difficulties obtaining foreign currency for imports. More problematic, however, have been currency swaps for the purpose of profit repatriation. Some FIEs that have not been able to balance their own foreign exchange have found it hard to repatriate profits, even though profit is considered a current account item.

Prior to January 1, 1994, the PRC maintained a dual exchange rate system, with a fixed official rate and a floating rate quoted at the swap markets. The swap markets, set up in the late 1980s for foreign exchange transactions, allowed foreign and domestic firms to "swap" RMB for hard currency. Under this system, domestic firms were allowed to retain part of their foreign exchange earnings in the form of bank accounts or foreign exchange quota accounts at SAEC, while FIEs could retain all their foreign exchange earnings. Each foreign exchange transaction required pre-approval by the local SAEC branch. When considering whether to approve foreign exchange transactions, SAEC gave priority to export-oriented firms, and was more stringent with those seeking to import. For example, FIEs targeting the domestic market—most notably those in the consumer products sector—often found it hard to swap RMB for hard currency, especially when foreign exchange was in short supply.

In January 1994, Beijing unified the dual exchange rate system, abandoning the official fixed exchange rate and initiating a "managed float" system for the RMB. This change established a bank-based currency exchange trading system for domestic firms, while FIEs continued to use the swap markets (swap market liquidity was maintained through the funds provided by the banking system). Domestic firms, meanwhile, were required to use designated banks to sell or purchase foreign exchange, and were required to sell off all their foreign exchange rather than retain it. When buy-

ing foreign exchange, they needed only present the relevant commercial documents to a designated bank and were no longer required to obtain pre-approval from SAEC for each transaction. FIEs retained the right to hold their own foreign exchange earnings.

In April 1994, the China National Foreign Exchange Trading Center (CFETC) was established in Shanghai as an interbank foreign exchange trading system with member banks nationwide. Designated PRC foreign exchange banks were permitted to trade in the interbank market to adjust their foreign exchange positions resulting from their currency transactions with domestic firms; foreign banks were allowed to trade on behalf of FIEs. CFETC also integrated most of China's major swap centers, vastly improving liquidity throughout the swap market system.

By March 1996, with the country's foreign exchange reserves totaling more than \$75 billion, PRC officials initiated a pilot program whereby FIEs were allowed to purchase and sell foreign exchange directly at designated banks in Jiangsu Province, and in the cities of Shanghai, Dalian, and Shenzhen. The pilot program was expanded to the entire country on July 1, 1996, enabling FIEs to conduct foreign exchange transactions at designated banks or swap centers, which have continued to operate.

SOME STRINGS ATTACHED

With the expansion of the pilot program last July, China's currency effectively became convertible for purposes of trade. Certain administrative restrictions remain, however. Some important features of the current foreign exchange system include:

- **Separation of accounts** FIEs must report all their foreign exchange bank accounts to SAFE, and separate their accounts according to the source of foreign exchange. Each FIE can open only one settlement account for trade-related receipts and payments. SAFE sets a ceiling on the amount of foreign exchange each firm can hold in its settlement account according to the amount of the FIE's paid-in capital and trade vol-

ume. Foreign exchange in excess of the ceiling must be sold to one of the designated banks.

• **Annual inspection** To open a foreign exchange bank account, an FIE must obtain a Foreign Exchange Registration Certificate (FERC) from SAFE. Each year, SAFE designates certain accounting firms to conduct annual foreign exchange inspections of all FIEs, and stamps its approval on the FERCs of those that pass inspection. The stamped FERC must then be presented to the bank or swap center to conduct foreign exchange transactions. In the past, the inspection focused on whether the firm paid in its capital contribution on schedule, registered all bank accounts and loans with SAFE, and fulfilled its contractual export commitments. FIEs that failed to pass the inspection had to obtain SAEC approval on a transaction-by-transaction basis to purchase or sell foreign exchange. However, FIEs report that fulfillment of contractual export commitments is no longer enforced—SAFE continues to conduct inspections, but does not look at exports.

• **Speedier current account transactions** FIEs now have virtually unrestricted access to foreign exchange transactions for trade-related purposes, though controls remain in place on capital account transactions. Provided that the FIE can prove that the transaction is for trade purposes and has passed its annual SAFE inspection, any FIE can purchase and sell foreign exchange at either a designated bank or through a swap center without SAFE approval.

• **Differential treatment of domestic companies and FIEs** FIEs can keep their foreign exchange in bank accounts, up to a certain limit, and are supposed to draw down the foreign exchange account before swapping RMB for hard currency. Domestic firms must sell all their foreign exchange earnings to the banks as soon as they are received. Though FIEs currently retain access to foreign exchange swap centers, domestic firms can conduct foreign exchange transactions only with designated banks. It is only a matter of time, however, before the swap centers are replaced completely by the bank-based

foreign exchange trading system.

• **Central bank control over foreign exchange supply** Designated domestic and foreign banks (acting on behalf of PBOC) conduct foreign exchange transactions with companies. In addition to their foreign exchange capital and international borrowing, these banks are allowed to keep a certain amount of foreign exchange as working capital for foreign exchange transactions, but any foreign exchange exceeding the ceiling must be sold to PBOC. These designated banks can also trade in the interbank foreign exchange market. PBOC retains the right to intervene in the interbank market to stabilize exchange rates.

Currency convertibility has long been a significant risk factor for foreign firms considering doing business in China. The new system should alleviate some worries, as it eases or removes previous restrictions on currency conversion for trade and profit repatriation. But Chinese officials remain reluctant to eliminate the last vestiges of foreign exchange control, namely, regulatory export and foreign exchange balancing requirements. That these controls remain inscribed in industrial policy does not necessarily indicate a determination to keep exports high, but may be to provide security should the country encounter balance of payments problems. While China's foreign exchange reserves surpassed \$100 billion in 1996, it is possible that an economic downturn or sudden foreign exchange shortage could prompt the government to use these administrative tools to limit RMB convertibility.

THE LONG AND THE SHORT

Among the benefits of the system in place since July and formalized with the December 1 PBOC announcement are enhanced liquidity and expediency. A transaction with a designated bank can take less than a day, whereas a transaction in the past through a swap center could take up to a week to complete. The bank-based system, backed up by a national interbank foreign exchange trading network of more than 300 member banks and connecting trading centers in 25 major cities, provides continuous exchange

rate quoting and can absorb foreign exchange transactions of almost any size. But the enhanced liquidity afforded by the new system may be partially offset by the requirement that foreign exchange purchasers use a single designated bank. If bank competition is stifled, such a requirement could mean high fees for poor service.

Foreign banks have welcomed the move to official current account RMB convertibility. Previously, foreign bank branches in China were only allowed to purchase foreign currency from FIEs and resell it on the interbank market, or to act as brokers at the swap centers. Since the pilot program began last March, many foreign banks licensed to operate in China have been selected as designated foreign exchange banks. With this designation, these banks are permitted both to purchase and sell foreign exchange, do not require proof of SAFE approval to conduct a foreign exchange transaction, and can carry out foreign exchange transactions for FIEs. During the pilot program, more than 30 foreign banks in Shanghai reportedly were approved as designated foreign exchange banks.

China's foreign exchange reforms may also pave the way for foreign banks to conduct local currency business, which is set to begin on an experimental basis in Shanghai's Pudong New Area soon. In the meantime, FIEs will likely use a full-service domestic bank because of the restriction allowing one settlement account per firm. Currently, foreign banks licensed to operate in China are not allowed to take RMB deposits or provide RMB loans, though they are permitted to keep a certain amount of RMB to facilitate foreign exchange transactions. Thus, the ability of foreign banks to operate a full range of bank services, on par with domestic banks, is increasing, but slowly.

—Kirsten Sylvester

Kirsten Sylvester is associate editor of The CBR. Anne Stevenson-Yang, director of the Council's China Operations, and Yao Tong, a graduate student in Boston College's Finance Program and former Council research assistant, contributed to the preparation of this article.

Many recent reforms are moving China's financial system in the right direction.

vestment Bank, Hua Xia Bank, and Min Sheng Bank—provide services similar to SOCBs. Except for BOCOM and CITIC, national commercial banks are free from direct State Council control. These six banks serve primarily the private sector and tend to lend on commercial terms. Because these national commercial banks generally provide the same services as SOCBs, but more efficiently, they should play an increasingly important role in China's financial sector.

■ **Regional banks** Regional banks, which can provide financial services within the borders of their respective regions, bear some policy-lending responsibilities but are becoming increasingly commercialized. Shenzhen Development Bank, Pudong Development Bank, Fujian Development Bank, and Guangdong Development Bank all offer commercial banking services in their local franchises. China Merchants Bank, owned by the China Merchants Group, has a sister bank in Hong Kong and offers mainly trade finance services.

Not surprisingly, non-State national and regional commercial banks have significantly outperformed SOCBs. Between 1991-94, non-State banks' returns on assets (ROAs) were, on average, 1.36 percentage points higher than the ROAs for SOCBs. During the same period, non-State banks' returns on equity (ROEs) averaged 7 percentage points higher than the ROEs for SOCBs. The total 1994 assets of the 10 national and regional commercial banks (excluding the savings banks and the recently founded Min Sheng Bank), however, were only 9 percent of the top four SOCBs' assets.

■ **Savings banks** China has only two major savings banks—Yantai Housing Savings Bank and Bengbu Housing Savings Bank—both of which focus specifically on facilitating the ongoing reforms in the housing market. The principal business activities of the banks include raising funds for home construction and promoting housing reform by providing

low-interest mortgage financing for individuals in their respective cities. The Yantai and Bengbu banks, both established in 1987, have greater independence than SOCBs and assume sole responsibility for profits, losses, risks, and liquidity. They bear some resemblance to Western-style building societies, though China still lacks a formal or legal structure for such organizations.

■ **Non-bank financial institutions (NBFIs)** The most positive trend in China's financial development in recent years has been the growth of banks and financial institutions that are neither directly controlled by the State Council nor financial agents of SOEs. The emergence in recent years of these NBFIs—including trust and investment corporations (TICs), and urban and rural credit cooperatives—is an indication that specialization and competition in China's financial sector are on the rise. Whereas the SOCBs are designed and organized mainly to serve only clients within their respective industries, NBFIs are small and nimble enough to change in tune to the needs of the economy, whether by offering insurance products or serving small businesses. As NBFIs expand in the coming years, they are bound to introduce new products and services and start competing for the customer bases of the enormous SOCBs. Small credit cooperatives are gradually being converted into commercial banks to serve small- and medium-sized companies at the local level, and many are merging with each other and expanding their range of financial services.

SOCBs' share of national household deposits fell from 85 percent in 1994 to about 75 percent by year-end 1995, as more rural households opted to entrust their money to other financial institutions such as TICs and urban and rural credit cooperatives. Since the mid-1980s, according to PBOC, roughly 80 percent of rural households have been doing business with rural credit cooperatives.

TICs emerged in the early 1980s, mainly to serve township and village enterprises and small- to medium-sized private and collective companies. Though lacking official legal definition and governing regulations, TICs currently are allowed to hold trust deposits of six months or more from the following institutions: State and private enterprises, trust

funds of corporate financial departments, ministry trust funds, research funds of scientific institutions, funds of various societies and foundations, and enterprise savings of at least ¥1 million (\$120,482).

Prior to 1995, NBFIs were heavily involved in the underground loan market. In April 1995, in the wake of rampant illegal loans from State banks via NBFIs to private companies, PBOC prohibited commercial banks from operating and owning NBFIs. Given both the absence of legislation specifically governing NBFIs and the decentralized nature of their funding sources, NBFIs, and especially TICs, had become a means for lenders to evade central credit controls and quotas. For example, in 1992, illegal loans between State banks and NBFIs totaled \$23.3 billion (10 percent of total State bank loans), and 67 percent of these loans could not be recalled. Such loans were made via NBFIs that were owned by SOCBs. Illegal loans had become so rampant by 1995 that PBOC was forced to grant \$1.7 billion in emergency credit to State banks to facilitate the settlement process. Since Beijing implemented the ban on State banks owning NBFIs, these institutions have started to focus on developing their financial advisory services as a means of increasing their revenues.

■ **Joint-venture banks** As of early 1995, about 30 joint-venture banks were operating in China. These banks are principally involved in providing merchant and investment banking services and trade finance for the non-State sector. Joint-venture banks—which include Xiamen International Bank, established in 1985; Tai Hwa International Bank, a Sino-Thai venture; and China International Capital Corp. (CICC), a joint venture between Morgan Stanley Group Inc. and the China Construction Bank—help transfer international banking practices to China.

■ **Foreign banks** The best potential source of competition for China's domestic banks are wholly foreign-owned banks, which have increased their presence significantly since China first opened its financial sector to foreign banking in the early 1980s. Foreign banks are playing an important role in the overall modernization of the sector by bringing modern banking technology and practices to China. Currently, 24 cities in China are open to foreign banks

and their branches, though the vast majority of these banks are concentrated in Beijing, Guangzhou, and Shanghai. During 1995, China approved 18 foreign banks, one joint-venture investment bank (CICC), and 38 representative offices of foreign-funded financial institutions. As China liberalizes further and foreign banks begin to realize the vast potential of the market, the importance of the China market for bank shareholders is likely to rise substantially. For example, if foreign banks were to take a 5 percent share in the China banking market by 1998 (admittedly an unlikely stake), and earn an average net ROA of 1.25 percent, net profits that year would total \$1.25 billion, according to investment bank S.G. Warburg.

As of year-end 1995, there were more than 100 foreign bank branches operating in China, including Citibank Corp., Bank of America, Bank of Tokyo, Sanwa Bank, Standard Chartered Bank, and Hong Kong Shanghai Banking Corp. The assets of the operational foreign banks and finance companies in China reached \$19.1 billion, loans reached \$12.7 billion, and deposits hit \$3.1 billion in 1995, accounting for 2.5 percent, 2.1 percent, and 0.5 percent, respectively, of these categories of the Chinese financial system over the same period. The three indices registered year-on-year growth of 61.7 percent, 68.1 percent, and 26.1 percent respectively in 1995, according to PBOC. The annual growth rates of their total assets and loans greatly exceeded the average growth rate of Chinese banks' assets and loans, indicating that their market share is expanding.

Japanese banks have been especially aggressive in China, and have established more financial institutions in China than have Hong Kong and US banks combined. Like other foreign banks, Japanese banks tend to set up operations in places where their clients invest. In addition to supporting direct Japanese investment, much of it in the form of joint ventures, they have provided numerous loans for major State-owned companies, especially in the power generation, steel, and petrochemical industries. Many of these banks, however, are now facing serious loan repayment problems.

Although foreign banks in China can provide only about one-third of the total

range of financial services available in China, most have realized returns of more than 70 percent within their first three years of operation. Foreign banks' after-tax profits in 1995 reached \$140 million, an increase of 50.5 percent over 1994. The rapid increases in returns can be attributed to innovation and the introduction of new banking products, the ability to provide better financial services than those offered by local financial institutions, and the advantages afforded by preferential tax treatment. According to PBOC, foreign banks now claim 25 percent of the trade finance market in China. The structure of capital requirements and prohibition against conducting *renminbi* (RMB) business, however, has meant that wholly foreign-owned banks' income from fees—from such services as providing guarantees and handling foreign exchange transactions and letters of credit—has been greater than from lending. A much-awaited experiment, however, is set to begin soon in Shanghai's Pudong New Area in which PBOC-authorized foreign banks will be able to engage in RMB business. Once the experiment begins, it will be crucial for the

*An increasing number of
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past 15 years.*

selected foreign banks to perform well. To the extent that China's monetary officials are able to use monetary policy tools rather than administrative means to control the economy—and the scope of the credit plan diminishes—foreign bank participation can be expected to grow.

A HEAVY BURDEN

Despite the central government's commitment to the reform and diversification of China's financial sector over the past 15 years, serious problems remain, stemming largely from the skewed concentration of inefficient and poorly performing financial resources in the State sector. Financing the State sector's massive accrued losses is a formidable task for China's SOCBs and central government.

The Beijing Economic-Technological Development Area (BDA)

"Over 130 leading companies from around the world, including AT&T, Coca Cola, General Electric, General Motors, Cummins Engine, and Kimberly-Clark from the US have located in the BDA. We do whatever we can to help your business successfully locate as quickly as possible with the world's leading companies already in the BDA."

WHY HAVE SO MANY LEADING COMPANIES CHOSEN BDA?

- ◆ BDA — approved August 1994 by the State Council of China — is the newest Special Economic-Technological Development Zone (ETDZ) in China
- ◆ BDA is located 17 kilometers from Beijing's city center at the start of the new Beijing-Tianjin-Tanggu Expressway, only a 30-minute drive from Capital International Airport, 15- minutes from the Beijing Freight Railroad, and 90-minutes from Xingang Port (China's second largest port)
- ◆ BDA is a major focus of the State and the Beijing Municipality to build in the southern part of Beijing a modern industrial center and satellite city in an area of 80-100 sq. km. with a population of 400,000 to 500,000
- ◆ BDA provides easy access to a market of over 20 million people in a region that accounts for over 21% of China's GDP
- ◆ BDA offers preferential policies, including tax holidays, to companies locating in the BDA
- ◆ BDA, the closest ETDZ to the capital, offers easy access to the government and world-class living amenities, including medical facilities and international schools
- ◆ BDA — with Beijing's over 70 universities and colleges — provides access to the largest pool of skilled labor and market of educated consumers in China
- ◆ BDA offers the best location for business and living of any ETDZ in China

FOR MORE INFORMATION, INCLUDING A VIDEO, CONTACT WITHOUT OBLIGATION:

John Y. Zhang/Paul W. Shi
Investment & Promotion, BDA
#4 Wanyuan Street, BDA
Beijing 100076, P.R. China
Tel: +86 10-6788 1209/-6788 1107
Fax: +86 10-6788 1210/-6788 1118

Donald W. Vollmer, President
Beijing Development Area (USA), Inc.
Washington Mutual Tower, Suite 2850
1201 3rd Ave., Seattle, WA 98101 USA
Tel: +206 621 6570
Fax: +206 621 6571

<http://www.china-window.com/inve/bda/main.html>

In 1978, when the reforms began, China's total outstanding loans were \$24 billion, or about half of that year's GDP. In 1995, total outstanding loans were more than \$600 billion—almost equal to that year's GDP. Forty-nine percent (70 percent by private estimates) of SOEs lost money and were unable to pay their debts in 1995—double the number of SOEs recording losses in 1982.

Government revenue as a percentage of GDP (excluding borrowing from abroad) was 11 percent in 1995, according to official PRC sources, and has declined on average by about 5.5 percent per year since 1978. Thus, over the long term, government resources will not be sufficient to pay depositors and bondholders if SOEs are not willing or able to service their debts, nor will the government be able to transfer the problem of financing SOEs back to the budget. The government is likely to grant little debt relief in the future, but instead could pressure SOCBs to refinance a larger share of interest payments on old SOE debt. This, in turn, would reduce the liquidity of SOCB portfolios and mean that SOCB portfolios of loans with no maturity dates would grow more burdensome. The Ministry of Finance has allowed the SOCB to write off only 1 percent of their non-performing loans per year.

Of China's 102,200 industrial SOEs, only 8,000 (8 percent) are fundamentally viable enterprises, according to the World Bank. Of the 94,200 remaining candidates for bankruptcy or corporate takeovers, only 474 have been identified by the central government for bankruptcy since November 1994; of these, 92 have gone bankrupt and 161 have initiated bankruptcy proceedings. An additional 2,000 SOEs have applied for bankruptcy since 1995, of which half have already been declared bankrupt, leaving an estimated \$7.5 billion in uncollectible SOCB debt.

While bankruptcy is one solution for many SOEs, a PBOC survey in early 1996 found that SOCBs' rights and the debts owed to them were not being protected properly in SOE bankruptcy proceedings. SOCBs are treated as residual claimants rather than creditors and are thus unable to collect on guarantees or mortgages given to the SOEs. Widespread bank-

ruptcy, or debt cancellations, would further erode SOCBs' financial condition, as the banks lack adequate reserves to compensate for such losses. In such a scenario, SOCBs would require massive recapitalization, which the central government currently cannot afford to undertake.

Other results of heavy State involvement in the allocation of domestic capital in China are capital flight and "creative" investing. Some Chinese investors have sought ways to protect and maximize their returns by investing their capital abroad or re-investing it in China as foreign capital. The International Monetary Fund estimates that errors and omissions in China's national accounts reached \$26 billion in 1995—about 4 percent of China's 1995 GDP (the State Administration of Foreign Exchange later revised the figure to \$17.8 billion). The amount attributed to "errors and omissions" is commonly understood to represent "round-trip capital," or capital that leaves China simply to be re-invested in the country as foreign money, thereby obtaining foreign investment tax breaks. An estimated 25-30 percent of foreign direct investment in China is round-trip capital. Such activity serves as powerful evidence that China's financial system and incentive infrastructure are unable to allocate all of the country's available investment funds, resulting in economic losses. Over time, as competition for capital intensifies and liquidity of domestic assets increases, China's financial institutions will need to mediate investment more efficiently if the country is to maximize economic growth and development.

MOVING OUT OF THE RED

Inefficient investment on the part of the SOCBs, arising largely from State-directed loans, has been a significant drag on the PRC economy. Since 1982, SOCBs' non-performing debts and inefficient SOEs (as measured by the annual cumulative value of non-performing debts and surplus SOE output and investment) have reduced China's GDP, on average, by 3 percent per year. The World Bank reports that in some years stagnant SOE inventories have exceeded 10 percent of GDP.

The most serious threat to the safety of China's financial system, though, is the

possibility that a large number of SOEs would become unable to pay any interest on their bank debts, precipitating a grave liquidity crisis. Even if China's SOCBs discontinue extending loans to SOEs, recover half of their current non-performing loans, and write off all of their policy loans and deposit/loan interest subsidy losses, China's total financial losses would amount to more than 20 percent of GDP and over four times the country's current bank capital.

Recognizing that diversification within the financial sector can help dissipate the risk of a financial crisis, China's government has implemented impressive financial reforms since the 1980s that have led to the development of new financial institutions and restructuring of old ones. However, State ownership of the major commercial banks continues to constrain the development of commercial lending and distorts the structure of incentives for lenders and borrowers. It seems inevitable that, in the long run, SOCBs will decrease in size, as regional banks and TICs acquire SOCB branches. The likelihood of a financial crisis in China remains low at present, and the recent structural reforms and establishment of new banks should help contribute to an efficient and financially sound system in the long term.

Nonetheless, the government must take further action to ensure the solvency and diversity of the banking system over the next five years. The current challenge facing the government is to grant more autonomy to the SOCBs, which are struggling to compete with private banks for depositors and borrowers. The new domestic and foreign private banks that have been permitted to operate in China will be an increasingly important source of innovation as well as financing for the rapidly expanding small business sector. Though Beijing appears committed to financial sector reform and is encouraging SOCBs to develop new governance structures, it is unlikely that the government will refrain entirely from interfering in the management of these banks. The intervening reforms implemented to date and the growth of the private banking sector are promising signs that a system of regulated capital is emerging from the decades-old regime of directed capital. 完

The Technology Transfer Tango

Douglas C. Markel and Randy Peerenboom

*It's one step
forward but two
steps back with
the latest PRC
technology
regulation*

The Ministry of Foreign Trade and Economic Cooperation (MOFTEC), without much fanfare, issued a new regulation in March 1996 that appeared to signal a sea change in PRC technology import policy. At first glance, the Provisional Measures for the Administration of Technology Introduction and Equipment Import Trade Work (the Measures) appeared to do away with the often burdensome requirement that MOFTEC approve each technology import contract. Thus far, however, the Measures have proven to be an empty promise, as approvals by MOFTEC or its local counterparts (COFTECs) continue to be required. And, despite the new regulation's apparent purpose—to encourage technology imports by relaxing government controls and expediting the approval process—gaining approval has become, in many respects, more arduous and time-consuming. In fact, MOFTEC and local COFTECs have taken a markedly harder line than in previous years on a number of issues critical to companies considering technology transfers to China.

FROM APPROVAL TO REGISTRATION...

The need to win MOFTEC or COFTEC approval for virtually any type of technology arrangement, whether in the form of a licensing agreement or contribution to a foreign-invested enterprise (FIE), has dominated the technology transfer process in China since the early 1980s. Foreign purveyors of technology to China find that successful negotiation with the Chinese company that will license the technology (or the Chinese partner to the joint venture to which the technology will be contributed or licensed) is only the first step. It is at the offices of MOFTEC or the local COFTEC where the final deals often must be struck.

The approval requirement is unequivocally spelled out in the 1985 Regulations on Administration of Technology Import Contracts of the People's Republic of China (the 1985 Regulations) and their implementing rules (together, the Technology Regulations), both of which remain in effect. The Technology Regulations apply to almost all contracts involving the import of technology in any form. They also grant approval officials broad powers to scrutinize—and reject—basically every meaningful aspect of those contracts, from the royalty rate to performance specifications to the term of the contract.

The Technology Regulations require that technology import contracts be approved by MOFTEC or COFTECs within 60 days of submission. With respect to transfers of technology to FIEs, if the total investment of the project is more than \$30 million, the technology import contract will generally require MOFTEC approval. If under \$30 million, in most instances the contract may be approved locally or at the provincial level. One-time technology transfers of over \$5 million to wholly Chinese companies require MOFTEC approval.

The recently promulgated Measures, to the surprise of many long-time observers, seemed to mark the end of the technology transfer approval process. Rather than require formal approval, the Measures call for an "effective upon registration" system for most technology and equipment import contracts. To register a technology contract, the parties would need only provide MOFTEC or its autho-

Douglas C. Markel and Randy Peerenboom are attorneys with the Beijing office of the international law firm Freshfields.

rizied counterparts with a copy of the recipient's foreign trade operation rights documents, an application form, and, presumably, the technology contract, which was conspicuously left off the list

China's approval officials, particularly at the national level, have become less accommodating to foreign investors.

of required documents. Whereas previously only certain Chinese import-export companies (and FIEs) were authorized to import technology, the Measures permit any Chinese party with foreign trade operation rights to do so—expanding significantly the number of possible importers. A Registration Form for the Undertaking of or Agency for a Technology and Equipment Import Project is also required for transfers or licenses to PRC entities that are not FIEs. In place of the traditional approval certificate, accepted technology contracts would receive a new Technology and Equipment Import Contract Registration Validity Certificate.

...AND BACK TO APPROVAL

The drafters of the Measures apparently did not have the courage of—or a consensus for—their convictions. A careful reading of the Measures reveals that despite the new provisions, the 1985 Technology Regulations' approval requirement remains very much in effect. Specifically excluded from the registration process called for in the new Measures are contributions of technology and related equipment to FIEs, which continue to be subject to the MOFTEC approval process. More important, the Measures call for an effective-upon-registration system "except where otherwise specifically provided by current laws and regulations of the State." Given that the Technology Regulations specifically require approval, this exception would appear to override the rule.

Further, the Measures do not explicitly repeal the Technology Regulations, and it

is questionable whether they could. The State Council issued the 1985 Regulations, while the implementing rules were approved by the State Council and issued by MOFTEC. But MOFTEC, which formally issued the new Measures on its own, does not have the authority to repeal, or issue regulations inconsistent with, State Council legislation.

Jurisdictional quibbles aside, serious questions arise as to whether the new system, in practice, would liberalize the technology transfer process substantially. In contrast to the Technology Regulations' broad mandate to "approve" (*pizhun*) the legal and commercial terms of a technology contract, the Measures allow MOFTEC and its local counterparts to simply "verify and confirm" (*hezhun bing queren*) a contract's compliance with PRC law—arguably a less-intrusive inquiry. Yet such a scale-back in power would be largely self-policing by MOFTEC and COFTEC officials, and if experience in other areas is any guide, China's approval authorities likely would have trouble confining their inquiry to mere verification.

It may be some time before foreign technology holders learn whether the Measures will have any significance for their China business. As of the end of November 1996, the registration system had yet to be implemented, at least at the national level. MOFTEC officials have acknowledged that while certain reformers who welcome foreign direct investment (FDI) would like to simplify the technology import process, others want to tighten control over FDI and the influx of technology by retaining the approval process. Such disagreement may explain the inconsistencies between the general purpose of the Measures and some of its specific provisions. It may also explain why officials have been reluctant to reveal how and when the new system will be implemented.

PHANTOM AMENDMENTS

The true thinking of many influential policymakers may not be reflected in the Measures, but rather in a set of proposed amendments to the Technology Regulations. Drafted jointly by the State Council and MOFTEC and intended to replace the Technology Regulations in their entirety, the Amended Technology Regulations of the People's Republic of China (the Pro-

posed Amendments) apparently were scrapped at the last minute. Though never formally promulgated or released to the public, the amendments nevertheless continue to guide at least some officials in their review of technology contracts. In fact, some officials have become so accustomed to using the Proposed Amendments as a guide that they seem to forget sometimes that they are not law. In a recent negotiating session, one official caught a technology licensor off guard—and stunned his legal counsel—by insisting that the amendments were the law of the land. Two weeks later that same official, somewhat sheepishly, telephoned the lawyer with the news that he had been mistaken, and that the Proposed Amendments had never been approved. The official did not, however, offer to retract his criticisms of the technology contract based on the amendments.

Some of the Proposed Amendments reflect the generally harder line China's approval officials have taken on foreign technology imports over the past two years. For example, the amendments prohibit tax "gross-up" clauses, under which the technology licensee agrees to ensure that the licensor will receive a certain payment after paying withholding taxes in China. Though commonly used in licensing arrangements around the world to assure licensors a predictable return, MOFTEC and the Ministry of Finance have long resisted this practice on the grounds that it "shifts" the obligation to pay taxes from licensor to licensee. Because withholding taxes usually reduce technology revenues derived from a China project by at least 10 percent, even the best-negotiated technology agreement can be undermined dramatically by the rejection of a gross-up clause at the approval phase.

Also to the dismay of foreign licensors, the Proposed Amendments seek to eliminate certain restrictions technology licensors often impose on licensees as a matter of course. One such restriction limits the right of licensees to export products produced with the licensed technology. This is particularly important to many multinationals, who license technology to subsidiary joint ventures in China solely to develop a position in the Chinese market.

The Technology Regulations permit restrictions on such exports, but only upon

"special approval" from MOFTEC or its local counterparts. Yet, in practice, "special approval" is no different from any other type of approval, a fact that still does not deter many Chinese negotiators from doggedly trying to convince their foreign counterparts that such approvals are required. Gaining government approval for these types of restrictive clauses traditionally has proved easier at the provincial or municipal level, as local officials have been willing to tolerate restrictions in return for much-needed upgrades of the local technology and skills base.

In an apparent attempt to rein in these local-level officials, viewed by their central-level counterparts as overly eager to grant concessions, the Proposed Amendments eliminate the possibility of "special approval"—or any other type of approval, for that matter—for certain restrictive clauses. Under the Proposed Amendments, for example, a licensor may limit the export sales of a licensee *only* if the licensor can demonstrate that he has exclusive export arrangements already in place with other companies in specific other countries.

To be fair, the Proposed Amendments contain provisions that, if enacted, would be welcome news to licensors. For instance, the amendments drop the problematic requirement that technology licenses, "in general," not exceed 10 years. Chinese negotiators traditionally have used this requirement as a basis on which to resist royalty arrangements that run beyond 10 years. Though MOFTEC and COFTECs frequently have agreed to licenses running longer than 10 years, especially where the technology supplied is part of a longer-term joint-venture investment by the supplier, obtaining such approval nevertheless has been a challenge. The Proposed Amendments would have strengthened the licensor's hand.

The Proposed Amendments, if enacted, would also drop the prohibition, absent special approval, against extending confidentiality provisions past the effective term of the technology contract. The dropping of this provision mirrors changes in the Chinese business environment as a whole: with increasing awareness of intellectual property rights in the PRC in recent years, it has be-

come easier to negotiate and obtain approval for extended confidentiality clauses. But despite the increasing ease of approval, enforcement of confidentiality clauses, even during the effective period of the contract, remains problematic.

Chinese negotiators have insisted for years that use rights must extend indefinitely past the expiration of the technology contract, and have often relied on the more general notion of a technology "transfer," as opposed to a license, to make this argument. Significantly, in contrast to current law, the Proposed Amendments make no reference to the concept of technology assignments or "transfers" (*zhuanrang*), referring instead only to licenses and supply contracts. The absence of the term "transfer" in the amendments would take away the basis of the negotiators' argument. Yet the prospects here should not be overstated; in practice, many approval officials and Chinese companies accept the characterization of the transfer as a license but still insist that use rights continue indefinitely even after the expiration of a license. Lately, some suppliers have negotiated successfully the termination of the use rights and return of the technology and documentation upon expiration, while others have simply refused to transfer the most advanced technology, providing instead technology that would be obsolete

PRC authorities, in many cases, have shown increasing flexibility in respecting royalty arrangements.

or of little proprietary value at the expiration of the contract.

GETTING THE CHOP

Aside from statutory changes, what remains most relevant to potential licensors are the concessions required to get the green light from China's government approval apparatus. Showered with billions of dollars in foreign investment over the past few years and overrun with multinational corporations anxious to enter the PRC market, China's approval officials, particularly at the national level, have become generally less accommodating to foreign investors. This increasing inflexibility has permeated the technology sphere as well.

Two areas where the approval authorities have tightened the screws are performance guarantees and product liability warranties. Such pledges are anathema to most foreign suppliers, particularly given the many factors in China beyond the

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control of the supplier that can affect the performance of the technology or the quality of the final product. As a result, suppliers have tended to strenuously resist pressure from the Chinese party or the approval authorities to include specific performance targets or broad indemnity and warranty clauses. If approval authorities insisted on performance guarantees or product liability warranties, suppliers usually were able to negotiate a series of conditions to dilute the obligations, by specifying that the Chinese party meet all of its obligations under the technology contract or related contracts, all raw materials meet specified standards, personnel be properly trained, and the equipment be well maintained. Sometimes suppliers would guarantee simply that the technology provided was "world class" or the same as that used in the foreign parent company's production facilities elsewhere in the world. In addition to such conditions, many suppliers could also obtain approval for monetary caps on liability and releases from all obligations to third parties. MOFTEC and its local counterparts often were particularly accommodating in cases where a foreign licensor held a significant stake in the PRC joint-venture licensee.

Of late, though, MOFTEC has become noticeably more rigid where performance guarantees are concerned. The Technology Regulations require the supplier to guarantee that the technology and information is "complete, correct, valid and capable of accomplishing the technical targets set forth in the contract." MOFTEC increasingly expects contracts to contain some language to this effect, and now often rejects the traditional approaches to watering down the performance guarantees. For projects of more than \$30 million in total investment that must obtain the approval "chop" at the

central level, approval without a performance guarantee in some form has been very hard to obtain.

Another troubling development for technology licensors has been MOFTEC's increasing insistence that licensors provide broad indemnities against infringement claims by third parties. These days, MOFTEC generally expects licensors not only to defend licensees against claims of infringement from third parties but also to indemnify them against all possible resulting losses should such claims be upheld. In many jurisdictions, this would not be a particularly onerous requirement for a licensor. In China, however, the uncertainty of the legal environment raises the stakes because of the possibility that unsubstantiated infringement claims might be upheld by a PRC court, though admittedly there have been no such instances to date.

Indemnities running in the other direction, from licensee to licensor, are also under siege. Licensors often require licensees to indemnify them against third-party claims for damage or losses caused by products manufactured in China using the licensed technology. The rationale for such clauses, which are common in technology licenses worldwide, is that there are too many factors in the production process beyond the licensor's control for the licensor to assume the risk of open-ended liability to third parties. Without some form of indemnity the foreign licensor, as the "deep pocket," is vulnerable to potentially large liability suits. To Chinese negotiators and many approval officials, however, the notion of purposefully allocating risk between licensor and licensee has been a difficult sell.

An added challenge is that China's managers and approval officials rarely consider the unique commercial and technical circumstances of each individual technology license arrangement when demanding licensor guarantees and indemnities. Chinese negotiators and approval officials tend not to ask themselves—much less answer—such key questions as: What is the potential economic benefit to the licensor? Is the licensee getting a good deal, especially if the substantial research and development costs the licensor incurred in developing the technology are taken into account? Is the technology state of the art, and how difficult is it to apply to production? In-

stead, these officials take a "one size fits all" approach, often asking licensors to assume risks relating to the technology license that far outweigh the potential economic benefits from the license of their technology in China. In one recent case, after months of negotiations with MOFTEC, one exasperated licensor offered to provide the technology to its minority-stake licensee *free of charge* in exchange for an agreement to drop demands for onerous guarantees. MOFTEC rejected the offer.

SOME THINGS STAY THE SAME

On many other issues, Chinese negotiators and approval officials have always been tough and continue to be so. The right to make improvements to technology during the license term is a particularly thorny matter, as the Chinese team (consisting of the Chinese company that aims to be the licensee or to invest in the licensee, and COFTEC/MOFTEC officials) frequently expects an open-ended commitment from the foreign licensor to provide improvements—even new generations of technology—at no extra cost. Similarly, Chinese officials continue to scrutinize closely tie-in clauses under which the supplier of technology requires the licensee to purchase inputs or raw materials from the licensor. And although Chinese law clearly provides that technology contracts may apply a foreign governing law, negotiating for such an application can be painful. Whereas in the West the law of the licensor's home jurisdiction customarily governs, gaining approval in China to opt for a neutral third country law to apply in the case of dispute resolution can be considered quite an accomplishment.

There are other areas, to be sure, where negotiating approval for technology import contracts has become easier. PRC authorities, in many cases, have shown increasing flexibility in respecting the royalty arrangements, usually ranging from 2-5 percent and calculated on net sales. Approval also is sometimes granted for hybrid payments, combining royalty payments with one-time license fees or equity credit. Most major licensors are no longer expected to demonstrate that they own the technology; usually a statement in the contract that they have the right to

license the technology will suffice. And the approval authorities these days tend not to ask many questions about whether the technology is "advanced and appropriate," leaving the contracting parties and the industrial ministries to work out such issues among themselves.

A CHANGED CLIMATE

The apparent schizophrenia in the evolution of law and practice in the PRC technology sector over the past few years, in many respects, mirrors contradictions in the environment for foreign investment as a whole. PRC government bodies frequently issue vague public pronouncements that China is opening its market, liberalizing its trade rules, and creating a "level playing field" for competition between FIEs and domestic Chinese enterprises. Yet many foreign investors believe the investment environment has deteriorated recently. In the past year, for example, the government has revoked the exemption on capital equipment imported for contribution to FIEs (see *The CBR*, July-August 1996, p.32), refused to

grant promised value-added tax rebates to exporters (see *The CBR*, September-October 1996, p.43), thrown up new administrative obstacles to raising financing from abroad, and, in many large projects, insisted on disproportionate rights for minority PRC shareholders.

China's bureaucrats and managers, though, are for the most part of one mind when it comes to the importance of technology to the country's modernization drive. Upgrading countless obsolete, insolvent State-owned factories remains a top policy priority, and reaching this goal would be impossible without new technology. When PRC exports dropped precipitously early in 1996, many official observers quickly called for more sophisticated and higher-quality exports. And rarely, these days, is a large joint venture negotiated without the Chinese partner soliciting the foreign counterpart's help in developing a research and development center.

Just what will be required from China's lawmakers and approval officials to attract the technology needed to meet these am-

bitious goals in the coming decades? Some PRC policymakers believe that bringing China's technology transfer policies more closely into line with international practice is the answer, by making the approval process less intrusive and letting the parties to the transaction strike the bargain. Other voices, louder of late, call for closer government scrutiny of technology transfer arrangements, and are pushing foreign owners of technology to provide their technologies on terms that most Western companies would not consider accepting anywhere else.

Yet it takes two to tango. Whether the recent difficulties encountered by prospective technology transferors represent a long-term trend or temporary setback may not be for China's policymakers alone to decide. Despite the lure of the China market, foreign technology owners may seek to raise technology fees—or start to take their high technology projects elsewhere. Ultimately, it is the transferors themselves who may determine whether the terms on offer are acceptable enough to fill China's dance card. 完

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Winning Structures

Making a few organizational changes could lead to competitive advantages for multinational company operations in China

Mike W. Peng

Much has been written about how initial investment choices in China should be made, such as how to set up a joint venture to gain a foothold in the PRC market (*see The CBR*, May-June 1995, p.10). But the issue of how large multinational corporations (MNCs) integrate their China operations, once they have multiple joint ventures in place, is a relatively new field, and the structural arrangements used by MNCs in China have yet to be analyzed comprehensively.

MNC headquarters traditionally have treated their China operations as "special cases" requiring a great deal of adaptation to the local environment, primarily through the development of individual joint ventures. However, as China continues its transition to a market-based economy and foreign firms deepen their involvement there, many MNCs are beginning to adopt a more coordinated, balanced approach, synchronizing their China operations with the company's overall global strategy and seeking ways to improve the performance of lagging joint ventures.

SHAKE-UP AT THE TOP

In the past, MNCs typically set up shop in one region in China, establishing an initial joint venture involving one product division. When only one or two of an MNC's product divisions operate joint ventures in China, the company generally does not find it difficult to achieve a unified China strategy. However, when multiple units of an MNC seek to form their own joint ventures in China, in many cases, the lack of coordination between the various individual product divisions can result in costly mistakes. For example, while some product divisions may be very experienced in their dealings with Chinese counterparts, other product divisions may lack such experience or fail to utilize the China expertise acquired by other units.

As an MNC increases its China presence beyond the first few joint ventures, presenting a corporate China strategy to Chinese authorities may be preferable to allowing each product division to initiate its own joint venture. Many MNCs have found that Chinese officials dislike having to deal with multiple delegations from different divisions of the same foreign company; project approvals may be more likely if PRC investment authorities understand the overall scale and scope of the MNC's commitment. A united and coordinated effort not only helps Chinese officials appreciate an MNC's corporate-wide commitment, but also prevents Chinese negotiators from pinpointing differences in the investment proposals presented by different product divisions and then playing one MNC division against another. For example, one joint-venture proposal might commit to a certain percentage of exports, prompting Chinese officials to push for the same export commitment to be included in the joint-venture deal offered by another of the MNC's divisions.

In an effort to solve some of these problems, an increasing number of MNCs are establishing corporate-level China centers to coordinate their China operations. In PRC legal terms, such corporate-level centers in China sometimes take the form of "investment" or "umbrella" companies, so named

Mike W. Peng is assistant professor of management and of Chinese studies at the University of Hawaii, where he teaches in the China- and Japan-focused executive MBA programs. He holds a Ph.D. in strategic management from the University of Washington.

because the centers can provide organizational and financial management of the MNC's China operations (see *The CBR*, July-August 1995, p.34). Chinese law permits investment companies to engage in numerous investment-related activities, including loan procurement; foreign exchange balancing among subsidiaries, subject to the approval of foreign exchange authorities; financial support services to subsidiaries, with the approval of the People's Bank of China; and procurement and after-sales support.

This move may come with a high price tag, but the cost of establishing a corporate-level China center can be justified if the company is large and expects to do significant business in China. No matter where the corporate-level China center is located—in China, Hong Kong, or at corporate headquarters—it should clearly articulate to each division the corporate vision for China and integrate the MNC's entire China operations within the company's overall structure and operations. Though each product division formulates its China plan, the China center should fine tune these plans and identify cross-divisional synergies and strategies. To ensure that all China operations are within the parameters of the MNC's global strategy, the China center should define corporate-wide policies and establish principles for developing joint ventures in China, including risk exposure limits, investment return thresholds, and acceptable joint-venture structures.

An MNC's China center typically reviews all investment proposals from the product divisions and supports those that are in line with the company's overall strategy. The China center also attempts to balance global strategic considerations with corporate country priorities. In some cases, the China center may recommend that a particular product division pursue certain projects that may not be to the division's optimal benefit, but may boost the prospects of other China operations, thus improving the MNC's overall market position in China.

In addition to its involvement in the strategic decisionmaking process, the China center also can provide vital support functions. Instead of personnel from each product division negotiating with their Chinese counterparts, for example, China centers can pool talented negotia-

tors and employ them in different joint-venture negotiations, with the hope that the lessons learned in previous negotiations can be applied to make the current negotiations both short and effective. Another important role that the China center plays is to coordinate relationships with various Chinese authorities to deliver a consistent message at every government level. Many China centers, for example, help arrange high-level meetings between CEOs and State Council and provincial leaders.

DESIGNING NEW STRUCTURES

Although many such China centers now are up and running, there is little consensus on where these centers should be positioned within the corporate hierarchy. Two basic approaches have emerged, however: one that retains the existing global product structure and one that reorganizes this structure. The matrix structure uses the existing global product structure, simply adding a China center headed by a senior country executive (see Figure 1). The center works with the various product divisions to coordinate the MNC's China operations, and requires that each product division collaborate with the China center. Such an arrangement usually necessitates strong support from the corporate CEO and chairman. Indeed, the most successful China centers organized along this line are characterized by close working relationships between the product divisions and the China center, and mutual understanding of the MNC's global strategy and its China-specific goals. But China centers organized in this fashion

There is little consensus on where China centers should be positioned within the corporate hierarchy.

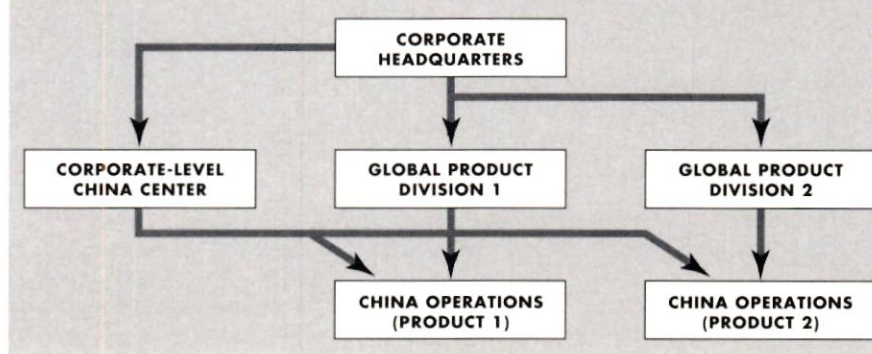
can be plagued by lengthy decisionmaking and inter-unit conflicts.

Other MNCs are experimenting with ways to reorganize the existing global product structure, so that the China center is headed by a senior executive with country profit-and-loss responsibility (see Figure 2). Financial responsibilities for all China operations are transferred from the product divisions to the new corporate-level China center. Both Northern Telecom and AT&T, for example, appear to have restructured their operations by adding this type of China center. Such an arrangement affords the advantages of clearer lines of responsibility and faster decisionmaking. However, implementing this structure can be difficult, as product divisions may object to the loss of budgetary control over their China operations. Successful implementation of this structure requires not only strong support from top management, but also a strong commitment to a country/regional orientation, rather than a product-driven orientation.

MID-LEVEL MOVES

Because of China's vast size and the limited distribution capability of most local partners, multiple joint ventures in a single product line are often necessary to

FIGURE 1
CORPORATE-LEVEL CHINA CENTER: THE "MATRIX" STRUCTURE



Some MNC executives believe that the China center is a transitional structure.

reach the national market. However, multiple joint ventures make tremendous demands on the managerial resources of the corporate-level China center. For example, many executives of MNC China centers have found that, though they spend time attending different joint-venture board meetings, they still lack detailed information on each specific joint venture. Consequently, many MNCs create strategic business units (SBUs), which group different joint ventures according to either product line or geographical location. The SBU executives—who tend to be based in major business centers such as Hong Kong and Shanghai—sit on the board of directors of each joint venture in their group.

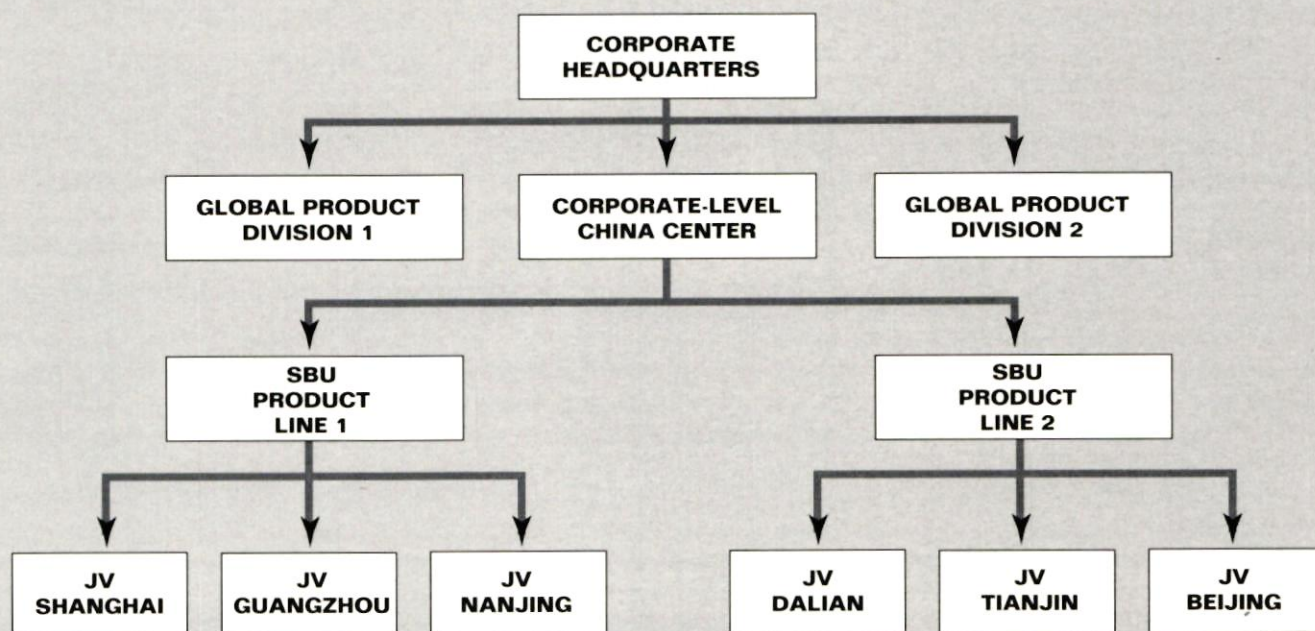
MNCs with China centers and large China operations—such as Motorola Inc. and Siemens AG—tend to have SBUs, though some smaller companies that have several joint ventures up and running in China also may benefit from adopting the SBU structure. For multi-product and multi-business companies, SBUs are important because the battle for market share is fought primarily at the SBU level. SBU executives are responsible for implementing overall corporate strategies and for making sure that the product line meets its profit and production targets. SBU heads thus are likely to have the best understanding of the managerial and financial strength of entire product lines. For example, the product-based SBUs of such electronics companies as Sony Corp. and Matsushita Electric Industrial Co., Ltd.—rather than corporate headquarters or individual joint ventures—are responsible for executing the tactics that corporate headquarters hopes will lead to dominant positions in the Chinese video cassette recorder, color television, and compact disc player markets.

A small number of companies choose to implement the SBU structure on a re-

gional, rather than product, basis. For example, companies working in single-product businesses such as hotel management and fast-food services tend to structure their SBUs regionally to facilitate localized promotional efforts.

Most China-focused SBUs, though, consist of multiple joint ventures in one product line from different locations. For example, one large health care products company has formed six product-based SBUs to manage its more than 30 joint ventures in China. Each SBU thus focuses managerial attention on a handful of joint ventures to improve the quality of decisionmaking. This type of structure also allows the transfer of experience gained from manufacturing and employee training, and enables the strong relationships developed with suppliers at one joint venture to be shared with other joint ventures working in the same product market in other locations. And, because the SBU structure enables China-based executives to focus their energies on a smaller number of joint ventures, the structure helps to solve the information overload problem that China-based executives typically encounter.

FIGURE 2
CORPORATE-LEVEL CHINA CENTER: THE COUNTRY ORGANIZATION*



* In this particular example, the multinational corporation adopts a product-based strategic business unit (SBU) structure. If the SBU structure is not used, then the corporate-level China center manages individual joint ventures in China directly.

Some China-focused SBUs even take over marketing, distribution, and accounting responsibilities to allow each joint venture to concentrate on manufacturing. In general, SBUs tend to be more deeply involved with operations, while China centers function more in a strategic capacity. Centralization of China operations at the SBU level also helps an MNC to retain control of certain areas of the production process and ensure that each venture's activities are consistent with the company's other SBUs in China and with operations in other parts of the world. This ability becomes increasingly important as the MNC's China operations expand and incorporate dozens of joint ventures and multiple SBUs.

RESTRUCTURING FROM THE GROUND UP

While establishing a corporate-level China center to coordinate an MNC's efforts is an important step, the success or failure of an MNC's China operations also depends heavily on each individual joint venture's performance. Many MNCs have realized that weak joint ventures—those that fail to reach profitability targets or market-share goals because of managerial, organizational, and marketing problems—provide a poor foundation for the MNC's future growth in China. In some cases, the MNC may consider restructuring such joint ventures into wholly foreign-owned enterprises (WFOEs). But adopting the WFOE structure is not the only option for boosting weak joint ventures. Seeking greater equity control, deploying more expatriates in key management positions, or transferring corporate culture and values to the operation are other ways to strengthen a lagging joint venture.

Only in aerospace, retail, oil exploration, and in some telecommunications sectors does the PRC continue to forbid MNCs from taking a majority equity share in a joint venture. Recently, Chinese authorities also have begun to limit foreign equity stakes in key projects in "pillar industries" such as autos and electronics. However, Chinese officials have been receptive to changes in foreign equity control in these industries if the MNC demonstrates a sincere commitment to improving the performance of a weak joint venture.

MNCs rely heavily on expatriates to manage their China offices, though some foreign companies also are hiring from the growing pool of overseas-trained Chinese MBA graduates (see *The CBR*, May-June 1996, p.26). Despite more than a decade of economic reforms, skilled local managers are still hard to find in China. Though deploying expatriates or overseas-trained PRC MBAs in key positions such as general manager and comptroller may meet resistance on the part of the PRC partner, such a move can help strengthen an MNC's control over a lagging joint venture.

An assignment that usually requires one manager in a developed economy may demand two or three expatriate managers who can readily adapt to the Chinese environment and develop local managerial expertise. Given the relatively high percentage of expatriate managers who break their contracts and leave China prematurely, MNCs often have to "overinvest" in experienced expatriate staff to ensure the successful reorganization of a weak joint venture. To attract well-qualified expatriates, some MNCs provide special career development incentives such as premium salaries and benefits packages, frequent promotions, and the promise of a desirable posting upon completion of the expatriate's China stint.

Though the process is slow and tedious, an MNC working to turn around a lagging joint venture could find that transferring its corporate culture to the corporation's China-based operations yields a significant long-term payoff. Like managers and employees elsewhere, Chinese managers and employees tend to focus on the particular aspects of their own problems, with little understanding of the parent firm's global strategic considerations. Expatriate managers should take primary responsibility for promoting strong employee identification with the corporation's mission by investing heavily in employee training, while also accommodating Chinese culture and values. IBM Corp., Motorola, The Procter & Gamble Co., and Volkswagen AG, for example, offer high-tech training, while teaching both basic business skills and the company's own corporate culture to boost worker loyalty and effectiveness.

Beginning as a handful of solo joint ventures in the 1980s, the China operations of many MNCs have matured in the mid-1990s into dozens of coordinated joint ventures. Having singled out China as the emerging market to receive a large—and perhaps disproportionate—amount of resources in the future, most MNCs may look to implement innovative organizational solutions that not only take advantage of their experience operating separate joint ventures, but also keep their China operations aligned with their global strategic goals.

The ability to create and utilize winning structures for multiple China ventures could determine whether a foreign corporation's operations will be successful in China over the long term. The creation of a strong China center that enjoys the full endorsement of both senior management and individual product divisions enables the MNC to share lessons learned throughout its China operations. And sharing lessons learned in one region in China with the MNC's operations in other regions serves to maximize the firm's overall returns in China. The effective use of China-focused SBUs at the intermediate level also allows expertise gained by individual joint ventures in one particular local market or product line to be transferred to other joint ventures, helping the MNC to capture market share across the country. But China centers and SBUs are only as strong as the MNC's joint ventures. The need to turn around underperforming joint ventures may push the parent MNC to look at ways to restructure not only the lagging facility, but also the firm's overall China operations.

Navigating an economy in transition demands great flexibility on the part of foreign participants. Some MNC executives believe that the corporate-level China center is a transitional structure and that global product divisions within the MNC—not SBUs—will assume greater control over China operations in the future. As the global business environment becomes more competitive and the China market grows more attractive to foreign investors, MNCs must be able to manage their increasingly expanded and complex China operations effectively. As these companies compete in China, it is safe to predict that the quest for winning structures will continue. 完

An Evolving Environmental Framework

*China's
environmental
rules mean new
burdens on
foreign firms*

Julia Epley Klee and Felicity C. Thomas

While most countries juggle the tradeoffs between industrial development and environmental protection, China, with particularly rapid economic growth, faces these challenges on a monumental scale (*see p.41*). The Chinese leadership, well aware of the need to improve environmental management, has made a concerted effort over the past few years to create a comprehensive regulatory regime to minimize environmental degradation in the PRC. In 1993, the National People's Congress (NPC) established the Environmental and Resources Protection Committee to advise on environmental legislation and policy. Led by former National Environmental Protection Agency (NEPA) head Qu Geping, the committee has been instrumental in the enactment of a number of new and revised laws (*see box*).

These developments are bringing China's environmental regime closer in line with Western environmental control systems. The Chinese framework is now comprehensive, increasingly detailed, and similar in concept and approach to the environmental regulatory path taken in the United States. There is even talk among PRC regulatory officials of implementing Superfund-type measures—currently a major gap in Chinese legislation—to assign responsibility for cleaning up polluted sites. For US and other foreign companies operating in China, the PRC's tighter environmental regime may bring some surprises and new obligations, but could also mean more business opportunities for environment-related firms. Despite the many similarities between the US and Chinese environmental regimes, several key differences exist. Thus, it is important for foreign firms operating in China to have a sound understanding of China's environmental laws and, more significantly, of China's approaches to problem resolution.

THE PROCESS

Environmental management in China is implemented through legislation and administration at various levels of government. The Standing Committee of the NPC generally is responsible for formulating and enacting relevant laws and ensuring they are implemented and enforced by national, provincial, municipal, and local government administrations, while NEPA formulates environmental regulations. Environmental standards setting specific quantitative pollutant limits are developed by NEPA under the supervision of the State Science and Technology Commission (SSTC). Regulations and standards are also set at the provincial, municipal, and local levels, and they may vary from related NEPA national standards.

Special ministerial standards—set by ministries in conjunction with NEPA and SSTC, and often stricter than the limits set at the national level—apply to ministry-controlled industries. The Ministry of Chemical Industry, for example, cooperates with NEPA in the formulation of regulations, the management of environmental impact assessments, pollution control implementation, and the management of hazardous waste as related to the chemical industry. However, there are few clear areas where NEPA has the final say and, for the most part, each ministry is responsible for implementing industry-spe-

Julia Epley Klee, a former partner with the law firm Pillsbury Madison & Sutro, recently returned to the United States after working in China as an environmental consultant during 1995-96. Felicity C. Thomas, a regulatory specialist with ERM China, has been working in China since 1994.

cific legislation. The result is a considerable degree of overlap between industry-specific and environmental legislation and regulations. The situation is not likely to be clarified in the near future, and foreign investors can continue to expect considerable ambiguities in identifying all relevant environmental laws that regulate a particular facility or industrial process. A further problem is the fact that PRC environmental laws tend to be quite broad, leaving interpretation of key areas and examples to be laid out in the implementing regulations, which follow months or even years later.

Providing the overall framework for China's environmental legislation is the Environmental Protection Law, which was passed as a trial law in 1979 and then amended and enacted in final form in 1989. The law introduces and allows for the definition of the responsibilities of environmental protection bodies, and establishes environmental quality standards and EIA requirements. The law also lays out the Three Synchronies policy (also known as the "Three Simultaneous" or "Three Synchronicities"), which applies to all development projects and requires that environmental abatement systems be designed, constructed, and operated in tandem with the design, construction, and operations of industrial facilities. The law establishes a system for discharge monitoring and fees, fines, and criminal liability. Other laws address specific measures covering water, air, solid waste, and noise pollution:

■ **Water** Two national laws and several national standards provide environmental regulation of China's waterways, surface water, and groundwater. The major statute, the 1984 Water Pollution Prevention and Control Law, was amended in 1996 to clarify the responsibilities of various governmental departments, provide stricter noncompliance penalties, encourage specific "clean technologies," and specify that water treatments should be centralized, or conducted at a single large treatment plant used by industrial facilities in the surrounding area. Fees charged for water treatment are to be used for the maintenance of the treatment facilities.

The 1996 amended law did not introduce clearly defined fines for violations or introduce total quantity, or mass loading, pollutant controls. These controls

measure pollutants in terms of quantity, not level of concentration, and are a first step toward implementing quotas for maximum discharge levels. The controls are based on an assessment of environmental capacity and the maximum levels of pollution that can be absorbed into the environment with minimal detrimental effect. Though earlier drafts included such provisions, it appears NEPA was unable to push the provisions through because

of opposition from the powerful Ministry of Water Resources, which apparently was unconvinced that mass loading pollutant controls are appropriate for China.

Premier Li Peng has publicly supported implementation of mass loading pollutant controls for all environmental media during the Ninth Five-Year Plan (1996-2000), encouraging the use of this approach to control the discharge of priority pollutants. NEPA is expected to define the pol-

KEY PRC LEGISLATION, REGULATIONS, AND DIRECTIVES ON CHINA'S ENVIRONMENT

GENERAL

Environmental Protection Law 1979 (Ratified 1989)

WATER

PRC Water Pollution Prevention and Control Law 1996

PRC Environmental Quality Standard for Surface Water (GB 3838-88)

Combined Wastewater Effluent Standards for Type 1 and Type 2 Pollutants (GB 8978-88)

Quality Standard for Ground Water (GB/T 14848-93)

AIR

PRC Air Pollution Prevention and Control Law of 1995

National Ambient Air Quality Standard (GB 3095-96)

Comprehensive Air Emission Standard (GB 16297-96)

Emission Standard of Air Pollutants from Industrial Furnaces (GB 9078-96)

Emission Standard of Odor Pollutants (GB 14554-93)

Administrative Regulations for Urban Smoke and Dust Control Zones 1987

WASTE

Prevention and Control of Solid Waste Pollution 1995

Regulations for Radiation Protection (GB 8703-88)

Regulation on the Control of Chromium Pollution (1992)

Control Standard on Polychlorinated Biphenyls (PCBs) for Wastes (GB 13015-91)

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals 1994

NOISE

Standard of Noise at the Boundary of Industrial Enterprises (GB 12348-90)

Standard of Environmental Noise in Urban Areas (GB 3096-96)

ENVIRONMENTAL IMPACT ASSESSMENTS

Management Guidelines on Environmental Protection of Construction Projects (1986)

Regulations for Engineering Design of Environmental Protection of Construction Projects (1987)

Management Procedures for Environmental Protection of Construction Projects (1990)

SOURCE: ERM China

ENVIRONMENTAL TROUBLESHOOTING

When Western companies begin to contemplate a China investment, environmental considerations should be high on their list of concerns. Chinese environmental regulations specify that all new "developments," whether a greenfield facility or an expansion or technical renovation of an existing plant or joint venture, require an environmental impact assessment (EIA). But even before the project nears the final stages, many Western firms will seek a preliminary environmental audit or environmental site assessment (ESA) and establish an environmental baseline survey to satisfy any questions from the company's directors or financial backers about potential environmental problems down the road.

In the past, Chinese manufacturers tended to pay little attention to wastewater and air discharges, waste disposal and storage, plant maintenance, or general environmental housekeeping. China's environmental control regime has expanded greatly in recent years, though, with the issue of new guidelines for water and air pollution, waste storage and handling, and other forms of pollution control. For foreign firms, knowing full details of any past environmental problems on a particular site is important, as Chinese law currently is unclear whether the present user of a particular site or facility can be held accountable for cleaning up prior contamination. China currently does not have any Superfund-type provisions to assign responsibility for environmental clean-up efforts, though Chinese environmental officials have reportedly considered implementing a system similar to the US system (see p.34). This might mean, in a worst-case scenario, that a foreign firm entering into a joint venture in China could find itself liable in the future for cleaning up hazardous contaminants left on site by previous users.

When the plans for a joint venture or other investment in a production facility in China are just getting under way, many foreign companies opt to perform a non-intrusive ESA to get a general feel for any environmental problems on a particular site, and satisfy the environmental due diligence that their corporate philosophy

or foreign financial backers might require. Such a step is not required by Chinese law, but can be useful in laying the groundwork for a full-blown EIA later. The foreign investor will usually pick up the \$5,000-\$25,000 tab for the ESA, and will try to include this expense as part of its capital contribution to the venture.

In the United States, non-intrusive ESAs generally are performed in complete accordance with ASTM E 1527, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process." It is impossible to perform an ESA in China in complete accordance with this standard, though, because the regulatory records and database files commonly used to investigate environmental conditions at properties in the United States frequently are not available in China. Instead, most Western companies rely on experienced consultants to develop an appropriate scope and standard for the assessment using the ASTM Standard Practice as a guideline.

As the ESA is not required by Chinese law, Chinese environmental firms may lack the experience to complete this type of assessment. If the ESA is a requirement for project financing, the parties providing the financing may stipulate that the ESA be undertaken by an international firm with experience working in China.

The ESA process in China typically involves several phases, allowing the foreign firm to base the later phases of the environmental assessment on the early findings, thereby minimizing costs. In the first phase of an ESA, the assessor conducts a visual inspection of site surface conditions and reviews any records to identify potential sources of contamination both on and adjacent to the site. To ensure that important contamination indicators are not overlooked, this process will involve a field inspection of the enterprise facility or parcels of land; a review of available literature and information to assess geological setting, previous land uses, nearby groundwater wells, neighboring industries, and wetland impact protection measures; and discussions with plant personnel and local environmental protection officials. The

initial assessment should also include a review of Chinese legislation and regulations, including the new Law for the Prevention and Control of Solid Waste Pollution (see *The CBR*, March-April 1996, p.36).

During the second phase of the ESA, investigators typically drill and obtain soil and groundwater samples to be analyzed for a range of organic, inorganic, and metal contaminants. In some cases, Phase II activities entail an evaluation of special contaminants, such as asbestos and polychlorinated biphenyls (PCBs), depending on site history and use. Investigators may also assess and inspect sewers, stormwater facilities, and relevant municipal facilities for disposal of liquid and solid wastes. The third and final phase of the ESA process involves remedial action planning and design of mitigation alternatives to lessen existing or potential problems; preliminary design and cost estimates; and final designs for wastewater treatment, air pollution control, and waste disposal.

PRC EIA REQUIREMENTS

The ESA helps a foreign investor decide whether a particular site is a prudent location for its operations, but also lays much of the groundwork for the environmental impact assessment the venture will have to prepare before it can receive approval to operate. When the venture submits its proposal documents for official approval by the relevant authorities at the local or national level, the foreign investor will generally have to include an "environmental protection chapter," which provides information on potential sources of environmental pollution resulting from the venture's operations, and the measures to be implemented to control this pollution.

During the final feasibility study stage, the venture will need to conduct a formal EIA. This process is typically managed by the local or provincial EPB, in conjunction with the local planning commission and/or local land management department. The EIA requirements are laid out in the Management Guidelines on Environmental Protection of Development

Projects (1986), Regulations for Engineering Design of Environmental Protection of Construction Projects (1987), and Management Procedures for Environmental Protection of Construction Projects (1990). In some cases, this process may mean simply filling in a standard EIA form detailing the nature, size, and cost of the project; any anticipated pollution discharges and pollution treatment levels, and pollution facilities to be used; and the environmental status of the surrounding areas.

Foreign developers whose investments are considered major projects, however, must prepare a full EIA statement. The EIA requirements will depend on the amount of foreign investment, as well as on whether the particular industry is considered a polluting sector. Using standardized procedures, the project developer first prepares EIA guidelines describing the scope and content of the EIA statement to be prepared. These guidelines are then reviewed and approved by the local environmental protection bureau (EPB). To conduct the investigation and complete the EIA statement, the developer then turns to experts in a PRC firm approved to carry out EIA investigations. In many cases, the EIA is done by a research or consulting arm of a Chinese agency involved in the project, or perhaps by the design institute involved in the preparation of the final feasibility study. While a few foreign environmental engineering firms have joined with Chinese institutes to do EIAs in China, an EIA prepared solely by a foreign firm may not be acceptable to Chinese approval authorities. Finally, the EIA is submitted to the EPB for assessment and approval and, upon approval, the EPB refers its decision to the relevant authorities.

PROBLEMS ALONG THE WAY

On paper, at least, the environmental engineer's efforts to complete an ESA or work with the local EPB and approved PRC environmental consultants to see the EIA process through seem straightforward. In reality, though, many obstacles make any type of environmental investigation in China difficult. Investigations into a particular site are often stymied by the lack of updated site plans, useful

records, and historical aerial photographs. Many potential resources may be off-limits altogether; regional geological maps and groundwater data, for example, normally are not available to the public. The venture's local partner may be overeager to please the foreign party and the foreign environmental investigators. For example, the local partner may give every assurance that there are no PCBs on site, without stopping to clarify what the term itself means. The language barrier can pose other problems, so a foreign investor should make sure its ESA and other environmental investigation teams have the ability to read site documents and conduct interviews in Chinese with knowledgeable plant representatives as well as with local EPB officials.

The physical collection of site data may also prove difficult. Chinese geological or geotechnical institutes and bureaus, for example, have drilling capabilities that vary markedly. While tripod-style drilling machines with a generator or electric-powered motor are common, truck-mounted drill rigs with augers are rare and hollow-stem augers, commonly used in Phase II investigations in the United States, are unheard of. Other equipment used in the West, including suitable well-screen, PVC pipe, bailers, and sampling bottles, usually must be imported. As submersible pumps for well development or sampling are not used, the sampling methodology tends to involve bailing, which may lengthen the sampling time required.

Once samples for an ESA have been obtained, the foreign party must choose carefully where the samples are to be analyzed. For an ESA, samples can be analyzed at a local laboratory, but the results are rarely prepared according to standard US or Western protocols, and lengthy turnaround times are common. The final report, moreover, will be in Chinese, which means the foreign firm will have to have the results translated for company officials and financial backers at home.

For a US-based company, sending the samples for an ESA back to the United States might seem the obvious solution, but this, too, can be problematic. US Customs tends to require lengthy documentation for any such "imports," and the

long transit times, which may exceed standard holding times, may warrant seeking a faster turnaround closer to the PRC site. Some samples, including those submitted for PCB analysis, cannot be imported into the United States. In general, laboratories in Australia, Hong Kong, New Zealand, and Singapore perform reasonably priced analyses; Australian laboratories, in particular, are often cheaper than those in other parts of Asia, can meet the required turnaround time, and often use US Environmental Protection Agency analytical methods. Australian Customs also maintains few restrictions on the importation of samples for laboratory analysis.

ASSESSING THE RISKS

Taking careful steps during the ESA and EIA processes should be foremost on every China investor's mind. The ESA process should uncover any evidence of actual soil and/or groundwater contamination from hazardous materials, either from current or past uses of the property or from off-site sources of contamination. If potential problems are discovered, the later phases of the ESA should determine the estimated costs associated with managing and remedying the situation.

Preparing an ESA should also help with the preparation of an EIA, a task every foreign investor in a production facility can expect to be asked to complete. The EIA process brings foreign investors in compliance with Chinese laws, an advisable position given the tendency of some officials in China to hold foreign parties accountable for meeting all the environmental specifications that might apply to their venture, in the assumption that "deep-pocketed" foreign firms can afford any extra financial obligations. While it is too soon to tell just how China will assign responsibility for cleaning up polluted sites, knowing the full story before breaking ground in China should help minimize any surprises down the road.

—James C. Scott

James C. Scott, a civil engineer with Denver-based Woodward-Clyde International, has been involved in environmental and engineering assessments in China for the past five years.

*A critical juncture will
be how and when China decides
to pursue Superfund-type
legislation.*

lutant levels further at some future date. Upon approval by the NPC, the mass loading controls will replace the concentration control criteria currently in effect. NEPA plans to establish mass loading targets initially for such priority pollutants as oil, grease, and petrochemicals, allocating discharge limits to individual industries and factories. It is anticipated that in the transition to mass loading criteria, controls will target newly established companies and companies with foreign investment, because of the Chinese legal tradition of "grandfathering" established State-owned companies by allowing a grace period before enforcing the full weight of the new legal requirements.

■ **Air quality** At the national level, air quality and air emissions are regulated by one law and seven standards. The main air-related statute, the 1987 Law on the Control and Prevention of Air Pollution, was significantly amended in 1995. The amendments focused principally on controlling sulfur, nitrogen oxides, and other emissions related to acid rain and coal combustion. In addition, Article 27 of the law requires sulfur dioxide and acid rain zones to be defined. These zones were defined in a regulation drafted by NEPA and enacted by the NPC in 1996. According to the regulation, factories in certain geographical zones will be assessed sulfur dioxide emission fees, and stringent emission standards for power plants and industrial boilers will be enforced. In general, recently issued air emission controls focus on sulfur dioxide, nitrogen oxides, total suspended particulates, dust, and ash emissions.

The newly amended law and air emission standards could help create a market for foreign-made stack emissions monitoring equipment and emissions control technologies for such processes as dedusting and desulfurization. Many cities have environmental quality targets that require local industries to reduce their lo-

cal pollutant emissions as much as possible. Such targets are generally not stringently enforced, as local industries tend to operate on tight financial budgets. However, the increased political support for the implementing of environmental protection measures may encourage industries in China to add or update emissions monitoring and control equipment.

■ **Solid waste** The core waste statute, the 1995 Law for the Prevention and Control of Solid Waste Pollution, establishes a broad national framework for the management of industrial, municipal, and hazardous waste (see *The CBR*, March-April 1996, p.36). The new law is expected to increase transportation and disposal regulatory demands on manufacturing operations in China. The lack of adequate solid waste disposal, treatment, and incineration facilities in China, though, will make comprehensive enforcement of the law difficult for the next two years or so. Nonetheless, companies must register with the local environmental department all solid and hazardous waste that they produce, as stipulated in articles 31 and 45 of the new law. While the specific protocols and registration documents referred to in the new law are still being formulated, the procedures for waste registration are likely to resemble a simplified version of the US Resource Conservation and Recovery Act. Also expected to be promulgated in the near future is a new packaging law, which is expected to include specifications for recyclable and biodegradable packaging. It remains unclear how stringent such requirements will be.

The implementing regulations to the Solid Waste Law, which NEPA is expected to release in early 1997, are likely to mean an increased regulatory burden on foreign firms. Foreign firms involved in processing chemicals and metals—or other industries that tend to generate large amounts of waste—may be particularly affected. Additional regulations within the next five years will address such issues as underground storage and emergency response protocols, neither of which currently is regulated comprehensively. Hazardous waste issues related to the statutory provisions of the 1995 legislation are also anticipated as part of the regulatory package and are expected to provide detailed hazardous waste classifications and treatment procedures.

The new law emphasizes the need for waste treatment and disposal and may open some doors for foreign providers of consulting services or waste treatment facilities in China. But the Solid Waste Law leaves many foreign firms with operating ventures in China somewhat unsure of their current and future cost obligations for waste disposal. In the short term, many foreign ventures are storing generated waste on site in anticipation of the establishment of proper disposal sites in China, and are looking to minimize their waste streams in China.

A critical juncture will be how and when China decides to pursue Superfund-type legislation, a move some sources in Beijing believe will take place within the next 10 years. NEPA officials and policymakers have been influenced by the US Superfund model, and are considering this approach as an option for cleaning up contaminated sites in China. Clearly, investors looking to establish manufacturing operations on sites previously used for manufacture, agriculture, or disposal activities could see significant financial burdens if Superfund-type approaches are implemented. In these circumstances, environmental assessments should be considered an important part of the due diligence process.

■ **Noise control** The long-awaited Law on Noise Pollution Prevention and Control was issued in November 1996. The law sets general requirements on noise control and requires mechanical and electrical equipment manufacturers to indicate the noise levels generated by their products, including electrical home appliances. The current Standard of Noise at the Boundary of Industrial Enterprises and Standard of Environmental Noise in Urban Areas are likely to be amended in the future. The current rules vary according to the zone in which the plant is located. The new standards are expected to be more stringent, but full details will not emerge until the amendments are released later in 1997. The new regulations, in time, may increase opportunities for manufacturers of health and safety devices such as ear protection devices or noise abatement equipment.

■ **Environmental impact assessments (EIAs)** EIAs are regulated principally by three regulations: Management Guidelines on Environmental Protection of

Construction Projects (1986); Regulations for Engineering Design of Environmental Protection of Construction Projects (1987); and Management Procedures for Environmental Protection of Construction Projects (1990). These rules require an EIA for each "development project"—whether an expansion, renovation, or new construction (see p.36). Foreign companies are advised to monitor closely each stage of the EIA—typically conducted by a local firm designated by the Chinese party or the design institute responsible for the final feasibility study—to ensure that the procedures used comply with the regulations.

CHANGING THE INCENTIVES

While the growing number of environmental laws and regulations now provide much of the framework for environmental protection in China, officials in Beijing are also aiming to boost the incentives to use cleaner production technology. Here, too, there are some similarities with US practice, though some important differences exist.

One important change took place in April 1996, when the NPC amended China's Criminal Law to make "jeopardizing the environment" a criminal offense. Criminalizing environmental legal requirements is expected to raise the significance of environmental issues in China and should help bring about greater compliance. This change may send a chill down foreign investors' backs, as a common complaint from international company managers in China is the perceived unequal enforcement of environmental regulations. Because many Chinese officials consider international companies to have more resources and more experience in meeting pollution-control requirements, they often expect them to be in full and immediate compliance with the requirements. In contrast, China's aging State enterprises—the bulk of Chinese domestic industry—frequently lack the capital to invest in clean technologies to meet the requirements of environmental regulations and, thus, receive deferential application, if any, of environmental requirements.

Foreign companies also need to keep abreast of PRC efforts to encourage com-

panies to pursue clean production. Under discussion are ways to shift the emphasis from end-of-pipe controls to preventative controls based on economic incentives. China, like other countries, is trying to move away from simple penalties that allow enterprises to "pay to pollute," and shift to a system that encourages enterprises to invest in pollution control. In China, three fundamentally different approaches currently are used:

■ **Pollutant discharge fee system** The most common discharge regulation system in China, this approach requires the enterprise to pay fees based on the extent to which its discharges exceed the general standards applicable to its particular industry and receiving locality. PRC environmental officials have criticized this system for allowing dischargers to continue to exceed standards as long as fees are paid.

■ **Discharge permit system** This system, which is being implemented with greater frequency by local environmental protection bureaus (EPBs), applies to wastewater discharge, solid waste, hazardous waste, and air and noise emissions. The discharge permits are specific to individual facilities and set standards for emissions of different pollutants based on concentration and volume. In some cases, it is possible that the discharge standards set in the permit are less strict than the general standards for the particular industry. In such cases, facilities must pay discharge fees for any discharges exceeding the general standards, regardless of whether they are in compliance with the discharge permit.

NEPA is currently in the process of altering the standards of the permit system

from ones based on concentration and volume to those based on mass loadings. A permit system based on mass loading calculations appears to be the initial step in the implementation of tradeable permits.

■ **License system** NEPA has introduced a discharge regulation system involving licenses in selected cities. The system involves setting allowable pollutant loads for facilities based on the assimilative capacity of the receiving water body. This system is the most advanced and most environmentally protective of the three, but the advanced technology required to assess the assimilative capacity of the water body and monitor the effluent quality is not widely available throughout China.

For each of the three discharge regulation systems, companies are required to provide data to evaluate their compliance and to allow for assessment of fees. In most cases, large industries are required to report the constituents in their discharge to the local EPB on a regular basis, ranging from daily to monthly reports, depending on the pollutants and the sampling technique employed. The local EPB's monitoring unit also samples most large and small industries periodically. These sampling visits are unannounced, and the frequency of samples taken depends on the polluting nature of the industry and the specific requirements of the local or regional EPB. Some firms find their operations subject to EPB sampling checks at least once a month, while others are scrutinized only once or twice per year. Companies not in compliance risk additional fees and penalties if they exceed discharge standards on a continual basis.

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FAR FROM COMPLETE

China's fundamental legal framework, recent legislative changes, and their implications for American business have a distinct flavor of Western environmental law and policy developments. Even the vocabulary is similar: Chinese government administrators speak of "pollution prevention," "comprehensive utilization and conservation of resources," and ways to promote "sustainable development." But the apparent similarities between the principles and policies that frame China's environmental protection regime and those commonly found in many Western countries must be balanced with some of the large differences. At the outset, the full set of Chinese environmental laws and regulations does not begin to add up to the bulk of material and detail found in US law relating to these topics. Other striking differences between the Chinese and Western approaches to environmental regulations exist, making it doubly important that foreign firms understand the full scope and impact of the Chinese rules.

Language and translation issues, for example, can have important legal implications in China and give rise to miscommunications between US lawyers and their Chinese counterparts. Modifying phrases, commas, tenses, conditional constructions, and their implications are much the subject of US legal interpretations; many of these kinds of grammatical structures, and the nuances they create, do not exist in the Chinese language. Foreigners trying to interpret China's environmental regulations can thus easily become focused on the significance and ramifications of certain ideas, ideas which may simply be an artifact of translation.

An additional problem is that many crucial terms in China's environmental statutes are not defined. In China, investors may find that there are clear and substantive environmental standards, but that the circumstances or parties to which the standards apply are not at all clear. In the United States, definitions frequently are reached through policy debates and, thus, tend to be instrumental in setting forth the intended reach and scope of the law. In China, by contrast, a company may have no choice but to seek the guidance of the relevant agency or ministry representatives, should the undefined

terms leave unclear matters of application or interpretation of the law. While PRC laws and amendments are becoming more detailed and are including more definitions, many terms and circumstances remain vague.

Another problem for foreign companies is the form of China's environmental laws. For example, new environmental statutes tend to be issued as "trial" or "interim" laws, fully enforceable in this form but subject to change. The basic Environmental Protection Law, for instance, was enacted on a trial basis in 1979 but was only adopted as "final" a decade later. The 10-year trial period resulted in changes which led to greater local authority over environmental decisionmaking. Foreign investors thus found themselves dealing with national-level authorities initially, but later had to shift their compliance actions and inquiries to the local level. In other cases, new laws or regulations are enacted on a trial basis only in certain parts of the country. At times, this limited applicability may not be clear from the text of the law, leaving a foreign company possibly scrambling to comply with a regulation that may not apply to its locality—or to make physical plant changes only to find that the final impact of the law is quite different.

In addition, environmental litigation, as we know it in the United States, does not yet exist in China, hence there is virtually no environmental case law to guide companies. In the United States, case law results can often help settle contested policy issues or clarify technical interpretation problems. The litigation process creates additional "public record" information, adding to the regulatory and legislative public record archives. In China, the lack of case law, substantive legislative history, or other accessible public record archives makes it extremely difficult for US professionals to analyze environmental issues from outside China. In many cases, discussions with government agencies are the only way to resolve questions of interpretation or applicability.

Moreover, environmental news in China is focused heavily on positive news and "success stories"—far less information is available publicly on serious environmental problems and environmental policy debates. This is in contrast to the US system, where environmental

professionals are accustomed to seeing information develop during public debate on environmental issues and have ample opportunity to participate in the policy-making process. China currently has no legally established protocols for private party or private business input during the development of laws and regulations, though this situation may be changing. Foreign firms operating in China frequently raise the need for greater transparency in the rule-making process, but for now, the lack of a public record—a crucial tool to US environmental professionals—contributes to the uncertainty of US and other foreign firms in China about their environmental obligations.

Interpretation of China's environmental law is further hampered by the fact that few Chinese environmental lawyers exist in the private sector to raise environmental questions about the endless stream of transactions and commercial contracts now being concluded in China. The majority of China's environmental lawyers tend to be employed by the government, posted in various ministries and regulatory agencies and on the staffs of legislative bodies. In situations where difficult legal issues arise, foreign parties will need to consult with environmental lawyers within Chinese governmental bodies.

GREENER PASTURES

While many of these enforcement and interpretation problems are hard to resolve in the short term, as they are, in part, a by-product of Chinese culture, China appears to be moving to make the environmental rules and processes more familiar to and more easily understood by foreign investors. A comprehensive environmental legislative structure, similar in many ways to the US framework, already is in place. And foreign and Chinese firms will no doubt find more stringent requirements and tougher penalties for noncompliance in the next few years, as new environmental laws, regulations, and standards are likely to be promulgated. Though the new laws, in all likelihood, will place additional regulatory burdens on foreign manufacturing companies in China, they also contribute to greater transparency and create new opportunities for other players to capitalize on the changes in China's environmental regime. 完

Greening US Aid to China

A retooled US policy could boost American environmental business in the PRC

Daniel C. Esty and Seth S. Dunn

Nearly 25 years after President Nixon's China initiative led to his visit to the mainland and a breakthrough in US-China relations, a similar "revolution in diplomacy," as Henry Kissinger called it then, must begin to address the serious environmental implications of China's economic development. After 15 years of rapid, largely coal-powered economic growth, five of China's cities rank among the world's ten most air-polluted locales for particulates, and acid rain now affects over one-third of China's land area. A growing demand for power (see *The CBR*, September-October 1996, p.8) and automobiles (China aims to produce three million cars per year by 2000) will add to these air pollution woes. Urbanization, meanwhile, is taxing water supplies and solid waste disposal efforts, while heavy fertilizer and pesticide use in the countryside places great strains on the nation's water resources. In rural areas, inadequate enforcement of environmental laws and the proliferation of town and village enterprises has led to haphazard industrialization (see p.34), while the ceaseless search for food and firewood endangers China's vast wealth of biological diversity.

These unfortunate circumstances are China's problem, some might say, but China's environmental problems have significant cross-border implications. Regionally, PRC sulfur dioxide emissions fall as acid rain in Japan and Korea, causing billions of dollars in damage. Globally, China is currently the world's second-leading emitter of carbon dioxide and other greenhouse gases, which many scientists believe contribute to global climate change. And the PRC is projected to surpass the United States to become the world's top emitter by 2020.

PRELIMINARY MOVES

Though economic and ecological interdependence make China's modernization an issue for the whole world, US policymakers have tended to view China's environmental problems in isolation, paying relatively little attention to the consequences for the United States. And, despite mounting evidence of China's deteriorating environment, the United States has been slow to recognize both the problems and the concomitant opportunities, particularly for the diffusion of clean technologies.

But environmental cooperation seems finally to be taking its place at the crowded table of US-China policy issues. The White House Office of Environmental Policy, in a 1995 statement, declared that the United States seeks "enhanced cooperation with China across a broad range of issues related to the environment." The Clinton Administration also recognizes that working with China to promote sustainable development—through pollution prevention, agriculture, and energy projects—fosters scientific exchange, offers an avenue for mitigating global climate change, and, according to the White House statement, "opens opportunities for the US private sector in the rapidly expanding Chinese market for environmental technologies and power generation equipment."

The Clinton Administration and the President himself have addressed shared US-China environmental concerns. The Administration's model business principles set forth during the 1995 China-MFN debate recommended that "responsible environmental protection and environmental prac-

Daniel C. Esty is director of the Yale Center for Environmental Law and Policy at Yale University. Seth S. Dunn is a researcher at the Worldwatch Institute in Washington, DC. This article is based on research for the Yale Center's ongoing project, *Powering China: The Environmental Implications of China's Economic Development*.

tices" be included in a voluntary code of conduct for US companies doing business in China. President Clinton also discussed with top US business executives the environmental impact of China's growing demand for cars and later that year reached formal agreement with PRC

one step behind the competition in what may well become the world's largest market for environment-related services, goods, and technologies.

Like many industrialized countries, the United States has directed some assistance and trade promotion programs toward China's environmental problems. Perhaps not surprisingly, though, Japan is the leader in this area, with a Green Aid program that will provide \$183 million in concessionary (soft) loans over the 1994-2000 period, guided by specific principles and aimed at the reduction of China's sulfur dioxide emissions (see *The CBR*, July-August 1994, p.39). US environmental assistance to China totals less than \$10 million. By comparison, the US government is spending hundreds of millions of dollars—and is inducing the private sector to spend billions of dollars—to reduce greenhouse gas emissions in the United States, while certain US policies encourage US businesses to undertake projects in China that will generate enormous increases in greenhouse gas emissions.

SMALL STEPS

Despite such policy inconsistencies, China and the United States have been cooperating, if on a small scale, on environmental initiatives for more than 15 years. US-China environmental ties began in 1980 with an Environmental Cooperation Protocol between the US Environmental Protection Agency (EPA) and China's National Environmental Protection Agency (NEPA). Extended in 1990, the protocol currently covers eight EPA projects in China, addressing air and water pollution, ozone protection, and environmental management. The joint efforts cover research, feasibility studies, and model site development for coal-bed methane recovery; helping Chinese refrigerator factories develop more efficient non-ozone-depleting products; and the establishment of an Export Council for Renewable Energy (ECRE) (see *The CBR*, July-August 1994, p.34).

EPA-led interagency efforts also address the impact of China's industrialization from a global perspective:

■ The Beijing Efficiency Center (BECon), a non-profit center formed in 1993 with support from EPA, the Department of Energy (DOE), the World Wildlife Fund, and China's Energy Research Institute and

State Planning Commission, is dedicated to promoting energy efficiency. BECon provides policy guidance to central and local governments, educates the Chinese public on energy efficiency issues, and runs technical training programs. It also pursues energy efficiency business development and design mechanisms for financing energy efficiency projects (see *The CBR*, November-December 1993, p.42).

■ EPA's US Climate Change Country Studies Program is offering technical assistance to help China develop a national greenhouse-gas action plan. Along with several Chinese agencies, the program recently sponsored an assessment of China's greenhouse gas emission sources, impact, and mitigation measures. In implementing the results of the study, Chinese and US officials hope to engage the private sector. US experts also are working to help China develop its own environmental technology industry, for example, through support for a \$2.3 billion industrial park for environment-related enterprises in Yixing, Jiangsu Province.

■ The \$11 million EPA-led US Technology for International Environmental Solutions (USTIES) program aims to develop advanced environmental systems and promote the achievement of environmental objectives worldwide. USTIES seeks to boost US private sector participation in these efforts through exports of "green" technologies. USTIES also strives to sharpen the international competitiveness of the US environmental industry, and has identified China as one of the world's fastest-growing markets for environmental products. In 1996, USTIES targeted \$4 million for China activities and made plans to mobilize about \$10 million in private sector resources for nine projects, including the establishment of a US-China Energy and Environment Center and a feasibility study of renewable energy for utilities.

Other bilateral agreements support these types of government-to-government environmental cooperation. The US-China Joint Commission on Science and Technology led by the Department of Commerce (DOC) and China's State Science and Technology Commission, has produced agreements in agriculture, atmospheric and earth sciences, natural resources, energy, and fisheries. DOC also co-chairs with the PRC Ministry of For-

Environmental cooperation seems finally to be taking its place at the crowded table of US-China policy issues.

President Jiang Zemin on the importance of joint cooperation on the environment. In a meeting in early 1996, the two leaders touched on both countries' contributions to global climate change.

Meanwhile, Secretary of State Warren Christopher helped make China a major focus of the recently unveiled State Department Environmental Initiative. Intended to help integrate global environmental issues into US foreign policy, the initiative also aims to increase the US share of the \$400 billion global environmental technology market. Last April, as part of this effort, Vice President Gore launched the US-China Forum on Sustainable Development, Energy, and the Environment, a bilateral program of environmental cooperation to address ecological and public health issues arising from energy, agriculture, and transportation activities. Gore and PRC Premier Li Peng termed their April 1996 meeting "a preliminary step" toward a stronger bilateral relationship aimed at sustainable development. High-level bilateral dialogue on the topic is likely to continue during Gore's planned trip to China this year.

Making the environment a real priority in US-China relations, though, will require more than talk. Actual environmental progress will require rethinking the existing US environmental policy toward China, which lacks a focused strategy to address China's global environmental impact. The current ad hoc US policy approach serves neither PRC nor US environmental interests—and keeps US firms

eign Trade and Economic Cooperation the Joint Commission on Commerce and Trade, which promotes export opportunities for US firms through working groups on environmental technologies and power generation equipment.

LIMITED SUPPORT

Still, in comparison with other countries, the United States has a long way to go. A recently completed eight-year study by Environmental Business International, Inc. (EBI) examined the global environmental technologies market and the relative competitiveness of the United States. The study found that the domestically focused US environmental industry, with only six percent of its revenue coming from exports, lags significantly behind Germany and Japan in capturing overseas opportunities. The EBI analysis also revealed very modest US government support for these firms and their efforts to reach out to new markets.

And, despite these EPA and DOC efforts, attention to global environmental objectives is far less evident in other US programs and in other agencies' activities. Most US assistance to China focuses on trade promotion, while passing up opportunities to enhance environmental protection. Even the Environmental Technology Export Initiative, an interagency effort launched by President Clinton in 1993 to promote the transfer of environmental technologies, remains geared toward boosting US exports. DOC's Environmental Technology Export Office, which leads the initiative, has focused its analysis on the Chinese demand for environmental goods and services, doing little to steer US funds toward projects that fulfill US environmental interests.

Recent DOC and DOE "environment" missions to China, including the late Commerce Secretary Ron Brown's August 1994 trade mission, focused on power generation projects and resulted in the signing of several clean-coal technology contracts. Though sometimes portrayed as an example of US environmental technologies in demand around the globe, "clean coal" makes little sense as the centerpiece of any environmental program because, though this technology reduces emissions of sulfur dioxide, it increases carbon dioxide emissions.

The same sort of trade-promotion emphasis dominated Energy Secretary Hazel O'Leary's February 1995 trip to China, which included representatives from non-profit environmental groups and executives from energy efficiency and renewable energy businesses, but concentrated heavily on coal-fired power plant development. DOE's narrow focus is surprising, as the department also manages the Asia-Pacific Economic Cooperation (APEC) Energy Efficiency and Renewable Energy Project, which distributes information and facilitates private sector interaction among APEC member economies to expand the regional diffusion of environmental technologies. But DOE's clean coal advocates hold considerable sway in a department that has long had a coal focus.

Despite the tendency to emphasize trade promotion activities to the detriment of environmental concerns, some progress has been made in integrating environmental concerns into US export policy. US exports of environmental technology grew 50 percent from 1993-95, and in 1995 the Export-Import Bank of the United States (Ex-Im Bank) provided \$1.37 billion in overseas environment-related financing. Moreover, Ex-Im Bank now conditions its loan approvals on each project's compliance with environmental guidelines established in 1992 and modeled on those of the World Bank. Consistent with these guidelines, Ex-Im Bank last summer refrained from issuing preliminary letters of interest to support US exports for the Three Gorges Dam project (see *The CBR*, July-August 1996, p.4). Ex-Im Bank has not closed the door completely to financing Three Gorges-related projects, though, and the bank has asked Chinese officials for more information on pollution-control plans and other environmental aspects. Overall, Ex-Im Bank's portfolio appears to be improving, as the bank recently authorized three loans totaling \$12.5 million for the sale of wind energy equipment and services to China. But Ex-Im Bank also supports clean coal projects and has approved export financing for a number of such projects in China.

A NEW FRAMEWORK

Restoring the environmental equilibrium in US-China policy will require a change in attitude from pure trade pro-

motion toward broader consideration of US interests. Instead of the current spotty list of environmentally aware policies, US development assistance to China could form the core of a focused, long-term, and flexible environmental policy. Government-wide, a new US-China Environmental Initiative could be designed to address the global environmental implications of China's economic development; steer the private sector toward more careful consideration of the environmental impacts of the projects they undertake; and strengthen China's framework

*The domestically focused
US environmental industry
lags behind Germany
and Japan in capturing
overseas opportunities.*

of laws and policies for environmental protection and the Chinese public's support for environmental investments. Greening US aid to China will require a comprehensive understanding of such global environmental concerns as greenhouse gas emissions, acid rain, and water pollution—and will involve a significant shift in US government priorities.

An important aspect of this shift would be to expand existing programs. The concept of "joint implementation" under the Climate Change Convention, for example, could be broadened. The United States has taken a leadership role in developing this multilateral mechanism for allowing industrialized countries to meet greenhouse gas mitigation goals through cooperative projects in developing countries. An interagency effort led by the State Department, the US Initiative on Joint Implementation (USIJI) could also broaden its present scope to demonstrate opportunities for joint emissions reduction (or "sink enhancement") in China. To date, the program has advanced two rounds of pilot-phase projects, investing \$200 million, primarily in Latin America and Eastern Europe, for 15 projects ranging from forest preservation to solar electrification. No projects have yet taken place in China,

but there are no US government restrictions on such activities. The USIJI Secretariat met with Chinese officials in Beijing in September 1996 to identify potential projects and held a workshop there in November, though no concrete plans resulted from the meetings.

Another innovative US program which could benefit China is the US-Asia Environmental Partnership (US-AEP). Created in 1992, US-AEP seeks to match Asian en-

vironmental needs with US environmental experience, technology, and practice (see *The CBR*, July-August 1994, p.44). Led by the United States Agency for International Development (USAID), the 10-year initiative works with 35 Asia-Pacific nations and territories through partnerships with US federal departments and agencies, state and local entities, environmental businesses, nongovernmental organizations, and Asian counterparts. Until US restrictions on USAID funding for China are lifted, however, US-AEP cannot operate in China.

US-AEP originally focused on a variety of environmental goals: stemming biodiversity losses; controlling and preventing industrial pollution; assisting in the development of urban environmental infrastructure; and improving energy efficiency and the use of renewable energy technologies. In 1995, US-AEP redefined its mission to a single objective: to promote a "clean revolution" in Asia by introducing less-polluting systems of production. It now concentrates on encouraging clean technologies and sound environmental management; developing better environmental infrastructure for urban areas; and fostering the policy framework and public awareness for sustaining clean production.

US-AEP has already yielded significant results. Since 1992, both directly and

through its liaison work with the Asian Development Bank, US-AEP has involved 850 Asian and American professionals in exchanges; matched over 1,100 trade leads with more than 3,000 US environmental firms in its Environmental Technology Network for Asia database; transferred \$420 million in US private sector environmental equipment and services to Asian public and private sectors; and created more than 3,400 jobs in the United States.

The program is trying to look carefully at efforts that coincide with Asian countries' local needs and circumstances, such as improvements in energy efficiency and growing opportunities for wind power—now the world's fastest growing energy source—and other renewable energy projects that hold promise in China. Such projects could be a boon to struggling US wind companies if US-AEP were active in China. Danish firms, for example, recently signed a \$145 million contract with the Chinese Ministry of Electric Power to install 73 megawatts of wind-generating equipment in Xinjiang Uygur Autonomous Region, Inner Mongolia Autonomous Region, and Zhejiang Province. US-AEP is a unique effort which exemplifies the redefining of relationships—between aid and trade, public and private sectors, and business and nongovernmental groups—that must take place to solve China's environmental problems. It could help coordinate and focus the current patchwork of China programs, and merits higher profile in the US-China context. July 1997, when Hong Kong, (a US-AEP-eligible territory) reverts to PRC rule, would be an opportune time to extend US-AEP's mission to include China.

Other US programs also have a potentially helpful role to play in China. USAID, for example, provides valuable environmental technical assistance elsewhere in the world. The Trade and Development Agency (TDA) pursues trade promotion activities in many countries, but TDA funds have not been available to China since 1989. Although in 1995 TDA devoted just 11 percent of its loans to environmental initiatives, the agency has participated in a number of US-AEP projects and could play a significant role in future US-China environmental cooperation. Similarly, the Overseas Private Investment Corp. (OPIC) helped to raise a \$135 million Global

Environmental Fund for emerging mar-

kets, as well as two-thirds of the initial capital for the \$70 million Global Environmental Emerging Markets Fund, which will make equity investments in environmental projects in Africa, Asia, Eastern Europe, and Latin America. OPIC, though, like TDA, remains subject to Tiananmen sanctions and is prevented from engaging in activities with China.

ON THE MULTILATERAL FRONT

The United States also would do well to steer its indirect aid through international institutions toward environment-related China projects. International institutions currently have more than \$4 billion earmarked for environment-related projects in China. The World Bank will have a particularly important role to play, as China is now the Bank's largest borrower. The Asian Development Bank, too, has made China's environment a priority, with \$2 billion in the pipeline for environment-related projects over the next three years. The United Nations Development Programme (UNDP) continues to assist the Chinese government in implementing its ambitious "Agenda 21" program and the environmental goals spelled out in the Ninth Five-Year Plan for 1996-2000, while the United Nations Environment Programme (UNEP) has announced plans to expand its capacity-building and information-dissemination work in China.

A major effort should also be made to expand the China mission of the Global Environment Facility (GEF), a special fund managed by the World Bank, UNDP, and UNEP to help developing countries meet the incremental cost of addressing global environmental problems, including climate change, biodiversity, ozone depletion, protection of international waters, and land degradation. To date, GEF funds have been approved for seven projects in China, including coal-bed methane, biodiversity conservation, greenhouse gas control strategies, natural gas development and transport in Sichuan Province, ship waste disposal, energy efficiency and pollution control in township and village enterprises, and promotion of renewable energy. Future projects in the funding pipeline will pro-

mote energy-efficient refrigerators and compressors, vehicle emission controls, low-pollution coal briquettes, and methane recovery from municipal waste. Yet, though China is expected to receive substantial further funding, the GEF's budget still falls far short of China's urgent needs.

The United States, as a major GEF donor country, sits on the board that makes loan decisions and, thus, plays an influential role in GEF activities. But the United States has cut back GEF funding at a time when more, not less, money is needed to expand the facility. Greater US funding for the GEF would be, especially in China's case, a cost-effective investment in environmental protection. US support also would help cutting-edge business technologies enter the market, which will be important as the GEF will likely have to find ways to leverage its investments with private-sector funds.

THE WAY AHEAD

A US-China Environmental Initiative should aim to inject global environmental priorities into existing programs and remove restrictions on programs that stand to improve not just China's environmental situation, but the global environment. It would also help China strengthen its legal and policy framework for environmental protection. Such an initiative would seek to integrate environmental concerns into current US-China policy, making US environmental interests as well as commercial interests of central importance. In essence, US foreign assistance, by targeting supranational environmental spillovers, would help secure domestic environmental protection.

In an ecologically interdependent world, traditional thinking about both development assistance and export promotion is fundamentally misplaced. US policymakers must reconceptualize current programs to promote environmental protection, foreign policy goals, and US business interests simultaneously. The task of adjusting and revising US environmental policy to China's realities is daunting and will require a dramatic change in strategy and priorities—and, perhaps, some further nudging from both the environmental and business communities.

China's environmental situation is unique, requiring carefully tailored pro-

The task of adjusting and revising US environmental policy to China's realities is daunting and will require a dramatic change in strategy and priorities.

jects and programs. The bilateral and multilateral efforts now under way are an important start, but it will no doubt take further efforts to make the environment a priority in US-China relations amid myriad competing concerns. Though the scale of the ecological time bomb ticking in China demands it, we have yet to develop the framework—as Kissinger would say, “a comprehensive framework”—for addressing the environmental implications of China's economic development, and fostering the cooperation that will be needed for the next quarter-century and beyond. 完

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HONG KONG MEMBERS TALK APPRAISALS, DISTRIBUTION, AND TRAINING

The difficulty of valuing "intangible assets" such as intellectual property headlined the Legal Committee's October 14 meeting in Hong Kong. Keith Yan, vice president of the Business Valuation Group at American Appraisal Asia Ltd., outlined the various formulas Chinese auditors use to value Chinese assets. Yan noted that China's Trademark Office is developing new rules for the valuation of Chinese trademarks and the construction industry is considering creating a valuation department to assess building values. The Legal Committee met again on November 18 to review China's new joint-venture trading company regulations, which participants concluded are designed primarily for large Asian traders.

Management training was the subject of a talk by Sheila Melvin, director of the Council's Shanghai office, at a breakfast

meeting on November 13. Melvin stated that foreign companies should consider providing Chinese employees with more opportunities for follow-up training. Foreign companies also could benefit from training their managers about the cultural and practical realities of doing business in China.

The Marketing and Distribution Committee heard detailed reports on November 22 from member companies Sara Lee Corp. and The Procter & Gamble Co. (P&G). Mark Gao, Sara Lee's Shanghai-based sales and marketing director for China, said his staff has assumed all merchandising and marketing responsibilities, since local distributors are unable to provide these services. P&G's Larry Mason, Guangzhou-based sales director for Greater China, said that P&G has set up a national sales team to handle the company's China sales.

SCIENCE AND TECHNOLOGY COMMISSIONER ADDRESSES COUNCIL

The Council, with support from General Motors Corp., hosted a delegation of 24 science and technology officials led by Song Jian, State councilor and minister of the State Science and Technology Commission, at a luncheon on October 24. Song was in Washington to co-chair a meeting of the Joint Commission on Science and Technology with his counterpart, John Gibbons, director of the White House Office on Science and Technology Policy.

In a lively speech, Song detailed for the more than 100 Council members and guests the many examples of bilateral cooperation on projects to expand not only China's domestic scientific and technological resources, but also to examine global climate change and other issues that affect both countries. Stating that their cooperation was "flourishing," Song noted that the United States and China had been working together effectively in a wide range of fields since the 1979 creation of the joint commission. Bilateral efforts have involved 10,000 scientists and engineers from both countries, Song said, and

more than 1,000 projects ranging from cancer research to astronomical studies.

The minister also highlighted the importance to China of the participation of foreign businesses, including member companies General Motors, Ford Motor Co., General Electric Co., IBM Corp., Motorola Inc., and Texaco Inc., in establishing research facilities in China to help develop the country's domestic technological capabilities. Song also expressed the hope that US companies would be able to participate in the provision of nuclear power engineering and services, noting that expanded nuclear generation is necessary if China is to reduce its heavy reliance on coal. He noted that the United States and China rank first and second, respectively, in total carbon dioxide emissions, which result primarily from fossil fuel combustion. US firms currently are prohibited by US export restrictions imposed after the 1989 Tiananmen crackdown from supplying nuclear technology to China, but since 1994 have been able to supply non-nuclear balance of plant equipment.

VISITS BY PRC FINANCE MINISTER...

US Treasury Secretary Robert Rubin was on hand to assist the Council and 10 member-company sponsors in welcoming Minister of Finance Liu Zhongli and his delegation to a reception on November 18. Liu was in Washington to co-chair with Rubin the ninth meeting of the US-China Joint Economic Committee (JEC), which met November 18-19.

In informal remarks, Rubin and Liu summarized for Council members and guests the progress achieved in the JEC talks. Rubin noted that the JEC meeting had given him a greater understanding of China's economy, which soon is likely to be the world's largest. Liu echoed Rubin's praise of the JEC meetings, stressing the distance China has come in modernizing its economy, and asserted China's support for future mutual cooperation.

...AND MAYOR OF SHANGHAI

The Council and the National Committee on US-China Relations, with support from The Chubb Corp., The Coca-Cola Co., Ford Motor Co., General Motors Corp., and Motorola Inc., hosted a corporate luncheon for Shanghai Mayor Xu Kuangdi in Washington on November 13. Affable and informative, the mayor of China's largest city presented a slide show illustrating the changes taking place in Shanghai's landscape and economy. In 1995, the city's GDP per capita hit ¥19,000 (\$2,289).

Foreign direct investment (FDI) and infrastructure improvements are driving the city's growth, Xu said. As of September 1996, US investment projects in the city numbered 1,932 and had a combined value of \$3.7 billion. In 1995, 25.5 percent of the city's total FDI came from Japanese investors, while US investment accounted for 14.7 percent, followed by Hong Kong (7.4 percent), Germany (7 percent), and South Korea (6.1 percent). The mayor also expressed his hope that Shanghai would join Hong Kong as a major financial center: in 1995, financial services accounted for 12 percent of the city's tertiary industry.

Christopher V. Harris

The following tables contain recent press reports of business contracts and negotiations exclusive of those listed in previous issues. For the most part, the accuracy of these reports is not independently confirmed by *The CBR*. Contracts denominated in foreign currencies are converted into US dollars at the most recent monthly rate quoted in the International Monetary Fund's *International Financial Statistics*.

Firms whose sales and other business arrangements with China do not normally appear in press reports may have them published in *The CBR* by sending the information to the attention of the editor.

SALES AND INVESTMENT *September 16 - November 15, 1996*

Foreign party/Chinese party

Arrangement, value, and date reported

Accounting and Insurance

OTHER

General Accident Fire and Life Assurance Corp., PLC (UK)

Opened representative office in Pingdu, Shandong Province. 10/96.

Winterthur Insurance Group (Switzerland)

Won license to provide insurance policies (excluding life insurance) in Shanghai. 10/96.

Agricultural Commodities and Technology

CHINA'S IMPORTS

Australian Wheat Board, Transfield Holdings (Australia)

Won contract to build grain terminal in Fangcheng, Guangxi Zhuang Autonomous Region. \$7.9 million. 10/96.

INVESTMENTS IN CHINA

Continental Grain Co. (US), Mitsubishi Corp. (Japan)/Dongfang International Holdings Group (Shanghai)

Will establish import-export joint venture in Shanghai. \$1.2 million. (US:22%, Japan:27%-PRC:51%). 11/96.

OTHER

ADB

Will provide loan to Hainan Province to develop agricultural and natural resources. \$53 million. 11/96.

US Department of Agriculture

Will offer export credits to China for the purchase of a variety of US agricultural commodities. \$100 million. 11/96.

World Bank

Will extend loan to support seed commercialization project. \$36.5 million. 10/96.

Abbreviations used throughout text: ADB: Asian Development Bank; BOC: Bank of China; CAAC: Civil Aviation Administration of China; CNAIEC: China National Automotive Import-Export Corp.; CATIC: China National Aero-Technology Import-Export Corp.; CITIC: China International Trust and Investment Corp.; CITS: China International Travel Service; CNOOC: China National Offshore Oil Corp.; ETZ: Economic and Technological Development Zone; ICBC: Industrial and Commercial Bank of China; MPT: Ministry of Posts and Telecommunications; NA: Not Available; NORINCO: China North Industries Corp.; P&T: Post and Telecommunications; PBOC: People's Bank of China; SEZ: Special Economic Zone; SINOCHEN: China National Chemicals Import-Export Corp.; SINOPEC: China National Petrochemical Corp.; SINOTRANS: China National Foreign Trade Transportation Corp.; SPC: State Planning Commission; UNDP: United Nations Development Program.

Banking and Finance

INVESTMENTS IN CHINA

Daewoo Corp. (S. Korea)/Shanghai Langsheng Group

Established trading house joint venture in Shanghai. \$12 million. (S. Korea:49%-PRC:51%). 10/96.

OTHER

ADB

Approved loan and equity investment for China Everbright Bank. \$80 million. 11/96.

Western Union Financial Services International (US)

Expanded money-wire service to 13 more cities in China. 11/96.

KeyBank, ChinaWire Corp. (US)

Will offer electronic cash transfer service between US and China. 11/96.

Fujitsu Ltd. (Japan)/Fujian Shida Computer Co. Ltd.

Will cooperate to expand China's ATM market. 10/96.

The Mitsubishi Trust and Banking Corp. (Japan)/CITIC

Will cooperate to introduce Chinese companies to potential Japanese joint-venture partners. 10/96.

China Construction Bank

Will open representative office in New York City. 10/96.

The Sumitomo Bank Ltd. (Japan)

Opened representative office in Shenyang, Liaoning Province. 9/96.

Korea First Bank (S. Korea)

Opened branch office in Shanghai. 9/96.

Ivory Coast Debt Autonomy Bank/The Export-Import Bank of China

Signed loan guarantee for Huaco Auto Corp. Ltd., a Sino-Ivory Coast joint venture. \$6.2 million. 9/96.

MasterCard International (US)/Shanghai Pudong Development Bank

Will issue MasterCard smart card in China. 9/96.

Visa International (US)/China Construction Bank

Launched "Interlink" debit card. 9/96.

Chemicals, Petrochemicals, and Related Equipment

INVESTMENTS IN CHINA

Burmah Castrol PLC (UK)/NA

Established Foseco Foundry (China) Ltd. joint venture to build chemical plant in Hubei Province. 11/96.

Americhol Corp., a wholly owned subsidiary of Union Carbide Corp. (US)

Will build plant in Guangdong Province to produce its UCARE-line polymers for personal care products. 11/96.

BP Chemicals Ltd., a unit of British Petroleum PLC (UK)/Shanghai Petrochemical Co., a unit of SINOPEC

Established ethylene cracker joint venture in Shanghai. \$2.5 billion. (UK:50%-PRC:50%). 10/96.

LG Chemical, a subsidiary of the LG Group (S. Korea)/Yongxing Chemical Plant (Zhejiang)

Established Ningbo LG Yongxing Chemical joint venture to manufacture acrylonitrile butadiene styrene in Ningbo, Zhejiang Province. \$80 million. (S. Korea:75%-PRC:25%). 10/96.

Hoechst AG (Germany)/Tianjin Dyestuff No.8 Factory

Established Hoechst Tianjin Pigments joint venture to manufacture pigment dyes in Tianjin. \$16 million. (Germany:60%-PRC:40%). 10/96.

Praxair, Inc. (US)/Beijing Chemical Experimental Plant

Established Praxair-BCEEP Carbon Dioxide joint venture to produce liquid carbon dioxide. \$8 million. 9/96.

OTHER

Burmah Castrol PLC

Will open branch office in Shanghai. 11/96.

Consumer Goods

INVESTMENTS IN CHINA

Bosch Siemens Hausgerate GmbH, a joint venture between Robert Bosch GmbH and Siemens AG (Germany)/Wuxi Little Swan Electrical Appliances Industry Co., Ltd. (Jiangsu)

Set up Boswan Co., Ltd. joint venture to produce washing machines, dry cleaning machines, and dishwashers. 10/96.

Maytag Corp. (US), NA (HK)/Hefei Rongshida Group (Anhui)

Set up six joint ventures to produce electric appliances in Hefei, Anhui Province. (US:49.5%, HK:1%-PRC:49.5%). \$161.5 million. 9/96.

Electronics and Computer Software

OTHER

Hayes (Asia Pacific) Co., a subsidiary of Hayes Microcomputer Products (US), Microsoft (China) Co., a subsidiary of Microsoft Corp., Stone Rich Sight Co. (HK)/State Information Center

Will cooperate on Internet solutions and development. 11/96.

Techtronix, Inc. (US)

Signed distribution agreement with Legend Technology Ltd. for Tektronix Phaser color printers. 10/96.

Unify Corp. (US)/General Association of Light Industries

Signed licensing and distribution agreement, which contains a compensation provision for pirated copies of Unify software. 9/96.

Engineering and Construction

INVESTMENTS IN CHINA

Asahi Glass Co., Ltd., ITOCHU International Inc. (Japan)/Nanjing Jiantong Wall Materials Corp. (Jiangsu)

Established Nanjing Asahi-Jiantong New Building Materials Co. joint venture to produce and sell autoclaved lightweight concrete. \$10 million. 10/96.

CBR International Group (Belgium)/Pingfengshan Cement Factory (Guangdong)

Established joint venture to produce high-grade cement in Louding, Guangdong Province. \$228 million. (Belgium:60%-PRC:40%). 9/96.

OTHER

Parsons Transportation Group Inc. (US)

Was awarded contract by Heng Tong Group (Beijing) Co. Ltd. to perform traffic planning and engineering studies for the Great Mall of China project in Beijing. 10/96.

Environmental Technology and Equipment

INVESTMENTS IN CHINA

Ecotec (Finland)/Guangdong Wanding Enterprise Group

Established joint venture to build solid waste treatment systems in Guangdong Province. \$1 million. 9/96.

OTHER

ADB

Will offer technical assistance to improve the efficiency of China's energy-saving materials industry. \$400,000. 10/96.

ADB

Will offer technical assistance to develop China's national environmental impact assessment system. \$600,000. 10/96.

Food and Food Processing

INVESTMENTS IN CHINA

Singapore Food Industries, a subsidiary of Singapore Technologies Industrial Corp./Da Yang Food (Shanghai)

Will develop pig farm in Shanghai. (Singapore:51%-PRC:49%). 10/96.

Royal Ahold Group (Netherlands)/China Venture-tech Investment Corp. (Beijing)

Will establish joint venture to establish Shanghai Ahold-Zhonghui supermarket chain in China. \$50 million. (Netherlands:50%-PRC:50%). 10/96.

Kerry Beverages, a joint venture between The Coca-Cola Co. (US) and Kerry Holdings (Malaysia)/Harbin Economic and Technological Zone Industrial Development Corp. (Heilongjiang), China National Cereals, Oils and Foodstuffs Import-Export Corp. (Shanghai)

Will open bottling plant in Tianjin. \$22 million. (US, Malaysia:60%-PRC:25%, 15%). 10/96.

Sapporo Breweries Ltd., Marubeni Corp. (Japan)/Nantong Brewery, Nantong Five Star Beer Corp. (Jiangsu)

Established joint venture to produce Sapporo brand beer.
\$20 million. (Japan:15%, 15%-PRC:40%, 30%). 9/96.

Machinery and Machine Tools

INVESTMENTS IN CHINA

Long-Airdox Co., a subsidiary of The Marmon Group Inc. (US)

Established Long-Airdox (Tianjin) Ltd. wholly owned enterprise to produce conveyor idlers in Tianjin. 10/96.

Long-Airdox Co., a subsidiary of The Marmon Group Inc. (US)/NA

Established Tangshan TYL Ltd. joint venture to produce conveyor idlers. (US:65%-PRC:45%). 10/96.

OTHER

Nanyang Commercial Newspaper (Malaysia)

Will purchase advanced publishing and composition technology from Beijing University Founder Group.
\$2.1 million. 11/96.

Medical Equipment and Devices

CHINA'S IMPORTS

Advanced Technology Laboratories, Inc. (US)

Will transfer ultrasound system manufacturing technology and exclusive distribution rights to Shantou Institute of Ultrasonic Instruments in Shantou, Guangdong Province. 10/96.

INVESTMENTS IN CHINA

Orion Diagnostica (Finland)/Shanghai Nuclear Technology Development Corp.

Established joint venture to produce radio-immunoassay kits.
\$200,000. 9/96.

Fimet Dental Equipment Co. (Finland)/Shanghai Medical Instruments Factory

Established joint venture to produce dental X-ray equipment in Shanghai. \$5.5 million. 9/96.

Metals, Minerals, and Mining

CHINA'S IMPORTS

Aluminum Co. of America (US)

Signed 30-year contract with China National Nonferrous Metals Industry Corp. (Beijing) to supply 400,000 tons of aluminum per year. \$240 million. 11/96.

INVESTMENTS IN CHINA

Pohang Iron and Steel Co. (S. Korea)/NA

Established Jiangsu Shagang-POSCO Coated Steel Co. joint venture to produce galvanized steel sheets in Zhangjiagang, Jiangsu Province. \$48 million. (S. Korea:90%-PRC:10%). 10/96.

Pohang Iron and Steel Co. (S. Korea)/NA

Established Jiangsu Shagang-POSCO Stainless Steel Co. to produce stainless steel in Zhangjiagang, Jiangsu Province. \$156 million. (S. Korea:80%-PRC:20%). 10/96.

OTHER

Foseco Foundry (China) Ltd., a joint venture between Burmah Castrol PLC and NA (China)

Entered contract with Qinghua University to provide Foseco software to China's foundries. 11/96.

Petroleum, Natural Gas, and Related Equipment

OTHER

Royal Dutch/Shell Group of Companies (Netherlands)

Won contract to explore for oil in the Pearl River Delta. 11/96.

Chevron Overseas Petroleum Inc., a subsidiary of Chevron Corp. (US); Petronas Carigali Overseas Sdn Bhd (Malaysia)/CNOOC

Signed contract to explore jointly gas and oil reserves in Block 02/31 in Liaoning Bay. 9/96.

Pharmaceuticals

INVESTMENTS IN CHINA

Panjin Crown Royal Ginseng Products Ltd., a joint venture between Imperial Ginseng Products Ltd. (Canada) and Liaohe Oil Field Import and Export Corp. (Liaoning)

Will build pharmaceutical plant in Panjin, Liaoning Province. 10/96.

ICN Pharmaceuticals, Inc. (US)/NA

Will establish Wuxi ICN Pharmaceutical Co., Ltd. joint venture to produce medications in Wuxi, Jiangsu Province. \$25 million. (US:75%-PRC:25%). 10/96.

Ports and Shipping

INVESTMENTS IN CHINA

U-Freight (Singapore)

Will invest in a large warehouse and office complex in Shanghai. \$1.8 million. 11/96.

American President Companies Ltd. (US)/Shenzhen Chiwan Wharf Holdings Ltd., Shenzhen Warehouse Holdings Ltd.

Will build a container storage and repair logistics center in Shenzhen, Guangdong Province. \$25 million. 10/96.

Orient Overseas Container Line Ltd. (HK)

Will invest in a depot and warehouse in Dongguan, Guangdong Province. \$8 million. 10/96.

OTHER

American President Lines Ltd., a subsidiary of American President Companies Ltd. (US)

Opened rail-based intermodal container service from Dalian, Liaoning Province to Harbin, Heilongjiang Province. 11/96.

Mitsui O.S.K. Ltd., a subsidiary of Mitsui & Co. (Japan)

Opened a representative office in Shenzhen, Guangdong Province. 11/96.

Thai National Shippers' Council (Thailand)/China Ocean Shipping Co.

Signed agreement to expand cooperation on two shipping routes. 11/96.

Los Angeles Harbor Bureau (US)

Opened representative office in Beijing. 10/96.

The Export-Import Bank of China

Offered loan guarantee for Sumitomo Bank to support Huitong Asia Co. Ltd.'s construction of six ships. \$103 million. 9/96.

Power Generation Equipment

CHINA'S IMPORTS

Foster Wheeler Corp. (US)

Signed contract with Hebei Electric Power Corp. to supply equipment for a coal-fired power plant in Hebei Province. \$174.4 million. 11/96.

Electricité de France, GEC Alsthom, a subsidiary of Alcatel Alsthom Compagnie Générale d'Electricité (France)

Signed agreement to finance, build, and operate Laibin B power project in Guangxi Zhuang Autonomous Region. \$580 million. 11/96.

Sumitomo-Mitsubishi Electric Industries (Japan)

Won bid to build transformer for Ertan hydroelectric power station near Chengdu, Sichuan Province. \$17.8 million. 10/96.

INVESTMENTS IN CHINA

Community Energy Alternatives Inc., a subsidiary of Public Service Enterprise Group Inc., Peregrine Asian Infrastructure Fund (HK)

Established Maiya Power Co. joint venture to develop power projects in China. 10/96.

NGK Insulators Ltd., ITOCHU International Inc. (Japan)/NA

Will establish joint venture to produce high-voltage power transmission insulators in Tangshan, Hebei Province. \$19.6 million. (Japan:76%, 19%-PRC:5%). 9/96.

American Electric Power Co., Inc. (US)/Henan Electric Power Development Corp., Nanyang Municipal Financial Development Corp. (Henan)

Established Nanyang General Light Electric joint venture to build power plant in Henan Province. \$172 million. (US:70%-PRC:15%, 15%). 9/96.

OTHER

London Securities Ltd. (Australia)

Bought a stake in the Huangqiao steam power station in Huangqiao, Jiangsu Province. \$1.5 million. 11/96.

Exxon Energy Ltd., a subsidiary of Exxon Corp. (US), China Energy Investment Corp., a subsidiary of China Light & Power Co. (HK)

Signed agreement to build a power plant in Shenzhen. 11/96.

Sithe China Holdings Ltd., a joint venture between Sithe Energies, Inc. and AIG Asian Infrastructure Fund (US), Government of Singapore Investment Corp.

Secured non-recourse financing to help build coal-fired power plant in Tangshan, Hebei Province. \$128.4 million. 10/96.

ADB

Will offer loan to Anhui Fuyang Thermal Power Plant to develop thermal power technology. \$2 million. 10/96.

Exxon Corp., Duke Energy Corp. (HK), a subsidiary of Duke Power Co. (US)/China Huaneng Group Corp. (Beijing)

Will explore jointly opportunities to build coal- and natural gas-fueled power plants in China. 9/96.

Property Management and Development

INVESTMENTS IN CHINA

Third Dragon Development Pte. Ltd. (Singapore)

Will build theme park and orchard in Jimo, Shandong Province. \$300 million. 10/96.

ING N.V. (Netherlands)/CITIC, Beijing Urban Construction Group, Chaoyang District Authority (Beijing)

Formed joint venture to build 600 homes in Wangjing, Guangdong Province. \$23.6 million. 10/96.

Shinsegae Department Store Ltd. (S. Korea)/Shanghai Trade Center Co.

Will set up Shanghai Trade Center Shinsegae Co. to sell consumer goods at discounted prices. 10/96.

OTHER

Daewoo Corp. (S. Korea)

Won contract to construct Galilee World Trade Plaza in Beijing. \$200 million. 9/96.

Telecommunications

CHINA'S IMPORTS

Globalstar, a subsidiary of Loral Corp. (US)/MPT

Signed agreement to make MPT sole distributor of Goldstar satellite telecommunications services from four planned ground stations in China. 11/96.

Northern Telecom (Canada)

Will sell telephone switching equipment to Beijing Telecommunications Administration. \$25 million. 11/96.

Telefonaktiebolaget LM Ericsson (Sweden)

Won orders to supply AT&T and an unnamed Chinese partner with wireless telephone technology. \$580 million. 11/96.

Telefonaktiebolaget LM Ericsson (Sweden)

Won Guangdong Mobile Communications Corp. contract to expand existing cellular telephone network. \$280 million. 11/96.

Oy Nokia AB-Nokia Group (Finland)

Won contract to supply SDH transmission system for Nanning-Kunming railway. 10/96.

Motorola Inc. (US)

Won Tianjin P&T Administration contract to expand municipal GSM cellular network. 10/96.

Three-Five Systems, Inc. (US)

Will sell liquid crystal display modules to China for the production of cellular phones. 10/96.

Siemens AG (Germany)

Will supply 1,500 km of SDH fiber-optic cable for Shanghai-Dalian link. 10/96.

Compression Labs Inc. (US)

Will provide video-conferencing equipment to the Gansu P&T Administration. \$4.7 million. 9/96.

Motorola Inc. (US)

Will provide paging network equipment to MPT. \$11.7 million. 9/96.

Motorola Inc. (US)

Will supply equipment to expand the Shanghai municipal cellular phone network. \$40 million. 9/96.

INVESTMENTS IN CHINA**Vari-L Co., Inc. (US)/Chen-Hui Co. (Beijing)**

Established joint venture to produce voltage-controlled oscillators and phase-locked loop synthesizers for telecommunication applications in Beijing. (US:51%-PRC:49%). 11/96.

Deutsche Telekom AG, Siemens AG (Germany), American International Group (US)/CITIC

Established joint venture to build cellular telephone networks in Qingdao, Tianjin, and Wuhan. (Germany:25%, 15%, US:30%-PRC:30%). 9/96.

OTHER**Cable & Wireless PLC (UK)/MPT**

Signed memorandum of understanding to engage in future joint ventures. 11/96.

Société Générale Asia

Arranged loan through 12 international banks for LM Ericsson's expansion of the Shanghai mobile communications network. \$22 million. 10/96.

Finland Telecom Mobile Link

Won MPT contract to supply automatic roaming service for Chinese GSM mobile phone subscribers. 10/96.

Transportation**CHINA'S IMPORTS****Wirth Co. (Germany)**

Sold two sets of open-time boring machines to China National Technology Import and Export Co. for tunnel construction for the Xian-Ankang Railway. \$60 million. 10/96.

Howden Group PLC (UK)

Will provide two boring machines to drill the Qinling mountain tunnel. \$60 million. 10/96.

INVESTMENTS IN CHINA**Federal Technology Corp. (US)/Aviation Industries of China (Xian)**

Will establish joint venture to produce airplane engine parts in Xian, Shaanxi Province. \$25 million. 11/96.

Dalong Investment Group (HK)/Fujian CFC Zhongfu Industries, Handan Guangda Co. (Hebei)

Established joint venture to build and operate highway in Hebei Province. \$28.9 million. 11/96.

China Merchants China Direct Investments Ltd. (HK)

Will invest in the Zhangzhou section of National Highway No.324 in South China. \$10 million. 10/96.

Daihatsu (HK) Ltd., a subsidiary of Daihatsu Motor Corp. (Japan)/Liuzhou Mini Motor Vehicle Plant (Guangxi)

Established joint venture to raise capital for minivan production plant in Liuzhou, Guangxi Zhuang Autonomous Region. \$130 million. 10/96.

Fokker Elmo, a subsidiary of the Stork Group (Netherlands)/China Precision Engineering Institute, China National Airborne Equipment Corp. (Beijing)

Formed Langfang Fokker Corp. joint venture to manufacture electrical harnesses for aircraft. 10/96.

Iveco Fiat S.p.A., a subsidiary of Fiat S.p.A. (Italy)/Yuejin Motor Group, Hangzhou Advanced Gearbox Corp. (Zhejiang)

Established Haveco joint venture to produce gearboxes. \$245 million. 10/96.

Ciba-Geigy Limited Group (Switzerland)/Xiangtan Chemical Research Institute (Hubei)

Signed letter of intent to form joint venture to produce pigments for automobile paints in Hubei Province. 10/96.

Mam and Lowlite Co. (France)/Nanchang Aircraft Manufacturing Co. (Jiangxi)

Established Jiangxi Hongdu Scooter Co. joint venture to produce motor scooters for export in Nanchang, Jiangxi Province. (France:51%-PRC:49%). 10/96.

Lear Seating Corp. (US)/Jiangling Motors Co. Ltd. (Jiangxi)

Established Jiangling-Lear Interior System Co. joint venture to produce automobile seats and interior trim. (US:50%-PRC:50%). 9/96.

Suzuki Motor Corp., Nissho Iwai Corp. (Japan)/Changan Automobile Corp. (Sichuan)

Established Chongqing Changan Automobile Corp. joint venture to manufacture Suzuki's Alto passenger car model. \$92 million. 9/96.

Kansai Paint Co. Ltd., Asahi Chemical Industry Co., Ltd. (Japan)/Sanxia Paints (Sichuan)

Established Chongqing Kansai Paints joint venture to produce automobile paints in Chongqing. \$7.2 million. (Japan:45%, 5%-PRC:50%). 9/96.

Delco Electronics Corp., a subsidiary of General Motors Corp. (US)/Shanghai Changjian Instrument and Meters Factory

Established Shanghai Delco Electronics and Instrumentation Co. joint venture to manufacture automobile parts and instruments. \$30 million. 9/96.

Cooper Tire and Rubber Co. (US), Kenda Rubber Industrial Corp. (Taiwan)

Established joint venture to produce radial tires in Jiangsu Province. \$50 million. 9/96.

OTHER**Sunstrand Corp. (US)**

Opened representative office in Beijing. 11/96.

China Airlines (Taiwan)

Opened Beijing representative office. 11/96.

China Eastern Airlines

Will offer passenger service via Shanghai between Beijing and Sydney, Australia. 10/96.

ADB

Will offer technical assistance to improve the capacity of road networks in Sichuan Province. \$600,000. 10/96.

Rosenbluth International (US)/China Merchants International Travel Co. (Beijing)

Will join together to provide China-based clients with travel management services. 10/96.

World Bank

Offered loan for Second Xinjiang Highway Project in Xinjiang Uygur Autonomous Region. \$300 million. 10/96.

ADB

Offered loan for the construction of highway in Sichuan Province. \$150 million. 9/96.

The Export-Import Bank of the United States

Offered loan guarantee to support the sale of three McDonnell Douglas aircraft to China Northern Airlines. \$100 million. 9/96.

The Export-Import Bank of the United States

Offered loan guarantee to support the sale of four Boeing aircraft to China Southern Airlines. \$332.7 million. 9/96.

Miscellaneous

OTHER**Preston Gates & Ellis**

Opened law office in Hong Kong. 10/96.

Lincoln National Corp. (US)

Made donation to initiate Abraham Lincoln lecture series at Fudan University, Shanghai. \$1 million. 9/96.

Copy General

Opened high-speed copying center in Shanghai. 6/96.

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Heart to Heart is sending a medical airlift in April 1997

- An airlift of 50 tons of pharmaceuticals and medical supplies worth millions of dollars will be sent to hospitals in Chengdu and rural areas of the Sichuan Province.
- Pharmaceutical companies, key corporations, and individuals in numerous countries can help support this humanitarian airlift.
- Heart to Heart is working with the U.S. Embassy, the Division of International Non-governmental Relations for the China Ministry of Health, professionals in the health care system, and numerous caring corporations and individuals to coordinate the shipment.
- Federal Express is providing aircraft, EAS International Ltd. will provide in-land transportation, and McDonnell Douglas Corporation has offered a leading cash gift. Heart to Heart seeks to raise \$300,000. Co-chairing the project will be FedEx's CEO Fred Smith and Michael Sears, President of Douglas Aircraft Company.
- A delegation of Heart to Heart staff, business leaders, health care professionals, and others will join the China airlift and distribute supplies, providing manpower, credibility, and accountability.
- Heart to Heart International is a grassroots network empowering volunteers to mobilize resources to meet needs throughout the world. The organization facilitates projects that alleviate human suffering. ***With this China Airlift, Heart to Heart will surpass the \$100-million mark in distributing aid— medicines, medical supplies, nutritional products, and other provisions.*** Heart to Heart has organized 17 major medical airlifts, responded to disasters with volunteers and supplies, and launched a program to meet the needs of the poor in the United States. More than 98 percent of Heart to Heart contributions go directly to its relief efforts.



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