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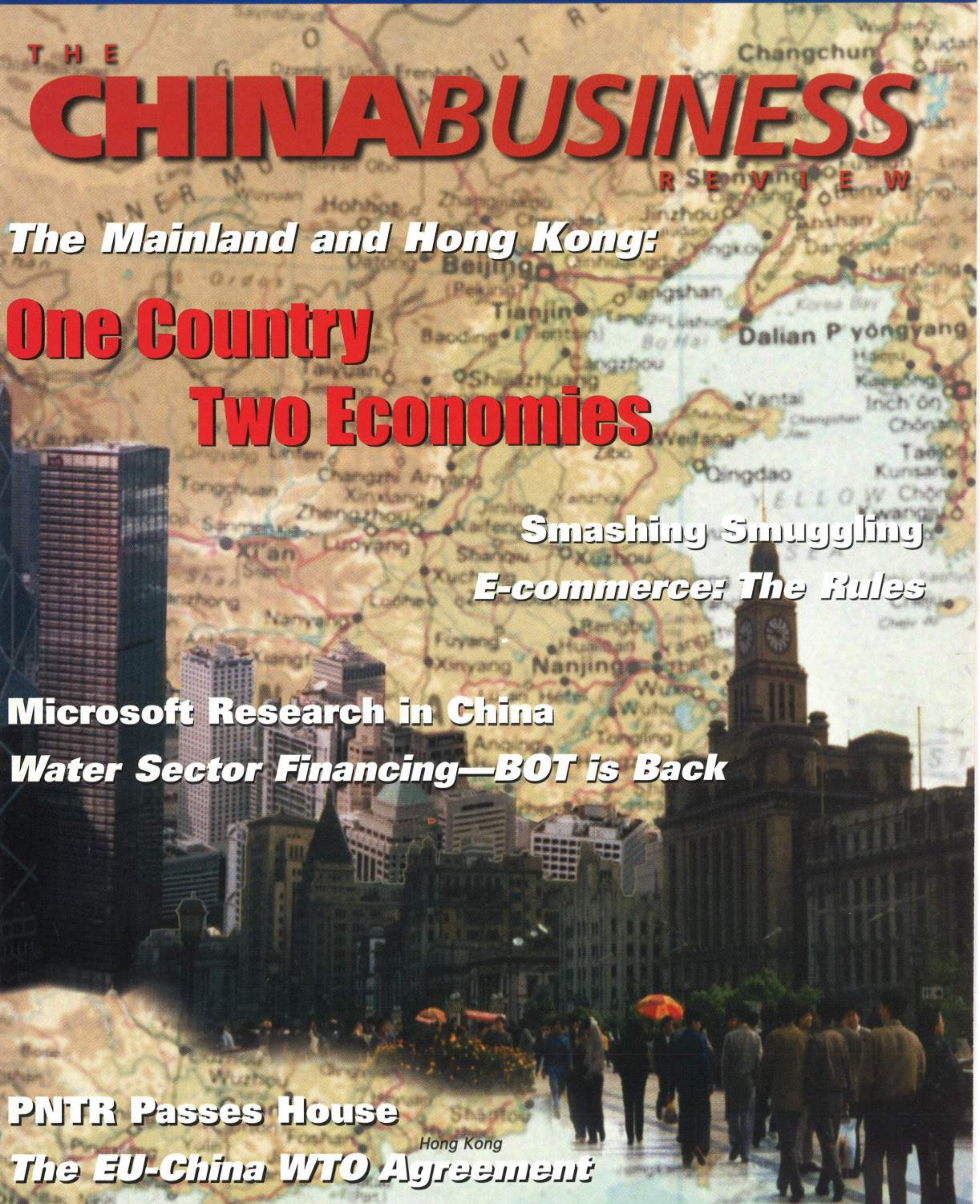
THE CHINA BUSINESS REVIEW



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PNTR Passes House

The EU-China WTO Agreement

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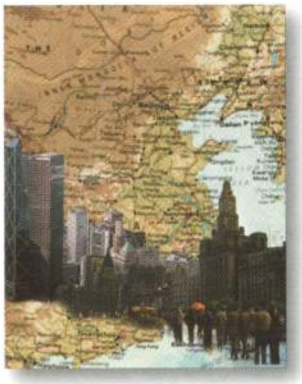

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short takes

Well-off in Shenzhen

Residents of Shenzhen have the highest incomes in China, according to a PRC State Statistical Bureau survey. The March 2000 survey reveals that people living in Shenzhen make an average monthly salary of ¥1,667.2 ($200). Guangzhou residents followed at ¥1,076.7 ($129), and Shanghai tailed the two Guangdong Province cities at ¥895.3 ($107). The average monthly per capita income of the 35 largest cities in China was ¥647.6 ($78).

Well-read Web

One out of every seven Chinese newspapers—a total of 273—is now on the Web. A survey, which *Huasheng Bao* reported on at the Twenty-First Century China Internet Conference, revealed that nearly half of the Web papers have their own domain name, and 85 are registered with a ".cn" domain. Fifty-six nationally distributed newspapers are online, representing a quarter of all national papers, while 14 of the online papers are published by provincial government organizations. And Guangdong's 40 newspapers make it the province with the most newspapers on the web, publishing 14 percent of China's online news.

China's Own WAP Phones

TCL Mobile Communications Co. (TCL) is the domestic competitor taking aim at foreign mobile-phone companies that plan to start, or are already selling, Wireless Application Protocol (WAP) phones to China. Based in Guangdong Province, TCL hopes to sell its 2000 TCL 999 handsets for about ¥6,000 ($723). WAP phones, which feature Internet access, are expected to be very popular in China. Many more people in China own mobile phones than home computers, and the numbers of mobile-phone users are expected to grow exponentially, leaping from 60 million at the end of 1999 to a projected 100 million by the end of 2001, according to Agence-France Presse.

Rent Too High? Buy a House!

Rents in Beijing are set to triple under a city government plan to stimulate home buying. Monthly rents will rise from an average of ¥1.3 ($0.16) per m^2 to ¥3.1 ($0.36). Exceptions to the policy will entitle poorer residents to discounts of up to 25 percent on rent, and offer low- and medium-income employees a housing subsidy of up to ¥90 ($11) per month.

Beijing's real estate market has fared poorly in recent years. High housing prices are a key constraint—Beijing's housing costs in the city center are an estimated 12 times the average income, compared to approximately five or six times earnings in London and New York. This, in addition to the fact that a large number of government employees choose to live in subsidized housing, raises questions about the new scheme's chances of success.

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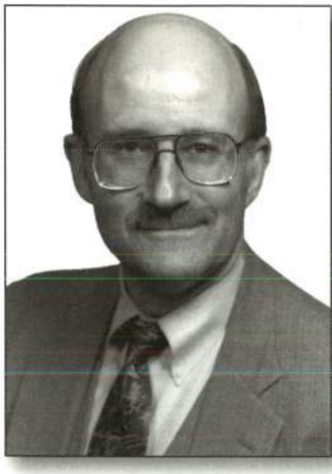

Robert A. Kapp

LETTER from the President

Neither Fast Forward Nor Rewind

With prospects for the final escape from the Annual MFN/NTR Renewal convulsion looking better, we drive forward, with one eye on the rearview mirror

While it is not a done deal as I write this letter, prospects for the final establishment of a post-Annual Most Favored Nation Renewal world have noticeably brightened with House passage of Permanent Normal Trade Relations (PNTR) status for China. The Council, like the business community as a whole and indeed like China itself, is looking ahead.

But the lessons of the recent PNTR campaign must not be forgotten, or we will confront very serious problems that foresight should be able to prevent.

1 Looking ahead

As the World Trade Organization (WTO) era begins for China, virtually every US firm doing business there will be attempting to grasp the new realities introduced by China's adherence to WTO codes and to the specific obligations the PRC undertook in its bilateral market-access agreements with the United States and other economies.

That means that companies will need to know, thoroughly and readily, the content of the WTO texts that affect their interests and the content of China's accession commitments; so will these US firms' Chinese counterparts, customers, suppliers, and competitors, as well as the Chinese government agencies that write and implement laws and regulations affecting foreign business in the PRC.

Business is correct in its assumption that WTO entry will impose upon China a process of change, linked to the achievement of WTO compatibility, which will permeate the Chinese economic and commercial environment. But even with the rigorous phase-in provisions of the US-China and EU-China bilateral agreements, what we cannot know in advance is exactly how, where, in what order, and how rapidly that change will occur in practice.

If past is prologue, we will see continuing uncertainties over matters of "interpretation." The possibility of early test cases, either before the multilateral WTO tribunal or within the Chinese decisionmaking apparatus itself, is very real. Even as the definitions of appropriate conduct under the WTO are better understood, the testing of the boundaries both by China and by its trade partners is highly likely. This should surprise no one, and indeed should be welcomed if it helps to establish and propagate a broader understanding of the stable parameters of the post-accession business environment.

At the same time, we are likely to find that the experiences and recommendations of international business, particularly of firms with more experience in the WTO environment or of firms in cutting-edge fields, will be helpful to China as it makes its way through uncharted territory, seeking to maximize the benefits of WTO participation while minimizing the domestic downsides. The US-China Business Council, for one, will seek to enhance the effectiveness of American business in working cooperatively with Chinese agencies in this regard.

American and other international companies will find that the WTO framework provides a guidebook to new opportunities, new ways of structuring and carrying out business activities, and new possibilities for resolving difficulties.

American companies will want to "know their rights" under the WTO, and they should be prepared to exercise those prerogatives when they need to.

But I believe that they will find increasingly that parties on the Chinese side are also ready to work under WTO-defined assumptions, and that over time the congruence of practice, vocabulary, and even definition of business goals will grow. I believe that, over time, the ancient problem of "same bed, different dreams," while never completely eliminated, will become less disruptive, as the norms and definitions embodied in the WTO take hold more and more widely in China. The process of mutual accommodation that has already taken China and international business so far from the 1978 starting point is likely to expand and accelerate, thanks to the sharing of WTO norms and assumptions.

Looking ahead, the US-China Business Council, and American business as a whole, will need to attend to at least four major jobs:

- Master the substance, in detail, of the WTO and its applications in the Chinese environment.
- Contribute our understandings and ideas to those in China willing to broaden the PRC internal dialogue on how best to develop China's economic future within the WTO framework, even when such Council contributions call for precious

corporate resources of expertise and manpower.

- Expect and maximize change without demanding miracles. The process of experimentation is essentially permanent in China. Ironclad written codes, fully implemented and adhered to by all, are a distant dream in many areas. Age-old patterns of communication and influence will yield reluctantly to externally induced change. The "work in progress" quality of Chinese economic and social change will outlast us all.
- Encourage mutual exchange of insights and experiences, not only between Americans and Chinese, but among all members of the world business community engaged with China. The core principle of the WTO, non-discrimination, certainly does not envision the elimination of competition among companies and among national business communities, but it does mean that what one party gains can benefit everybody. No one expects companies to spill their innermost secrets to the world. But there is room for wider transnational cooperation in achieving the kinds of business environment improvements that China's WTO membership should facilitate.

2 Watching the rearview mirror

If the post-accession future calls for a redoubling of our attention to the changing Chinese business environment, it is not mere nostalgia to point out that establishment of PNTR, while an important milestone, provides sobering lessons regarding what has not changed in the United States.

The victory in the House of Representatives on PNTR should not obscure the following:

- A large core of virulent criticism of internal conditions in China is alive and well in the Congress and the media. The vituperation of the anti-PNTR rhetoric in the May 24 House debate should be a warning to us all, as was the power of the anti-PNTR assault from organized labor and the anti-globalization forces in American society. At least in negative terms, China is likely to continue to have "legs" in some public-opinion and political circles. PNTR and WTO accession will not change that.
- On the other hand, final establishment of PNTR paradoxically deprives the forces supporting stability and civility in US-China relations of a clearly defined goal, a rallying point, toward which to devote their resources and energies. A campaign as intense and costly as the recent effort to win PNTR could not be sustained indefinitely anyway. But the subsidence of the colossal PNTR effort could leave a vacuum in the US public discourse and in US politics, which undeterred campaigners on the negative side will be all too ready to fill. The US business community must continue to play a crucial role in maintaining a balanced US domestic dialogue on China, for as far as the eye can see. Any default on that responsibility will have dire effects. If we do not deliver on this, no one will.
- The establishment of WTO-based economic relations between the US and China, amid continuing US public and political uneasiness over China itself, places American business operations in China more closely than ever under domestic US scrutiny. Some of the pro-PNTR rhetoric with regard to the "exporting of American values," while necessary to get a basic idea across to the uninformed during the PNTR campaign, stretched the limits of plausibility. What is clear, though, is that there can be no letup in the commitment of US firms to the fullest realization of American ethical and social standards in their China operations. That is not proselytism; it is good business. But it is also critically important politically. PNTR will not insulate American business in China from damage back home if the record of constructive US business contributions to China's progress and social development does not constantly improve.

In short, WTO and PNTR will pose heavy new challenges for US companies working with China, and for the US-China Business Council as it works to assist and advise US firms on how best to realize the benefits and minimize the risks of China's historic WTO commitments. But WTO and PNTR do not mean for a minute that the array of forces that we have faced in the United States for years, and which fought against PNTR with such power and with so many resources, can now be consigned to history. While we navigate the minefields of a changing Chinese economic and social environment, we will remain active in the continuing American dialogue about China and ourselves, in a world that appears, to many Americans, to present more peril than promise. 完

The EU-China WTO Deal Compared

The European Union hoped to improve the US-China terms, but still fell short in some areas—perhaps a case of diminishing marginal gains

Daniel Arthur Laprès

As the last major hurdle on China's route to the World Trade Organization (WTO), the negotiations with China afforded the European Union (EU) a historic opportunity to pry open the local PRC market. Since the PRC's accession will, in practice, be subject to unanimous consent of the WTO's 135 members, the scene was set for the European Union, China's second-largest trading partner, to tee off on the gains achieved in November by the United States in its market-access agreement with China (*see The CBR*, January-February 2000, p.16).

Instead, EU Trade Commissioner Pascal Lamy proclaimed from the outset his 80 percent satisfaction with the US agreement. After the completion of the negotiations, he concluded that more than 80 percent of the European Union's objectives for improvement had been obtained.

The non-discrimination (Most Favored Nation and national treatment) principles of the WTO-predecessor General Agreement on Tariffs and Trade (GATT) of 1947, as updated in 1994, require that any fresh concession obtained beyond those negotiated by the United States benefit all other WTO members to the same extent. In addition, under the terms of each agreement, some gains will enter into effect immediately, and both agreements reaffirm the grandfathering principle—that any benefits enjoyed by a WTO member's companies before China's accession shall be maintained after membership. In such circumstances, a comparison of the results of the two sets of negotiations may reveal opportunities for firms to gain competitive advantages in the lead-up to China's formal entry into the world trade body.

The achievements of the EU negotiators

Since the purpose of the negotiations was understood to be the achievement of advantages for home country enterprises, it is useful to inquire to what extent the EU negotiators satisfied European economic interest groups' desiderata. In fact, the European Union obtained significant duty concessions over and above the commitments given to the United States on some 150 specific industrial and agricultural products (*see* Table). For instance, the duty rate reduction the US negotiators won on wine imports, from the current 65 percent to 20 percent, was considerably improved by their EU counterparts (the duty rate will now fall to 14 percent).

Spokesmen for the European insurance industry have been especially vocal in their expression of satisfaction with the results of the negotiations, which included the pledge that China would grant seven licenses immediately upon accession. And given the very specific niches covered by the EU-China agreement (for instance, dredging, NPK fertilizers, insurance company licenses in Foshan, Guangdong Province, and accelerated access for banks to the local currency market in Zhuhai), it is reasonable to suppose that the most active of the European Union's interest groups have been placated. Even in the field of telecommunications, where the EU negotiators brought back less than a full set of concessions, industry reactions have been positive.

Especially noteworthy are the EU negotiators' achievements beyond what certain interest groups had sought. For instance, the Council of the Bars and Law Societies of the European Union called upon China "to allow foreign law firms to advise on home country, any third country, and international law" as well as "to allow *Chinese* lawyers working for foreign law firms to advise on Chinese law" (emphasis added). Apparently, the EU negotiators also obtained the right of lawyers of WTO members who are not Chinese citizens to advise on Chinese law.

The disappointments

Perhaps the major disappointments of the US and EU agreements concern the failure to win more concessions from the Chinese in liberalization of the telecommunications and audiovisual sectors, including the Internet.

The EU negotiators had specifically identified telecommunications as a sector in which they intended to improve upon the Chinese commitments vis-à-vis the United States. Indeed, Lamy even declared publicly the EU goal of majority foreign ownership of telecommunications operations in China.

Daniel Arthur Laprès,
avocat (France), barrister and solicitor (Canada), is co-editor and co-author of *Business Law in China: Trade, Investment and Finance*, (ICC Publishing, 1997). The website of Laprès & Associates (*www.gyoza.com/lapres*) features his other publications on business and law in China.

The US-China and EU-China Market-Access Agreements

	US-CHINA AGREEMENT	EU-CHINA AGREEMENT
GOODS		
Tariff Concessions		
Industrial Goods	• China's industrial tariffs will fall from an overall average of 24.6% in 1997 to an overall average of 9.4% by 2005. • On US priority industrial products, tariffs will fall to 7.1% with the majority of tariff cuts fully implemented by 2003.	• Average tariff falls from current 18.6% to 10.6% on 150 specific goods. • 52 types of machinery and appliances that account for 26% of total EU exports: 35% to 5-10% • Cosmetics: 30% to 10% • 13 products that account for 60% of EU exports of leather goods: 20-25% to 10% • 5 products that account for 70% of EU exports of footwear: 25% to 10% • 5 major categories of exports of marble/building stones: 25% to 10% • 11 key product categories of ceramics: 24.5-35% to 10-15% • 6 particular categories of glass products: 24.5% to 5%
Information Technology	• China will eliminate tariffs on information-technology products such as computers, semiconductors, and all Internet-related equipment by 2005 (current average: 13.3%).	
Autos and Auto Parts	• China will cut auto tariffs from the current 80-100% to 25% by 2006. • Auto parts tariffs will be cut to an average of 10% by 2006.	
Textiles	• Textile safeguard will be in effect until December 31, 2008, which is after the WTO Agreement on Textiles and Clothing expires.	• China's current tariff is close to that of EU on China's exports
Agricultural Products	• Tariffs will be reduced to an overall average of 17% by January 2004. • On US priority agriculture products, tariffs will be reduced from an overall average of 31.5% to 14.5% by January 2004 at the latest. • Wine: 65 to 20%	• All spirits subject to same treatment: 65% to 10% • Wine: 65% to 14% • Butter: 30% to 10% • Milk powder: 25% to 10% • Mandarins: 40% to 12% • Olives: 25% to 10% • Pasta: 25% to 15% • Rape oil: 85% to 9% • Wheat gluten: 30% to 18%
Quotas	• China has agreed to eliminate quotas and other quantitative restrictions with phase-ins limited to 5 years. • China will eliminate existing quotas upon accession for the top US priorities (e.g. fiber-optic cable). It will phase out remaining quotas, generally by 2002, but no later than 2005. • Auto quotas will be phased out by 2005. In the interim, the base-level quota will be $6 billion (the level prior to China's industrial auto policy) and this will grow by 15% annually until elimination. • China has agreed to import 20 films each year.	• Fertilizer NPK: quota improved; immediate relaxation of existing restrictions • Rape oil: quota improved
SERVICES		
Market Access		
Telecommunications	• Key telecommunications services corridor in Beijing, Shanghai, and Guangzhou will open immediately on accession in all telecommunications sectors. • China will phase out all geographic restrictions for paging. • Mobile/cellular in 5 years; domestic wireline services in 6 years; and value-added services in 2 years.	• Opening of the Beijing-Shanghai-Guangzhou inter-city market • Liberalization of domestic-leased circuit services • Increased competition in the provision of international corporate communications
Insurance	• China will expand the scope of activities for foreign insurers to include group, health and pension lines of insurance, which represent about 85% of total premiums, phased in over 5 years. • China will eliminate all geographic limitations in 3 years. • China will permit foreign property and casualty firms to insure large-scale risks nationwide immediately upon accession. • China agrees to award licenses solely on the basis of prudential criteria, with no economic needs tests or quantitative limits on the number of licenses issued.	• Scope of business expanded within 2 years to allow: health, pension and group in life insurance and all non-life activities except for statutory insurance. • Opening of Shenzhen and Foshan accelerated. • Brokers allowed to undertake large-scale commercial risk and reinsurance.
Banking	• China has committed to full market access for US banks within 5 years. • Foreign banks will be able to conduct local-currency business with Chinese enterprises starting 2 years after accession; with Chinese individuals 5 years after accession. • Both geographic and customer restrictions will be removed in 5 years. • Foreign banks will enjoy national treatment within designated geographic areas.	• Zhuhai banks to be allowed accelerated access to local-currency market. • Distributors and other non-financial institutions will be able to provide credit for trucks, tractors, and motorcycles.
Tourism	• Hotels: China will allow unrestricted access to the Chinese market • Travel services: foreign travel operators can provide the full range of travel agency services. • For travel agency services, China will allow access to government resorts as well as Beijing, Shanghai, Guangzhou, and Xi'an.	• Open to foreign firms after accession • Scope of travel agency services extended to allow corporate travel services.

The US-China and EU-China Market-Access Agreements *(continued)*

	US-CHINA AGREEMENT	EU-CHINA AGREEMENT
Audiovisual	• China will allow foreign enterprises to distribute video/sound recordings.	
Legal	• China will permit foreign majority control except for practicing Chinese law (an exception common to many WTO members).	• Authorization to provide services in Chinese law • Foreign lawyers will be allowed to instruct directly individual members of Chinese law firms. • Reduction of experience requirement for local manager to 2 from 3 years; prior experience will no longer have to be consecutive. • Solicitors (though not members of any Bar) will also be covered by the Agreement.
Accountancy	• China has agreed to eliminate a mandatory localization requirement and follow transparent procedures.	• No longer required to have local partner • Capacity to provide accounting, taxation and management consultancy services
Architectural		• Capacity to provide cross-border services through provision of scheme design services
Market Research		• Relaxation of current controls on confidentiality of research
INVESTMENT-RELATED MEASURES		
Market Access		
Motor Vehicles	• China upon accession will allow non-bank foreign financial institutions to provide auto financing and has made commitments regarding importation, distribution, sale, and maintenance and repair of automobiles.	• Within 2 years, freedom to determine product range • Reduction of red tape, as provincial authorities will be empowered to authorize investments in the sector worth up to $150 million (currently $30 million). • Wholly foreign-owned enterprises allowed in engine manufacturing
Telecommunications	• Value-added and paging services investment: China will allow 49% foreign ownership in the first year of accession; 50% in the second year • Mobile services: 49% in 5 years • International and domestic mobile services: 49% in 6 years	Foreign investment in local mobile operators: • Upon accession: up to 25% • Within 1 year of accession: up to 35% • Within 3 years of accession: 49% Settlement of the UNICOM claims
Insurance	• China agreed to allow 50% ownership for life insurance. • For non-life, China will allow branching or 51% ownership on accession and formation of wholly foreign-owned subsidiaries in 2 years. • Reinsurance will be completely open upon accession.	• Possibility of effective control of 50-50 equity joint-venture insurers • Grant of 7 new licenses (5 life, 2 non-life) • Additional 2 companies will be allowed to open in a second city. Insurance brokers: Upon accession up to 50% equity (possibility of effective control) • Within 3 years: majority control • Within 5 years: all restrictions removed
Distribution and Auxiliary Services	• Over 3 years, distribution rights will be provided for rental and leasing, air courier, freight forwarding, storage and restricted sectors such as wholesale, transportation, maintenance and repair. • All restrictions on provision of services auxiliary to distribution such as warehousing, advertising, technical testing and analysis, and packaging services will be phased out over 3 to 4 years.	• Large retailers (at least 20,000 m^2 or more than 30 outlets) will no longer be limited to 50% equity participation.
Tourism	• Hotel operators will be allowed to set up 100% foreign-owned hotels within 3 years; majority ownership possible upon accession.	• Capital requirements gradually reduced to parity with local firms upon accession, minimum annual turnover required to qualify as foreign investor reduced by 20% to $40 million.
Construction		• Foreign majority in equity joint ventures allowed upon accession. • Wholly foreign-owned enterprises may carry out projects financed by foreigners and Chinese construction projects, where need is justified, within 3 years.
Audiovisual	• China will allow 49% foreign participation in joint ventures engaged in the distribution of video and sound recordings. • Foreigners will be allowed to invest in movie theaters.	
GENERAL WTO PRINCIPLES/AGREEMENTS		
National Treatment		Specific commitment to apply WTO national treatment principle to: • Pharmaceuticals pricing • After-sales service of imported goods • Retail of imported cigarettes • Retail of imported spirits
State Trading	• Introduction of private trade in agriculture • New rights to import and distribute	• Silk: gradual opening of export sector to private traders • Crude and processed oil: gradual opening export sector to private traders • Fertilizers: gradual opening of export sector to private traders
Sanitary and Phytosanitary Measures	• SPS agreement concluded • China also agreed to the elimination of barriers that are not based on scientific evidence.	• SPS agreement concluded
Export Subsidies	• China has agreed to the elimination of subsidies on agricultural products.	• Elimination of export subsidies on industrial goods, and on offset requirement in civil aircraft sector

SOURCE: Daniel Arthur Laprès

But in the end, even after full implementation of the terms negotiated by the United States and improved in particular by the European Union, China will be allowed to limit foreign investment in the telecommunications sector to 49-50 percent, depending on the sub-sector. Moreover, since the Ministry of Information Industry currently treats Internet service providers (ISPs) as well as Internet content providers (ICPs) as telecommunications businesses, one must conclude that foreign majority ownership or control in these nascent sectors will also be excluded for the foreseeable future.

That the EU negotiators did not set as a priority the greater opening of the local market for movies and cultural products more generally is puzzling. Perhaps the French predilection for invoking "cultural exceptions" to justify local quotas on television content and public subsidies of local productions was felt to have crippled the European Union's negotiating position.

Toward an overall assessment

The US and EU negotiators, and indeed most commentators, have tended to evaluate their achievements by reference only to the present situation. Accordingly, since no investment whatsoever is today allowed, for example, in the telecommunications sector, even 50 percent limits on foreign ownership after accession represent a considerable achievement. But at least two other references would seem to apply to the negotiations.

First, on the assumption that the principal country investment and trade alternative to China is India, a comparison between these countries' WTO regimes will, in practice, likely influence the future decisions of international business. In this sense, were India's WTO regime to be far more favorable to foreign business, any victory today for China's protectionists might in the end prove to be Pyrrhic. While a comprehensive analysis of this question is beyond the scope of this comment, a few points are worth highlighting. Though India has been pursing a process of liberalization since 1991, and is indeed already a member of the WTO, China's terms of accession will cause it to leapfrog ahead of its South Asian rival in many aspects of opening and liberalization. For instance, while India's average rate of duty toward other WTO members has been reduced from an average of 71 percent in 1993 to a current average of 35 percent, this rate is 2-3 times higher than the comparable Chinese rate would be after accession, under the terms laid out in the US and EU agreements.

On the other hand, in at least one important respect, China will remain less open than India: Apparently, China will be maintain its excessively high requirements on the size of foreign investors' PRC businesses. For instance, the requirements applicable to foreign investors in the tourism business are quite steep. This is in addition to the many other financial requirements foreign investors face. The net result of these rules may be to disqualify a lot of small and medium-sized businesses from investing in China. This is a considerable disadvantage for China relative to India.

Second, insofar as the expectation of democratic countries in accepting the application to Hong Kong of the "one country, two systems" principle was, at least in part, that the liberal, capitalist regime in Hong Kong would spill over, if only by drips, into China, a comparison of Hong Kong's and China's WTO regimes governing the legal profession is especially significant (*see* p.16). Because the Chinese legal profession is both understaffed and undereducated, its protection from foreign competition has long been an avowed goal of the authorities. For instance, the US negotiators failed to win the right for their professionals to advise on Chinese law, though this has since been obtained by the EU negotiators. The right, which the EU negotiators also won, for foreign lawyers to instruct members of Chinese firms directly will, in effect, allow foreign lawyers to offer services in Chinese law, including representation before the Chinese courts. The net result will surely be the more rapid improvement, and indeed the greater democratization, of the Chinese legal system.

The home stretch

While the European Union was the last major holdout in the accession negotiations, it will not be the last of the 37 WTO members that requested bilateral negotiations with China. As of early June, Costa Rica, Ecuador, Guatemala, Mexico, and Switzerland still had yet to finalize accession agreements with China.

Once all these bilateral agreements have been filed with the WTO Secretariat (which can take several months from their signature), the Working Party will prepare the Schedules of Concessions on Goods and the Schedule of Commitments on Services, which reconcile and consolidate the results of the bilateral negotiations and which comprise annexes to the final Protocol of Accession.

In parallel with the bilateral negotiations, China has been negotiating with the WTO Working Party the exact text of the Protocol, a process that remains unfinished, but that the Working Party has indicated it now intends to intensify. The Protocol of Accession and Annexes together with the Working Party's Report will then be presented to the WTO's General Council, the assembly of all WTO members. In principle, any member

would be entitled to call a vote, whereupon a two-thirds majority would be required for China's accession to carry. But a call for a vote is unlikely, as all members have expressed their de-

That the EU negotiators did not set as a priority the greater opening of the local market for movies and cultural products more generally is puzzling. Perhaps the French predilection for invoking "cultural exceptions" to justify local quotas on television content and public subsidies of local productions was felt to have crippled the European Union's negotiating position.

sire that the PRC should regain its seat in the WTO (China was an original signatory to the GATT but withdrew several years after its formation).

Once the internal WTO procedures are completed, it will be up to the Standing Committee of the PRC National People's Congress to ratifiy the agreements, and 30 days after filing of such ratification with the WTO in Geneva, China's accession would enter into effect.

Stacked deck

In the end, the 14-year EU-China WTO negotiation process proved to be loaded against the Chinese side. The WTO practice, in which members consent unanimously on the terms of an applicant's membership, encouraged China's negotiating partners to implement coordinated strategies.

The European Union appears not to have exploited its holdout position to the fullest extent possible to pressure China into further concessions. The hope nonetheless remains that the benefits of opening and liberalization will be so evident to the Chinese authorities and the Chinese people that they will, of their own initiative, eliminate the vestiges of protectionism remaining in the country's international trade regime even after accession to the WTO. 完

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Whither Hong Kong?

Michael F. Martin

With its economy maturing and China on the verge of WTO membership, Hong Kong faces a new era—not for the first time

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The Hong Kong economy appears to be in recovery after two years of recession. Last year's 2.9 percent GDP growth and the 5 percent growth forecast for this year indicate that the economy is indeed on the rebound (*see* Table). Though the Hong Kong Special Administrative Region (SAR) may have weathered this recent recession well, three years after its handover to PRC rule the territory finds itself facing an uncertain future. Changes in the global economy, China's impending entry into the World Trade Organization (WTO), and shifting economic forces within Hong Kong are forcing the city's economy to evolve once again.

The path to prosperity, built on flexibility

Hong Kong is one of the most prosperous and successful cities in the world. According to SAR government statistics, the city's 1999 per capita GDP of $23,200 exceeded that of the United Kingdom, its old colonial ruler, and according to some estimates is second only to that of the United States.

International trade has been the economic force driving this prosperity. Because Hong Kong is home to both a free port—one with no tariffs or quotas—and an open financial market, it is a hub for global trade in goods, services, and capital. A total of $351.5 billion in goods, more than double its GDP, flowed into and out of Hong Kong in 1999. The SAR handled an additional $57.5 billion in international trade in services in 1999. Hong Kong is home to the world's seventh-largest foreign-exchange market and tenth-largest stock market. The city's 270-plus banks and deposit-taking companies average $82 billion in net daily foreign-exchange and derivatives turnover, and manage over $14 billion in trade-related loans each year. Hong Kong is also the second-largest source of outward foreign direct investment in Asia. And all this is accomplished by only 0.12 percent of the world's population.

Hong Kong has achieved its economic success through good fortune, hard work, and hustle. The good fortune lies principally in its geography (*see* Map). Blessed with one of the world's finest natural ports and centrally located along international sealanes, Hong Kong is the world's busiest container port, handling over 16 million twenty-foot equivalent unit (TEU) cargo containers in 1999. The city's role as a hub for seaborne cargo forms the first of its three economic pillars.

The second pillar is Hong Kong's manufacturing network, which began to take off in the 1950s, when hundreds of thousands of mainlanders fled to the then-British colony. This new population provided the workforce and the leadership to create Hong Kong's industrial sector. Most of the immigrants were farmers or urban workers, but industrialists from Shanghai and elsewhere who knew how to build successful manufacturing companies also moved south. Over the next three decades, Hong Kong industrialists and laborers built an impressive array of factories across the territory, particularly in government-subsidized industrial parks.

Strong global demand for consumer goods—fueled by the Korean and Vietnam wars—and a global embargo on trade with China created an opportunity for Hong Kong to compete in several light consumer-goods markets. From a humble start making plastic flowers and flashlights, Hong Kong's manufacturing sector evolved into a leading producer of watches, clocks, toys, and clothing. At its peak in 1980, Hong Kong manufacturers employed 46 percent of the city's workforce.

Today, the SAR is home to several of the world's largest companies, and some key economic sectors—real estate development, shipping, and the local financial market—are dominated by a few oligopolistic firms. But Hong Kong is also home to thousands of small, energetic, highly competitive companies. There are nearly half a million companies registered with the Hong Kong Company Registry—or one company for every 14 people. Most are small trading companies with fewer than 20 employees in their Hong Kong headquarters.

Each year, between 30,000 and 40,000 new companies register and roughly the same number are "wound up," or removed, from the official registry. This implies that one out of every six to eight companies in Hong Kong is either brand new or about to close—a sign of a highly competitive business environment.

The resulting economic structure is like a piece of cotton cloth. Each company, similar to a piece of cotton fiber, is small in size, but comparatively strong. These fibers are interwoven to form the fabric of Hong Kong's economy. And since the 1980s, these threads have reached across the border into China and out to the rest of the world.

Hong Kong's manufacturing network first began to turn outward after the world ended its trade embargo on China, particularly after the United States re-established diplomatic ties with

Beijing, and China's economy opened to foreign trade and investment. Hong Kong business leaders quickly seized the new opportunities this opening afforded. Most Hong Kong firms closed their factories in the city and opened new ones across the border in Guangdong Province. Over the last 15 years, Hong Kong firms have bought or built tens of thousands of factories in China, as far north as Beijing and as far west as Kunming, Yunnan Province. According to the SAR government, Hong Kong companies currently employ over five million workers in Guangdong alone. As a result of its extensive industrial investment in the mainland, the city handles about 40 percent of China's total foreign trade, according to the Hong Kong Trade Development Council (HKTDC).

Between a third and a half of Hong Kong trading companies also have investments outside the PRC. Many maintain manufacturing operations in the Middle East, South America, and Southeast Asia. Hong Kong industrial operations around the world engage in trade worth nearly twice the city's official trade flows. This external industrial network forms Hong Kong's third economic pillar.

As its manufacturing facilities shifted to China and other countries, Hong Kong's local economy began focusing on services. Hong Kong's current service-based economy caters mainly to businesses, providing letters of credit, insurance, freight forwarding, commercial credit, and other services. The services sector now employs nearly 90 percent of the Hong Kong workforce, according to SAR government statistics. In 1997, services contributed $1.07 billion to Hong Kong's GDP, and more than two-thirds of those services were business-to-business transactions. The dominance of this business-oriented service sector enables the city to promote itself as a one-stop service supermarket to the international business community.

Hong Kong's future prosperity will depend on its ability to maintain and expand itself as a hub for global business. Hong Kong companies must find ways to place themselves at the center of the international flow of goods, services, and capital into and out of Asia. As the SAR enters a new millennium, two factors are emerging that may make this a more difficult task: China's impending WTO membership and the technological advancements in telecommunications and information technology.

The first threat: China and the WTO

China is closing in on its bid to join the WTO (*see* p.8). PRC imports and exports are sure to grow rapidly as a result, but whether Hong Kong will continue to function as the gateway to China depends on how it responds to the new PRC rules and trade and investment environment that WTO membership will bring.

Though most of China's merchandise trade with the world traditionally went through Hong Kong, during the last decade the city's dominance of international trade flows into and out of China appears to have eroded. A growing percentage of companies either ship their goods directly, completely bypassing Hong Kong, or transship them—meaning they enter Hong Kong's port, but do not clear Hong Kong Customs. Improved port facilities on the mainland, such as those at Yantian and Shekou in Guangdong (often built or financed by Hong Kong shipping companies) have facilitated this trend. At the same time, Chinese and foreign trading companies have been learning how to deal with each other directly.

Hong Kong companies currently employ over five million workers in Guangdong alone.

The WTO-mandated reduction of trade barriers and increase in access to the mainland market will undoubtedly entice many overseas companies currently using a Hong Kong intermediary to work directly with mainland companies, further cutting Hong Kong out of the loop. In the future, US importers will be able to find reputable freight forwarders, shipping agents, and freight insurers—and secure letters of credit—within China, eliminating their reliance on the SAR for these vital services. The opening of China's financial, legal, trade, and other business-services markets to foreign companies will only accelerate the erosion of Hong Kong's middleman role.

On the upside, though Hong Kong companies will face fierce competition, overall they should enjoy more business as PRC trade flows increase after WTO accession. The HKTDC anticipates strong gains in Hong Kong's re-exports of automobile and auto parts, and electronics parts and components, as China lowers its tariffs and trade barriers. And Hong Kong textiles and clothing trading companies look forward to 2005, when WTO members must abolish quotas on China's exports in accordance with the Agreement on Textiles and Clothing.

The SAR should also benefit from the opening of China's wholesale and retail markets. Hong Kong businesses' existing comparative advantages will give them at least an initial jump in setting up solid logistics networks in China. Plus, the presence of hundreds of Hong Kong factories on the mainland will expedite the distribution of goods to Chinese consumers.

Several Hong Kong companies are already quite active in the mainland retail market. For example, Giordano, a leading Hong Kong clothing retailer, already has an extensive network of stores in China. It plans to open more in anticipation of WTO-induced growth in consumer demand.

But to remain competitive over the longer term, Hong Kong companies will need to generate comparative advantages other than the current ones of physical, cultural, and linguistic proximity to the mainland. Competing on cost alone is not, and has never been, practical. Though Hong Kong's workforce is more productive than those of neighboring economies, the relatively high salaries of its workers preclude price-based competition. Also, as Chinese companies learn more about the ways of international business, their labor productivity should rise significantly, narrowing the gap with Hong Kong.

One option for Hong Kong firms is to develop expertise in Chinese and Asian regional business practices beyond what their Chinese and foreign competitors can offer. A number of Hong Kong companies are moving in this direc-

World Cities

As described in urban economic development literature, world cities such as New York and London, and arguably Tokyo, share certain economic characteristics that distinguish them from other cities. Their economies are externally oriented, relying on business activities that extend beyond their borders. Their economies are more involved in international business relations than national or regional transactions. And as a consequence, their economies are service economies, principally providing business-to-business, rather than business-to-consumer, services. Also, there is a greater clustering of various business-related services available within the confines of the world city than in other cities.

The economic dynamics of world cities are also distinctive. They usually rely on small- and medium-sized enterprises (SMEs) for both employment and growth. These SMEs are often market leaders, more willing to take risks and quicker to adapt to changing economic conditions.

World cities also frequently share other, non-economic attributes. They are usually leading educational centers for their nations, major national cultural and artistic centers, and are politically important.

How does Hong Kong compare?

A comparison of Hong Kong to New York, London, and Tokyo reveals a number of similarities. Hong Kong's land mass of 1,078 km^2 is slightly larger than New York's, slightly smaller than London's, and about half the size of Tokyo's. Hong Kong's population is close to that of New York and London, but about 5 million less than Tokyo. (Hong Kong's population density is almost identical to Tokyo's, however.)

Hong Kong's economy is also structurally similar to those of the other three cities. In all four, services dominate. Agriculture is a negligible contributor to GDP and manufacturing only provides about 10 percent of output. Similarly, in all four cities, between 80 and 90 percent of the workforce is employed in the services sector.

In fact, each city shifted its economic base from manufacturing to services. For example, 57 percent of New York's workforce was employed by manufacturers in 1956, and 46 percent of Hong Kong's workforce was in manufacturing in 1980. Today, nearly 90 percent of the workers in both cities are in services sectors.

However, two aspects of Hong Kong's transformation are unique. First, unlike New York and London, Hong Kong has been better able to sustain the foundations of its old economies as it has developed new ones. During the 1950s, 1960s, and 1970s, Hong Kong remained a major shipping center, even as it built up its manufacturing capacity. Similarly, in the 1980s and 1990s, Hong Kong transformed itself into the world's most service-oriented economy, while sustaining more of its shipping and manufacturing bases than New York or London. For example, there were still over 250,000 manufacturing workers in Hong Kong in 1998, generating 6.5 percent of its GDP.

Today's Hong Kong possesses all four characteristics of world cities. The territory manages a global manufacturing network. Its total trade in goods and services far outstrips its GDP. Its top five trading partners are (in order) China, the United States, Japan, Germany, and the United Kingdom—proof of its global orientation. Today's Hong Kong is also mostly a business-to-business service economy. Finally, few cities in the world can boast as wide or deep a selection of business services as Hong Kong.

Hong Kong appears to fall short, however, when non-economic factors are taken into account. New York, London, and Tokyo are all home to some of their countries' finest universities, but Hong Kong's tertiary educational system enjoys a much less solid reputation. Similarly, Hong Kong's cultural and artistic community is nowhere near as robust or vibrant as those of New York, London, or Tokyo. In the political sphere, Hong Kong does not command as much respect nationally or internationally as do the three other cities. Finally, while many people view New York, London, and Tokyo as especially desirable places to live, Hong Kong is sometimes viewed as a "hardship" post because of the city's uncomfortable living conditions, which include cramped apartments and pollution.

It is too early to tell if Hong Kong will be able to complete its transformation into a world city in the near future. However, if recent Hong Kong government statements and reports are any indication, it is clear that that is the government's goal.

—*Michael F. Martin*

tion, shifting from direct manufacturing to specialize in supply-chain management (*see* p.20).

The second threat: information technology

The latest developments in telecommunications technology are making it increasingly difficult for Hong Kong firms to maintain knowledge superiority. Today, cellular phones, e-mail, satellite-based conferencing, and the Internet enable executives just about anywhere in the world to communicate directly, in real time, with their corporate head office or colleagues around the world. Corporate information, authority, and decisionmaking can be decentralized geographically. Executives now have greater access to more information about the global economy and specific markets than ever before.

In this new business environment, it is often no longer necessary, or even advantageous, to have a regional headquarters. In the future, multinationals may place their corporate home offices just about anywhere, and coordinate the activities of dozens of smaller, leaner overseas offices scattered around the globe.

In a future in which the Internet allows a customer to select these services from a global set of suppliers, and electronic documentation eliminates the need for physical proximity, Hong Kong's comparative abundance of services has less value.

The SAR today hosts over 800 regional headquarters and over 1,600 regional offices. Much of the city's economic vitality comes from the activities of these international firms, which operate in the key business districts of Central, Wan Chai, and Tsim Sha Tsui. As these companies shift their corporate structures to this new model, they may scale down or even close certain offices. Many staff members may be relocated to smaller offices across Asia in cities like Bangkok, Ho Chi Minh City, Jakarta, Kuala Lumpur, and Shanghai. The closing of regional offices will reduce local economic activity and undermine Hong Kong's ability to provide comprehensive business services.

Two paths

Well before the July 1, 1997 handover, a lively debate arose in Hong Kong about how the government should respond to the city's imminent political and economic changes. While generalizations risk oversimplifying the range of opinions, two general schools of thought have emerged. Some academics and business leaders

Major Economic Indicators for Hong Kong SAR

Indicator	1995	1996	1997	1998	1999
GDP					
Real GDP (US$ billion)	139.2	154.1	171.0	162.4	157.7*
GDP growth (%)	3.9	4.5	5.0	-5.1	2.9*
GDP per capita (US$)	22,433.0	24,212.0	26,104.0	24,288.0	23,052.0
Employment					
Unemployment rate (%)	3.2	2.8	2.2	4.7	6.0
Underemployment rate (%)	2.1	1.7	1.2	3.0	2.8
Merchandise Trade					
Exports (US$ billion)	172.3	179.2	186.7	172.8	172.9
Imports (US$ billion)	191.2	196.9	207.1	183.2	178.6
Services Trade					
Exports (US$ billion)	34.1	38.0	37.9	34.3	35.2
Imports (US$ billion)	20.6	21.9	23.0	22.6	22.3
Foreign-exchange Reserves					
Total reserves (US$ billion)	55.4	63.8	92.8	89.6	96.3
Growth rate (%)^	12.5	15.2	43.9	-3.4	7.5
Money supply (HK$ billion)					
M1	190.5	217.5	208.1	197.7	225.2
M3	2,364.0	2,611.6	2,825.6	3,122.3	3,361.8
Prices					
Consumer prices (%)	9.1	6.3	5.8	2.8	-4.0
Interest rates					
Discount rate (%)	6.25	6.00	7.00	6.25	7.00
Public finance (HK$ billion)					
Total revenue**	180.0	208.4	281.2	216.1	229.3
Fiscal reserves^^	147.9	173.6	457.5	457.5	432.7

SOURCES: Hong Kong Special Administrative Region Government website, *www.info.gov.hk*; Hong Kong Monetary Authority; Hong Kong Trade Development Council

NOTES: * Preliminary H.K. Government estimates

** Based on fiscal year beginning April 1 and ending March 31.

^Calculated by The US-China Business Council

^^ Includes HKSAR Government Land Balance since July 1, 1997

Hong Kong Facts

- On July 1, 1997 Hong Kong—viewed by some observers as the world's bastion of laissez-faire, free-market, competitive capitalism—became part of one of the few remaining (allegedly) communist nations, the People's Republic of China.
- According to 1998 World Bank figures, Hong Kong's Gross National Product would make it the 24th largest "nation" in the world, just after Denmark and just before Norway.
- Most of Hong Kong's land is virtually uninhabitable, mountainous terrain.
- Farmers scattered over the city's New Territories still grow more than 10 percent of Hong Kong's fresh vegetables and poultry.
- Roughly 95 percent of the city's 7 million residents are ethnically Chinese.
- Despite over 150 years of British rule, only one in three Hong Kong residents claim they can speak English. Cantonese is the native language of 89 percent of Hong Kong households, while English is the native language of just 3 percent of the households.
- Newborns in Hong Kong can expect to live to the ripe old age of 79, nearly three years longer than newborns in the United States.

—*Michael F. Martin*

The government is taking steps to develop and improve the city's soft infrastructure—education and the environment.

argue that the best way to secure Hong Kong's greater prosperity is to strengthen economic ties with the mainland and renew the focus on manufacturing. Others maintain that the best approach is to reinforce Hong Kong's international image and further support its services sector.

These divergent views were expressed in two books published in 1997. In *Made by Hong Kong* (Oxford), authors Suzanne Berger and Richard K. Lester maintain that the city will not flourish if the government sticks to its minimal interference in economic policy and local businesses continue to focus on light consumer goods. They argue that Hong Kong must remain primarily a manufacturing economy and that the government must actively push to develop Hong Kong's high-technology sector, and diversify into new product areas such as traditional Chinese medicines.

Berger and Lester also advocate stronger and closer cooperation between Hong Kong and mainland companies, believing that Hong Kong's proximity to mainland China will continue to provide economic advantages. They suggest a cooperative model in which China supplies a low-cost manufacturing environment and technical personnel, and Hong Kong provides capital and business know-how. Because this shift in focus is contrary to the past practices of most Hong Kong companies, which poured resources into low-tech manufacturing and trade- and finance-related services, Berger and Lester see the need for the Hong Kong government to abandon its relatively laissez-faire past and actively push the city's business community in these directions.

Michael J. Enright, David Dodwell, and Edith Scott, the authors of *The Hong Kong Advantage* (Oxford), maintain that the city can continue to prosper without stepped-up government intervention. They believe that a salient feature of Hong Kong is the ability of local businesses to adapt and adjust to changing economic conditions. If left alone, Hong Kong's business community will restructure and rebuild the economy as needed—just as it has done several times in the past.

This vision of a limited government role reinforces the key aspects of Hong Kong's political and economic heritage that contributed to making the city a hub for international trade and business. Though the authors applaud Hong Kong's common law legal system, free-trade and laissez-faire economic policies, and freedom of the press, they argue that the Hong Kong government needs to invest more in education and the environment.

Elements of both schools of thought are evident in recent SAR government policies and announcements. Chief Executive Tung Chee-hwa frequently speaks of the need to foster closer economic ties with the mainland. A recent government-sponsored long-term policy report calls for cooperation with Beijing and Guangzhou, Guangdong, to form an integrated Pearl River delta economic region that would span the border between Hong Kong and the mainland.

The SAR government is also pushing high-tech development programs. A science park is scheduled to open in 2001 in Pak Shek Kok, near the Chinese University of Hong Kong. The government will spend over $400 million on the first stage of the three-phase project, which is designed to foster technological innovation in Hong Kong.

At the same time, the government is taking steps to develop and improve the city's soft infrastructure—education and the environment. It is conducting a major review, to be followed by reforms, of the city's educational system, from primary through to tertiary institutions, to generate a better-educated and more creative local workforce. One proposal calls for students to receive more training in technical and scientific subjects.

Another trend in education is to move away from rote learning and exam-driven schooling. For example, students working on International Baccalaureate diplomas at the Chinese and French international schools are encouraged to think more creatively and independently than students in traditional Hong Kong high schools. Other schools are considering this teaching style; Yew Cheung International School will adopt it in September.

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Hong Kong's Newest Business Model

A new type of trading company has catapulted itself onto the Hong Kong trading scene. Much larger in size than most of its competitors, these new firms generally neither own nor operate factories but instead source goods on behalf of major retailers or brand-name distributors. These trading companies engage smaller companies to design, organize, and manage the manufacture of goods for their clients, forming a chain of factories in several countries.

A good example of this new breed of Hong Kong trading company is Li & Fung (Trading) Ltd. Founded in Guangzhou, Guangdong Province, in 1906 by Fung Pak-liu and Li To-ming, the company now has 44 offices in 30 countries and employs over 2,500 people. Each year, it conducts about $2 billion in business. Li & Fung contracts out manufacturing orders to a network of companies around the world. Through site inspections, the company monitors and manages the factories to ensure that the goods are produced on time and according to specifications.

Li & Fung offers its clients—which include Avon Products Inc.; The Limited, Inc.; Reebok International Ltd.; and Warner Bros.—a reliable, hassle-free supply of low-cost products that meet their orders. In today's consumer-goods markets, where profits are made either at the front end (product development and design) or at the back end (brand name development and retailing), many leading companies are more than willing to hire companies like Li & Fung to handle all sourcing matters.

Survival of the fittest

These new companies are better able to withstand economic downturns such as the recent Asian crisis. Most traditional Hong Kong trading companies cannot adjust quickly to economic shocks that occur where their factories are located. Unable to find supplies or credit, many fail to meet their contractual obligations and end up going bankrupt. As a result, a fragment of Hong Kong's economic fabric unravels.

In contrast, companies like Li & Fung can rapidly shift contracts to suppliers in locations more insulated from the economic shock, thereby meeting shipment requirements and surviving the crisis. The future of Hong Kong's economic prosperity may well lie more in the hands of companies like Li & Fung than in the hands of traditional Hong Kong trading companies.

—Michael F. Martin

Free Lunch or Last Supper?

China's Debt-Equity Swaps in Context

Edward S. Steinfeld

Nearly one year ago, China embarked on yet another "breakthrough" program of state-enterprise restructuring, the much-heralded debt-equity swaps between state banks and state firms. While greeted with considerable skepticism both within China and abroad, the debt-equity transfers do represent something new, at least in conceptual terms.

China's debt-equity swaps stand at the center of a conceptual debate in China over the nature and role of markets

Unlike most state-owned-enterprise (SOE) reform efforts over the past decade, which focused primarily on managerial factors within the enterprise itself, debt-equity swaps target the relationship between firms and banks. In doing so, they constitute an implicit recognition by Chinese policymakers that, at least in the broadest sense, China shares many of the problems of its financially stricken neighbors.

Throughout much of the 1980s and 1990s, Chinese banks served as handmaidens of the state, showering capital upon favored firms at extremely low or even negative real rates of interest. Firms, in turn, operating under chronically soft budget conditions, amassed tremendous liabilities and overinvested in capacity expansion, all the while facing declining real returns on investment. Such enterprise behavior in many respects precipitated China's current bout with deflation. Deflation, in turn, has impinged on enterprise profitability and further tightened the screws on heavily indebted firms. While China is insulated from financial panic for a variety of reasons, the country faces many of the same overall ills that plague its neighbors: a financial system dominated by banks; banks with balance sheets awash in nonperforming assets; and major industrial borrowers teetering on the brink of insolvency.

As Chinese commentators have noted, the debt-equity swaps are an immediate policy response to these problems, an effort to kill several birds with one stone. By establishing four asset-management companies (AMCs) to purchase non-performing assets—bad loans—from the four major state banks, the government has created a vehicle, albeit a problematic one, for cleaning up the balance sheets of these banks: the Agricultural Bank of China, Bank of China, China Construction Bank, and Industrial and Commercial Bank of China. As the new holders of outstanding loans extended to SOEs, AMCs convert those nonperforming assets into ownership shares in the borrower firms (*see The CBR*, November-December 1999, p.16). Through their new ownership rights, the AMCs—at least in theory—will be able to substantially restructure and rationalize some of China's largest SOEs. Eventually, the economically destructive and mutually reinforcing pathology of state banks pouring citizens' money into the black hole of state firms will come to an end, or so it is hoped.

Because debt-equity swaps are still in their infancy in China (the first swap took place in September 1999, and since then several hundred firms have undergone the process), it is too early to judge their efficacy. However, the swaps are worth examining, for they offer an extraordinary window into contemporary Chinese reform. First, they stand at the center of a conceptual debate in China over the nature and role of markets. Second, they offer an important glimpse into the Chinese policymaking process, particularly the degree to which implementation can have unintended and counterproductive consequences, despite the best intentions of all parties concerned.

The conceptual crossroads

China's debt-equity swaps mark a fundamental crossroads, a conceptual juncture in the evolution of basic societal understandings of the role and function of markets. By the late 1980s, the debate over plan versus market had already become passé in China. Yet widespread acceptance of "market economics" has by no means

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led to universally accepted notions of what exactly markets are, or how they should function. It is upon this debate, this intellectual evolution, that much of China's economic future turns (*see The CBR*, January-February 2000, p.54).

The "market as source of enterprise salvation" perspective

For much of China's reform era, markets were viewed primarily as incentive mechanisms for enterprises. The notion was that managerial autonomy, profit retention opportunities, and pressure to show returns on investment—conditions associated with markets—would push managers and entire firms to behave more profitably and efficiently. The vision of markets here is one of all firms responding positively to profit incentives, and all being drawn upward like ships on a rising tide. Markets, particularly with regard to the state industrial sector, were appealing precisely because they would obviate the need for painful restructuring, closures, or unemployment. Instead, they would unleash the latent potential that policymakers believed existed within virtually all state firms, and, in the process, energize the Chinese economy. In this "market as source of enterprise salvation" view, there were to be no losers. When losers did appear, the conclusion drawn almost invariably was that exogenous, non-market factors such as history, inherited burdens within the firm, or policy mistakes were to blame.

In many respects, it is exactly this vision that brought about the problems that debt-equity swaps seek to address, namely high levels of nonperforming loans (NPLs) in state banks and high levels of debt in state firms. Debt-equity swaps are thus a sort of response, 16 years later, to the 1984 policy of shifting SOE financing from direct subsidies to bank loans (*bo gai dai*). That policy was driven by the idea that if firms were no longer granted subsidies but were instead forced to finance themselves through interest-bearing loans, performance would improve (*see The CBR*, July-August 1998, p.8).

Interestingly, when performance failed to improve—when return on investment actually declined and firms proved unable to repay loans—the conclusion, somehow, was not that market forces were *working* (as they, indeed, actually were). Few policymakers or enterprise officials would accept the possibility that *bo gai dai* was doing exactly what it should have done: identify poor performers so that resources could be shifted away accordingly. After all, market forces were not supposed to create losers! Rather than tolerating market outcomes, therefore, decisionmakers backed away from their own policies. When enterprises could not repay the bank loans that had replaced direct subsidies, new loans were simply pumped in year after year.

China's contemporary buildup of NPLs and overindebted SOEs does not indicate the failure of *bo gai dai*. Quite to the contrary, the buildup indicates the policy's success. For what the policy did—in attaching a nominal price to capital—was to allow us all to see exactly who was failing to show return on investment. The policy makers' perception of failure was simply a reflection of their overestimation of what *bo gai dai*—and by extention, markets as a whole—could achieve. Operating under these misapprehensions, and facing considerable social and political pressures against shutting down SOEs, policymakers failed to allow market forces to act as selection mechanisms. Instead, in a textbook case of adverse selection, poor performers at the enterprise level were time and again provided a free lunch, the cost of which is evident in the condition of the contemporary Chinese banking system. NPLs accumulated not because of *bo gai dai*, but because of the mistaken belief that the primary role and function of market forces is to provide salvation to all enterprises.

In a textbook case of adverse selection, poor performers at the enterprise level were time and again provided a free lunch, the cost of which is evident in the condition of the contemporary Chinese banking system.

What is important to recognize is that some of these beliefs are alive and well in China today, a reality confirmed by the current attitude of many enterprise managers toward debt-equity swaps. Theoretically, the last thing a manager in a market economy should want is a debt-equity swap. After all, equity financing is generally more expensive than debt financing over the long run (otherwise, why would an investor purchase equity if he or she could achieve higher returns by simply putting money in the bank?), and the swap itself is an indicator of default. The first thing new equity holders would do—particularly if they were to become majority owners, as in the case of China's debt-equity swaps—would be to consider firing the managers during whose watch so many financial problems accumulated! Under what we normally think of as market conditions, managers run for cover when they hear about debt-equity swaps.

In China, though, managers and their patrons in local government for a variety of reasons aggressively lobby for debt-equity swaps. First, they view their high debt—often expressed through liability-to-asset ratios of 80 or 90 percent—as the problem itself, not as a symptom of deeper problems, such as the inability to realize returns on investment. In other words, they *do* feel they were the losers in *bo gai dai*, for their firms are now burdened with high debt levels. Second, they do not truly understand that equity financing, like any outside financing, demands returns, lest it migrate elsewhere. Third, they do not seem

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to believe that new majority equity holders, in this case AMCs, will have the authority, ability, or desire to fire managers or break up the firm.

At a deeper level, managers cling to the "market as source of enterprise salvation" view. They implicitly believe that the boundary of the firm is sacred—in effect, that the purpose of reform is to preserve assets as they are currently deployed in the existing firm. Therefore, they celebrate as a "market victory" the immediate accounting effects of debt-equity swaps. When such swaps occur now in Chinese firms, liability-to-asset ratios are by definition lowered (often from 80 percent to well under 30 percent), and profitability—again by definition—rises. Obviously, if a firm is suddenly relieved of its debt obligations and is not immediately committed to showing returns on equity, its nominal profitability will go up! But how can this renewed profitability be chalked up as a success? After all, nothing has fundamentally changed, save for some accounting issues. The firm's returns on investment remain negligible.

It is this fact that the "market as source of enterprise salvation" school has consistently failed to understand. When confronted by failing firms, adherents deny that the failure itself is a product of market forces, but instead seek a variety of "market" remedies—debt-equity swaps, new infusions of capital, and initial public offerings (IPOs), just to name a few. All the while, they operate under the illusion that they are providing some sort of last supper, some sort of last infusion of capital before market strictures are really applied, or more accurately, before the firm realizes the unleashing of its true market potential.

The unfortunate reality is that many of these firms have no market potential, and as such, will never take off if exposed to market forces. Time and again, policymakers and managers alike may persuade themselves that each new infusion of capital is a last supper, but what everybody knows—or at least what many managers have come to believe—is that each last supper has been, and will always be, a free lunch. For an

China's Economy, First Quarter 2000

While it is still too early to proclaim a full economic recovery, China's first-quarter economic performance improved significantly over the same period last year. The pickup is due largely to strong export growth, increased consumer spending, and the ongoing government stimulus program.

GDP

China's GDP rose 8.1 percent in the first quarter of 2000 over the same period last year. As much of the growth is due to rising exports, analysts forecast a healthier economy through the rest of the year. The State Development Planning Commission's Economic Research Institute, for instance, is predicting a year-end GDP growth rate of 7.5 percent, up from 7.1 for 1999.

Investment

Government spending continued to drive the rise in investment. State-sector fixed-asset investment rose 8.5 percent year on year, fueled largely by a ¥60 billion ($7.3 billion) Treasury-bond issue in late 1999. This year, China plans to issue ¥100 billion ($12.1 billion) in long-term T-bonds. While some of the money will go toward infrastructure investment, Finance Minister Xiang Huaicheng has said that a good portion of it will be used to mobilize private-sector investment. As much as 70 percent of China's new fixed-asset investment, bond financing, and government grants will go to developing western China. More funding is also expected to be earmarked for environmental protection programs, technical upgrades in enterprises, and China's woefully inadequate social security system.

Utilized foreign direct investment (FDI), though down for the quarter overall, rose 10.3 percent in March from February, breaking a long downward slide. Contracted investment was up by 27 percent for the quarter. China's pending World Trade Organization (WTO) entry may have encouraged investors, and the country's progress toward entry could spur further recovery in FDI in coming months.

Output

Up 10.7 percent, value-added industrial output rose more than expected in the first quarter, boosted largely by government spending and strong export demand, but also by a slight improvement in domestic demand. Heavy industry grew 11.5 percent, while light industry grew more slowly. Telecommunications and service output rose rapidly—mobile phone output jumped an eye-popping 140 percent, according to the State Statistical Bureau (SSB).

Consumption

The rise in consumer spending may be due to the trickle-down effect of strong exports. If that is the case, consumer demand may strengthen—as long as external demand stays strong. Rising consumption, in turn, could help deplete stockpiles and boost price levels.

On the other hand, the first-quarter increase in consumption may have been chiefly a result of the burst of spending that accompanied the extended Chinese New Year holiday, in which case it could be temporary. The extension of the May Day holiday to one full week may similarly help second-quarter figures. Nevertheless, while fears of job losses and ongoing reforms have prevented a full recovery of consumer confidence, SSB reports that its Consumer Expectation Index is at its highest level since August 1998, and that retail sales were up 10.4 percent from the same period last year. Moreover, the State Internal Trade Bureau predicts that first-half consumer spending growth will reach 8.8 percent, and that retail sales will rise 7.7 percent in the second quarter.

Prices

Deflation persists despite the rise in consumer spending. After turning positive in February for the first time in more than two years, the consumer price index fell into negative territory again in March and April. Most analysts agree that deflation is gradually bottoming out, but that much depends on domestic consumer confidence.

Non-state sector

Over the last year, China has taken several steps to boost the non-state sector. Last spring, it was upgraded to an "important component" of the economy in the constitution, and a new law on single-investor

SOE manager in China today, the debt-equity swap program is no different.

The "market as selection mechanism" perspective

Ultimately, the success of China's debt-equity swaps will not turn on what managers think, regardless of whatever misapprehensions and illusions they may have. Instead, success will turn on the savvy, ability, and authority of both the policymakers administering the swaps and the AMCs participating in them. As noted above, the swaps are coming at a time of considerable intellectual ferment on the economic front in China. Reflecting this ferment, the swaps, much like China's dramatically evolving stance toward World Trade Organization (WTO) membership, mark an extremely important conceptual waypoint in the reform process.

Unlike many of their counterparts in the enterprise sector, the conceptual originators of China's debt-equity swaps harbor few illusions regarding the "market as salvation" view. They understand perfectly well that markets, rather than saving all firms, create losers just as much as winners, and that only through the winnowing of losers from winners can growth and efficiency be achieved.

The basic idea is that markets are little more than selection mechanisms using the vehicle of price. By attaching prices to inputs—whether physical or financial—and by allowing those prices to respond to the pressures of supply and demand—markets broadcast signals regarding the effectiveness with which resources are being utilized. When those who utilize resources show high returns, those who have additional resources pump in more investment accordingly. When users of resources show low returns, holders of additional resources invest elsewhere. The "market as selection" view asserts that only through this process of selection, of letting winners win and losers lose, can China realize the incentive effects so sought after by the "market as source of salvation" school. Markets cannot and must not avoid losers, for only by tolerating

Ultimately, the success of China's debt-equity swaps will not turn on what managers think, regardless of whatever misapprehensions and illusions they may have.

enterprises (SIEs) went into effect in January. The SIE law allows individuals to set up enterprises with few restrictions, though the investor is subject to unlimited liability for the debts of the enterprise. A new law for small and medium-sized enterprises is also reportedly in the works.

A recent International Finance Corp. (IFC) report has suggested that China's non-state sector may be larger than previously thought. The private sector accounted for a third of China's GDP in 1998, the report found, compared with 37 percent from the state sector. The IFC reportedly included shareholding companies, foreign and domestic private enterprises, and about half of the so-called collectives in its definition of the private sector.

PRC Main Economic Indicators

(percent change over Q1 1999)

GDP	8.1
Value-added industrial output	10.7
Fixed-asset investment	8.5
Consumption (retail sales)	10.4
Exports	39.1
Consumer price index	0.1
Retail price index	-1.9
Utilized foreign direct investment	-2.7
Contracted foreign direct investment	27.1

SOURCES: *China Daily*, Foreign Broadcast Information Service, Ministry of Foreign Trade and Economic Cooperation, *Inside China Today* (*www.insidechina.com*)

Financial sector reform

China has recently been floating ideas for financial reform in an effort to prepare the sector for WTO entry. Once China accedes, foreign banks will be able to serve Chinese firms within two years, and offer retail services in five years. Beijing may soon allow domestic banks to list on the domestic market.

● ***Renminbi*** In April, the RMB briefly strengthened beyond China's narrow exchange-rate band. Chinese officials have since acknowledged that they are experimenting with the band, and may soon allow the currency to fluctuate more widely. This prospect does not spark the fear of previous years, in part because exports have recovered and because the RMB has shown signs that it would strengthen if allowed a wider range.

● **Markets** Foreign firms will soon be able to manage funds and underwrite domestic stock and bond issues through joint ventures. China is also planning to loosen initial public offering restrictions and open the A-share market, currently limited to domestic investors, to institutional investors. Authorities are likely to use a Qualified Foreign Institutional Investors system, which keeps the inflow and outward remittance of funds under strict ceilings. Beijing reportedly will also make it easier for individuals to buy bonds. Meanwhile, in April, the Shenzhen and Shanghai exchanges announced stricter disclosure rules. Beijing is considering merging the Shenzhen exchange with Shanghai's and establishing a high-tech board in Shenzhen, Guangdong Province, to streamline trading.

● **Insurance** Insurance companies may soon be able to invest a portion of their assets in the stock market. In early June, the China Insurance Regulatory Commission allowed China Pacific Insurance Co. to invest up to 15 percent of its total assets in the domestic stock market, up from the five percent limit introduced in October. In March, four other Chinese insurance companies were permitted to invest up to 10 percent of their assets in the market. Pension funds were also recently allowed to take stakes in fund management companies as a way of investing in the stock market.

● **Interest rates** The People's Bank of China reportedly plans to liberalize interest rates, first on foreign-currency transactions, on loans, and in rural areas. Later, rate controls may be lifted on RMB transactions, on deposits, and in urban areas.

● **New products** China is beginning to consider introducing financial futures, including stock-index and bond futures, though these are generally thought to be some years away. China has been burned by runaway speculation in derivatives markets, particularly in commodities, in the past.

—*Virginia A. Hulme*

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losses and the resulting reallocation of resources can effective incentives for the efficient utilization of resources be achieved. In this view, the goal is not to save existing firms, whether state owned or private, but instead to allow firms to rise and fall so that efficient outcomes and growth can be achieved for the system as a whole. Basically, the objective is to improve the system, not save the individual firm.

The debt-equity swap, from this perspective, becomes a vehicle not to save firms, but rather to apply market-selection mechanisms, often at the expense of distressed firms. For the originators of the program, debt-equity swaps are not at all a means of relieving firms from onerous debt burdens to achieve instant nominal profitability. Indeed, mountains of enterprise debt are viewed not as a disease per se, but instead as a mere symptom of far deeper problems. The idea, therefore, is not simply to pick the "best" firms for debt-equity swaps, relieve them of interest payment burdens, and then allow them to go off on their merry, and profitable, way. Rather, the notion is that only the worst, most unredeemable firms should be selected, and selected because new equity owners will be able to come in and either radically restructure the defaulting firm or utterly dissolve it. The swap becomes the lead-in to market selection, not enterprise rejuvenation. In short, the swap makes sense only in the context of strategic downsizing of the SOE sector.

The swap should certainly not be a free lunch for the firm, and it may not even be a last supper. Indeed, depending on the decision of the new owner, it may be an acknowledgement that the borrowing entity has already consumed its last meal, is no longer worthy of financial nourishment, and instead must be dissolved.

Even from the micro perspective, a lender, when confronted by a defaulting borrower, reasonably pursues a debt-equity swap only as a worst-case option short of bankruptcy proceedings (in which case the lender stands little, if any, chance of recovering funds). If the borrower is essentially healthy, but for whatever reason cannot meet the terms of a loan in a given period, the lender would be much more inclined to pursue a variety of measures short of actually coming in and trying to take an ownership stake in the borrower. The terms of a loan can be renegotiated and extended, and in more extreme cases the lender can push for restructuring commitments or managerial changes.

The debt-equity swap, however, is an extreme measure, an acknowledgement that the borrower suffers from intrinsic governance problems that cannot be resolved through renegotiated terms. For those problems to be resolved, the new owner—a bank or other financial intermediary—has to have full ownership rights, including the authority to appoint managers, transfer ownership to other parties, or totally liquidate the assets of the firm. Basically, debt-equity swaps make sense only in the context of markets as selection mechanisms, and they make sense only for the worst firms. The swap should certainly not be a free lunch for the firm, and it may not even be a last supper. Indeed, depending on the decision of the new owner, it may be an acknowledgement that the borrowing entity has already consumed its last meal, is no longer worthy of financial nourishment, and instead must be dissolved. Only to the extent that this extreme option becomes credible can the owner hope to achieve some returns, either through the restructuring or liquidation of the firm.

Prospects for the future

What should be clear from this discussion is that though debt-equity swaps are proceeding in China, they are proceeding in an environment of markedly divergent expectations. On one side are those who believe, as they have for two decades, that the core of the SOE sector is basically sound, but that some state firms need to be revived through yet another round of debt relief—in this case, debt-equity swaps. On the other side are those who believe that an entirely new page must be turned in the reform process, that fundamental strategic downsizing must occur in the state industrial sector, and that debt-equity swaps are but the first step in this radical downsizing process.

In terms of China's long-term growth, the stakes in this debate are undoubtedly high. Should the first school of thought triumph, we can expect a reaccumulation of NPLs in the banking system, and persistent problems of insolvency and low return on investment in the SOE sector. Ultimately, these all point toward slower economic growth in the future.

Alternatively, should the second school prevail, we can hope to witness the deepening of reform and restructuring in core portions of the economy. While none of this need happen overnight, it does need to happen ultimately—at whatever pace—so that China can continue to achieve the growth it both expects and desires. Debt-equity swaps will not solve all of China's problems, but depending on how they are ultimately managed, they can serve as important signals to economic actors throughout the system.

That said, many issues surrounding the swaps are being resolved ad hoc through the implementation process. While nobody knows exactly how these will ultimately play out, some decidedly ominous signs have already emerged.

1 AMCs, as a matter of policy, have been required to purchase bank NPLs at full face value. Virtually nobody either inside or outside China, however, believes that the true value of these assets is anywhere close to par. To pay for assets at par, AMCs have little choice but to issue bonds to the sellers of the assets, state banks. Yet how can those bonds ultimately be serviced if the real value of the assets—formerly loans to enterprises, and now equity in enterprises—is so low? What sort of exit option do the AMCs realistically have under these terms? Who, eventually, is going to absorb the difference between the par value of these assets and their real market value?

Two outcomes, neither particularly desirable, might occur. In one, banks and AMCs may try to keep enterprises afloat in the somewhat dubious hope that enterprise assets may climb in value. The outcome suggests lots of continued bank loans to firms. In the second outcome, AMCs exit quickly, but default on their bond commitments to the banks. In that case, the very banks whose NPLs were relieved by debt-equity swaps will see distressed assets appear once again on their own balance sheets.

2 The State Economic and Trade Commission (SETC), formally in charge of supervising debt-equity swaps, must provide initial approval for any firm seeking to participate in a swap. SETC, unfortunately, has stipulated conditions that qualify only the "best" firms for swaps: firms with "exceptional" management teams, advanced technologies, competitive products, and so on. If these firms are so exceptional, they should have simply renegotiated the terms of their outstanding loans with the banks rather than undergoing debt-equity swaps. If these firms are in reality not so exceptional, they have just been anointed with a mark of approval from the state, making it all the more difficult for new equity holders to fire managers, sell off assets, or otherwise restructure the enterprise. SETC's stipulations, no matter how well-intentioned, in effect undercut the power of new enterprise owners, the AMCs. In a broader sense, SETC's stipulations run counter to the notions of strategic downsizing and "market as selection mechanism."

3 Related to the problematic role of SETC is Premier Zhu Rongji's three-year commitment to "resolve the difficulties" (*jie kun*) of large SOEs, a promise that will come due in 2001. SETC, charged with the task of meeting this commitment, faces pressure to use debt-equity swaps to achieve short-term financial results in SOEs. In other words, as long as nobody clearly defines what *jie kun* really means, the inclination on the part of managers and officials alike is to seek quick ways to improve enterprise profitability. As noted above, debt-equity swaps, which instantaneously relieve enterprise interest payment burdens, by definition pump up the short-term profitability of firms. Yet, these improved profit figures reflect accounting changes rather than any resolution of the intrinsic problems that were causing low returns on investment and the buildup of unserviced debt. The basic reality remains unchanged. Regardless of how their accounts are juggled, these firms remain unable to show acceptable returns on investment. The potential result of the Premier's promise—whether intentional or not—is that the debt-equity-swap program will be transformed from a novel restructuring measure into a more traditional subsidization policy for commercially unsustainable firms.

The swaps, like many other policy measures, are essentially neutral. Everything depends upon how they are actually applied. Before judging, therefore, we should remind ourselves that Chinese reform has been, and will continue to be, a protracted process.

While none of these factors bode particularly well, it is still far too early to judge China's debt-equity swaps. The swaps, like many other policy measures, are essentially neutral. Everything depends upon how they are actually applied. Before judging, therefore, we should remind ourselves that Chinese reform has been, and will continue to be, a protracted process. Over the years, two steps forward have almost always been matched by one step backward. There is no reason to expect otherwise today.

What is new, however, is the recognition system-wide that significant problems have accumulated throughout the reform process, problems that are manifested in the weak condition of the Chinese banking and heavy industrial sectors. The debt-equity swap program, like China's bold attempt to enter the WTO, is at least in part an indicator of novel thinking on the reform front. In this sense, debt-equity swaps, like WTO accession, truly stand at a conceptual, and potentially extremely productive, crossroads. Yet, just as important, these policies—emerging in an environment of mixed ambitions and expectations—are still now essentially up for grabs. China may have years ago opted for "the market," but the time has come for key actors within the system to determine exactly what kind of market they have opted for. 完

Financing Options for PRC Water Projects

Mitchell A. Silk and Simon Black

China is focusing on building water-treatment plants nationwide, and is allowing foreign investment to take some innovative forms

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Water treatment has climbed considerably on China's list of infrastructure priorities over the past two years. Water projects are relatively less capital intensive and low tech than projects in other infrastructure sectors. However, developing the sector has posed considerable challenges to China's policymakers and regulators, and, in turn, to foreign participants. A look at some of these challenges, particularly the legal and regulatory issues most relevant to foreign companies, suggests possible routes that the private sector can take to help the country achieve its goal of providing efficient and reasonably priced water services.

One option for foreign participants, which has received much attention over the years in the power sector in particular, is the build-operate-transfer (BOT) model, in which a project company undertakes the construction, operation, and financing of a facility during a limited concession period. Another option for foreign investors is investment through the traditional PRC joint-venture (JV) structure, with the Chinese partner role filled by a municipal water utility that plays numerous, and sometimes conflicting, roles in the project.

The scale of the challenge: water shortages, structural impediments

Inadequate resources, insufficient supply infrastructure, contaminated raw (untreated) water sources, and a natural resource imbalance in China's water sector all contribute to an acute water shortage in China's cities. The central government has classified 300 cities as short of water, 108 as having serious water problems and 60 as being critically short of water. The country also suffers from low per capita water resources in terms of rainwater and groundwater reserves, water reserves per hectare, and water reserves per capita. A geographic imbalance further exacerbates this lack of resources. Northern China holds only one-fifth of the per capita resources of southern China, though both have roughly equal water needs.

Ineffective management of resources contributes to shortages as well. Ditch irrigation systems waste 60 percent of the water used in the agricultural industry and also contributes to pollution through pesticide run-offs. In the industrial sector, enterprises tend not to recycle water and in all sectors, outdated production technology creates further excessive wastage. The result is that China may need to increase its water supply capacity 25 percent by 2010. This equates to building roughly 600-800 new water-treatment plants similar to the recently completed Chengdu No. 6 plant, which has a capacity of 400,000 cubic meters per day (cmpd), although updating current technology, improving wastewater treatment, and institutional reform will also help achieve this goal.

Foreign investors can help China meet this challenge by bringing financial capital, new technology, and human expertise to its water-sector investments. Major foreign water companies such as Suez Lyonnais des Eaux, Thames Water, and Vivendi have already invested in the sector via technology transfer, training and technical assistance, water and wastewater treatment management, and wholesale ownership of treatment facilities. However, the scale of foreign participation has barely scratched the surface of the potential demand. In part, this reflects exaggerated expectations, the relatively limited number of foreign water companies with ambitions in China (compared with the relatively larger number of foreign firms in the power sector) and the general difficulties associated with foreign investment in China. Following are some issues specific to the water sector:

- **Coordinating approvals** Up to 30 agencies at the central, provincial, and local levels have approval authority in any given water project, in diverse areas such as macroeconomic planning, foreign-investment policy, commercial registration, water-resource regulation, foreign exchange, taxation, land administration, sanitation and environmental protection, customs, and construction. Each regulator may be subject to different and sometimes conflicting policy constraints. Lack of coordination in the approval process has led to delays and high development costs, leading in turn to higher tariffs.
- **Tariffs** Water remains a subsidized resource in China, with consumers generally paying less for drinking water than the real cost of production and distribution. This situation threatens the commercial viability of projects particularly for foreign investors facing commercial objectives and constraints. Tariffs are subject to review and approval, generally at the local level, and tariff approval authorities may be loathe to approve tariffs for foreign-owned plants that are out of line with those applicable to domestic plants. Tariffs that are approved on a commercial basis will require that the

marginally higher cost of wholesale treated water from privately invested plants, as opposed to subsidized plants, be borne by a local water utility, its water customers, or the foreign investor.

The best and most responsible way to mitigate these risks is to seek a clear, objective, and financially driven tariff structure that also incorporates proper incentives to lower capital and operating costs. Achieving this fine balance, of course, requires all parties to ensure that the risk and reward profiles of all cost inputs be reasonable and responsible, to ensure that the marginally higher tariff indeed reflects market prices to the consumer and market returns to the investors.

● **Municipal and local risks** The success of a foreign-invested plant will depend greatly on the performance of the local water utility, either as joint-venture partner or as offtaker. (As offtaker, the water utility purchases the water from the plant and on-sells to the enduser.) The lack of financial transparency that pervades many Chinese state-owned enterprises and the subsidized, and sometimes inefficient, business conditions under which they operate make issues of credit and performance acute. This has caused some foreign participants to rely on structures guaranteeing rates of return or government support letters that run against the grain of current policy and, in some cases, of PRC regulation.

Foreign participation in the distribution sector would reduce these risks by ensuring direct access to customers, but Chinese law currently prohibits foreign ownership and management of water distribution. In the absence of deregulation in the distribution sector, some projects have sought to ring-fence revenue—that is, dedicate a portion of the local water company's revenue from water customers solely to pay the foreign company—with all the attendant structural and legal risks (*discussed below*).

● **Raw water supply** In some areas, China experiences shortages of raw water. Falling water tables and industrial pollution have also combined to reduce the quality of raw water. This highlights the need for, first, additional investment in the treatment of wastewater to reduce pollution, and second, fair and transparent management of raw water resources that will not disadvantage foreign investors in water-treatment plants.

Meeting the challenge: models of foreign participation

Traditional models of foreign investment in the water sector can be broadly categorized as either joint-venture structures, often involving unsolicited negotiations with a local partner; and BOT structures, involving a competitive bid and wholesale foreign ownership and operation.

Foreign investors have often used their existing business relations in China to secure investment opportunities in conjunction with a local partner and generally without a publicly announced competitive bid. The joint-venture structures have generally taken the form of "multi-role" structures or "innovative" structures.

The "multi-role" project traditionally comprises a joint venture between the foreign investor and the local water utility whereby the utility assumes most construction, operation, supply, and offtake responsibilities and risks. The project seeks to achieve a minimum return to its investors by a minimum offtake at a tariff that reflects the actual cost of construction, operation and maintenance, taxes and reserves, debt service, and minimum equity return (the so-called "cost-plus" tariff).

Risky and high-cost "innovative" structures take varying forms, including offshore debt funded via the foreign shareholder, pooled equity funds, and all-equity funding through construction. The risky nature of innovative structures is evident in the security and comfort arrangements employed. These are generally defensive in approach and stray from a uniform market standard, through the use of guaranteed shortfall payments, support letters, and standalone arrangements to make termination payments backed by insurance arrangements.

The combined effect of the varying forms of innovative structures is to create uncertainty and delays, lengthier project-development periods, higher development and capital costs, and higher infrastructure commodity prices for the consumers.

The BOT structure was designed to contain the above risks. The model involves a foreign consortium bidding for a concession from a provincial or municipal government to build, own, and operate a water project throughout a concession period. The bid documents would include a draft concession agreement, an offtake agreement with the local power or water company, and the related technical specifications and financial information.

BOT offers real benefits in the following ways:

● **Clear risk allocation** The BOT structure provides a clearer risk allocation by reducing the concentration of performance and credit risk on the local Chinese party and avoiding the real or perceived conflicts of interest that exist under the multi-role structure. The foreign consortium bidding for the concession tends to bear most of the construction and operation risks, and the Chinese parties will assume most fuel or raw water-supply, offtake demand, political, *force majeure*, and currency risks.

● **Competitive bidding and tariffs** Competitive bidding has increased transparency, fairness, and efficient allocation of resources and expertise, allowing firms to focus on cost and technical factors rather than time-consuming negotiation and political matters. This has increased certainty in the process and reduced tariffs—the water charges paid by the utility. The tariff structure, by providing only for variations to reflect exchange-rate fluctuations and to compensate the consortium in other limited instances, itself acts as an incentive

Major foreign water companies such as Suez Lyonnais des Eaux, Thames Water, and Vivendi have already invested in the sector via technology transfer, training and technical assistance, water and wastewater treatment management, and wholesale ownership of treatment facilities. However, the scale of foreign participation has barely scratched the surface of the potential demand.

The BOT model, in different guises, has spawned three water projects. Both Thames's Da Cheng project in Shanghai and Vivendi's Chengdu No. 6 project have reached financial close. Bidders on the Beijing No. 10 project currently await the announcement of the winning bid.

to build and operate efficiently. The move toward fixed tariffs instead of cost-plus tariffs or guaranteed returns has therefore reduced water tariffs and minimized the tariff approval risk.

● **Pre-packaging of approvals** Pre-packaging of approvals in the tender documents removes some of the approval and pricing uncertainty by providing a clearer regulatory path which, in turn, reduces time delays and development costs. It also reduces ongoing regulatory risks, such as the continuance of approvals, tariff adjustment, and foreign-exchange issues.

The BOT model, in different guises, has spawned three water projects. Both Thames's Da Cheng project in Shanghai and Vivendi's Chengdu No. 6 project have reached financial close (*see* Figure 1). Bidders on the Beijing No. 10 project currently await the announcement of the winning bid (*see* Figure 2).

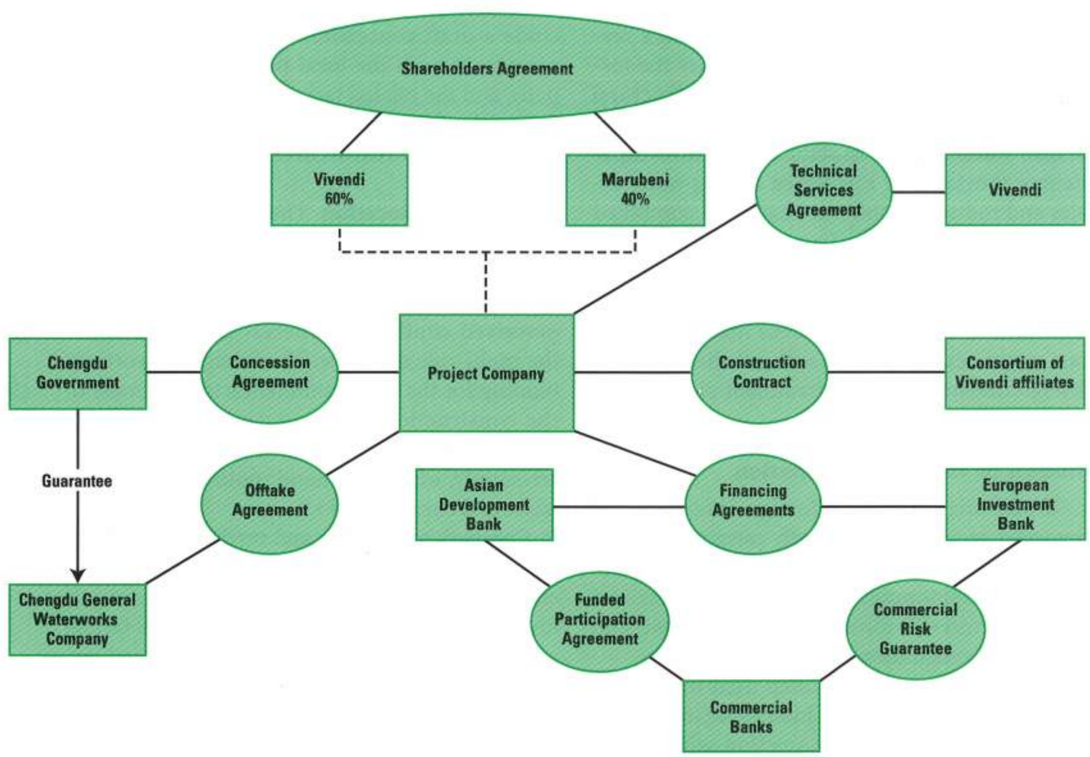
Development of BOT

The Chengdu No. 6 water-treatment project benefited from the direct sponsorship of the central-level State Development and Planning Commission (SDPC) under its pilot BOT scheme and also from the Chengdu Municipal Government's effective "guarantee" of the raw water-supply and the local utility's offtake responsibility. Since Chinese law prohibits a government agency from guaranteeing the performance of another Chinese party without the necessary approval, the parties structured the guarantee as a direct undertaking by the municipal government, as "primary obligor," to perform raw water-supply and offtake obligations. While the parties secured all necessary approvals for the structure, the structure contains obvious contradictions, as it appears inconsistent with Chinese policy goals of separating the administrative and commercial functions of government and minimizing recourse to the government in private infrastructure projects.

Perhaps for this reason, the legal structure for Beijing No. 10 is radically different. Under the umbrella of specific BOT legislation the Beijing Municipal Government has promulgated, the government will designate different functional authorities to act as concession authority, raw water supplier, offtaker, and payor of termination sums. It remains to be clarified what strict legal recourse the concession company would have toward the municipal government if the functional authorities fail to perform their responsibilities. The concession company established by the winning foreign consortium will perform responsibilities similar to those for Chengdu No. 6, namely construction, operation, maintenance, and financing of the plant. It is therefore worthwhile to assess the future direction of BOT in light of the revised structure, which raises some specific questions in the areas of government responsibility, credit support, and cost.

● **Defining government responsibility** The dis-

Figure 1
Chengdu No. 6 B Water Treatment Plant—Basic Structure



SOURCE: Allen & Overy

cussion of the Beijing case highlights two potentially conflicting principles. On the one hand, in an increasingly deregulated economy, Chinese policymakers will seek to minimize recourse to the government in private infrastructure projects. On the other hand, the inability to conduct effective investigation into the financial condition of many local Chinese companies forces foreign parties to focus on the role of the government. To solve this conundrum, the BOT project model must better define the governmental rather than commercial responsibilities and, where appropriate and possible, provide effective credit support for commercial responsibility of the local parties, without recourse to government bodies.

● **Credit support** Credit support for the payment of periodic water charges by the water utility to the concession company can take the form of a dedication of funds received from water customers (particularly larger ones) in special "escrow" accounts or the issuance of letters of credit secured on the utility's receivables. Beijing No. 10 itself envisages some form of special account, which the tendering office aims to develop with the winning bidder into a bankable structure.

Though such payment and security structures have obvious limits of coverage (for example one or two months' water charges), they have proved relatively successful in mitigating similar credit risks in other countries, notably in India's power sector. The key in China is to find a workable structure that overcomes the absence of a recognized body of trust law and the traditional reluctance of Chinese banks to offer escrow banking services. Opinions and experiences vary on the workability of escrow account structures but, with appropriate structuring, Chinese law, particularly Chinese contract law, arguably can accommodate such structures.

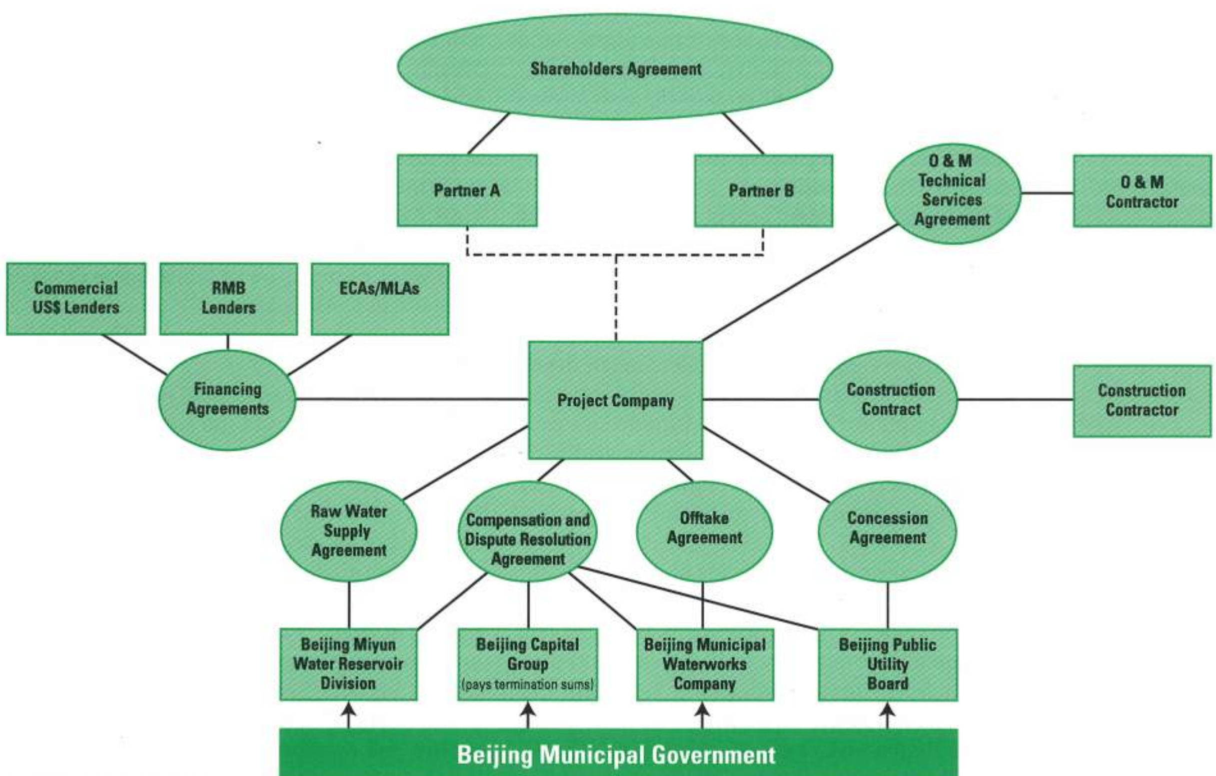
● **Greater transparency—lower development costs** While the BOT scheme has promoted greater regulatory and contractual clarity, many foreign developers would still argue that the development periods are unacceptably long. Since a foreign developer will, during the bidding process, propose a tariff that is based on the projected development costs during the predicted period to financial close, delays beyond that period will increase development costs—directly reducing its return from the project. The delays may have many causes, but the continuing uncertainty on diverse matters such as government support, land, insurance, foreign exchange, pricing, and security contributes significantly. Furthermore, the approval process, while more transparent than traditional foreign-investment projects, could be accelerated and streamlined to the benefit of all project stakeholders.

BOT bonanza—for some

Promulgation of a comprehensive BOT law would undoubtedly help clarify these issues. The

The Beijing No. 10 Tendering Office is rumored to be surprised (and no doubt delighted) at the tariffs bid by some foreign firms.

Figure 2
Beijing No. 10 A Water Treatment Plant—Basic Structure



SOURCE: Allen & Overy
NOTES: O & M = Operation and maintenance
ECAs/MLAs = Export-Credit Agencies/Multilateral Lending Agencies

The joint-venture approach, essentially by default, will remain the only means of meaningful foreign participation in the future.

delay in finalizing the draft BOT law currently under discussion probably reflects the high-level debates taking place over the core issues of macroeconomic development and foreign investment. In the meantime, Beijing No. 10 and other projects will probably develop in an ad hoc way. That development may well create the necessary consensus and clarity even without the release of the BOT law. For example, though the legal structure may be different, the basic contractual terms and risk allocation in Beijing No. 10 closely resemble those in Chengdu No. 6. Furthermore, many investors hope that Beijing No. 10 will itself prove a benchmark (in terms of credit enhancement and government support) for other municipal BOT projects.

Because of the higher costs involved, however, BOT is really only viable for the large-scale and therefore relatively rare projects (above 300,000 cmpd). Being rarer, and subject to intense competition amongst the foreign firms, the BOT projects appear to offer foreign firms symbolic "flagships" of investment in China rather than generous profit margins. The Beijing No. 10 Tendering Office is rumored to be surprised (and no doubt delighted) at the tariffs bid by some foreign firms. Some tariffs tendered are said to be below the average currently subsidized water price applying in Beijing (¥1.4-1.5 [$0.16-0.18] per m^3). The rarity of the larger BOT projects and their razor-thin profit margins may push foreign investors to look for more profitable investment opportunities elsewhere.

Further development of the JV model

Whatever the challenges in terms of managing relationships and issues of operational and financial control, the joint-venture approach, essentially by default, will remain the only means of meaningful foreign participation in the future. The following issues are particularly conducive to the JV model:

● **The "cookie cutter" aspect** Joint-venture investments, often without limited-recourse debt finance, are likely to remain the standard for the abundant smaller municipal projects (typically in the range of 100,000 to 200,000 cmpd). In order to achieve economies of scale, foreign developers seek to standardize the smaller projects (for example through financial modeling, contractual risk profiles, credit support, technical due diligence, and documentation) in an effort to reduce development costs and increase returns. A portfolio of smaller projects with similar structures may also provide opportunities for refinancing by limited-recourse structures, such as bond issues, which lower the developer's cost of capital. The differences in policies and attitudes across municipalities limit successful implementation of this strategy.

● **Municipal risks and pricing issues** The JV model's success is also dependent on the ability of the parties to contain the traditional municipal risks. First and foremost, this requires projects to be economically sound and have real and predictable demand for their products. Furthermore, a combination of even-handed construction terms between the joint venture and its Chinese contractor, allocation of risk of changes in law, and political and natural *force majeure* risks in line with acceptable norms, along with containment of the payment risk on the offtaker, are also necessary. In this respect, the credit-support structures for the local offtaker discussed in connection with the projects above could equally apply to the joint-venture model. Such factors can, in turn, promote a more reasonable and responsible pricing of water treatment in China. The introduction of competitive pressures and incentives would also help reduce prices. For example, Chinese parties could introduce a competitive element by putting joint-venture opportunities out to a simplified form of competitive tender.

● **Water distribution** As mentioned, Chinese law currently restricts foreign involvement in the water distribution sector. This applies equally to joint ventures and wholly foreign-owned enterprises. However, limited construction, and operational and technological assistance in the water-distribution sector, is not necessarily prohibited. As the natural nexus between the foreign and domestic parties, joint ventures provide a better vehicle than the BOT corporate structures to take advantage of these opportunities.

● ***Renminbi* (RMB) finance** The importance of local equipment procurement and the payment of tariffs in RMB make RMB financing attractive to Chinese water projects. In the BOT cases, Chengdu No. 6 involved no RMB financing while Beijing No. 10 contemplates a possible 50-50 split in the debt portion (some bidders and advisers believe a 100 percent RMB debt portion would have been the cheapest source of finance). A joint venture could take obvious advantage from the links between the domestic partner and local Chinese banks and the less severe regulatory and policy constraints (when compared with wholly foreign-owned enterprises) to maximize use of RMB finance.

Plumbing the depths

The exciting developments in China's water sector are a reflection of the progress the country has made in both economic and industrial development. Great potential demand remains to be tapped, and foreign investors, acting responsibly, can assist Chinese policymakers and regulators in meeting their goals of securing reasonably priced water resources. In turn, however, Chinese policymakers must make significant strides in achieving greater transparency and certainty within the water sector, particularly with regard to the financial standing of the Chinese counterparties, the regulatory framework, dispute resolution, and the degree of permitted government legal recourse or other support. 完

www.China

www.worldcargoalliance.com/library/library.htm The World Cargo Alliance, a membership organization for companies handling cargo at the point of origin and destination, has put together a trade library that includes glossaries of International Commercial Terms (Incoterms), international payment terms, and ocean and air freight terms. The site also features a dictionary of industry acronyms. The International Chamber of Commerce first published Incoterms in 1936 to standardize business vocabulary so that buyers and sellers can understand their contractual responsibilities.

www.dfait–maeci.gc.ca/china/business/doc.asp?Name=76520-&Language=en The Canadian Department of Foreign Affairs and International Trade's SME Survival Guide to the China Market makes a good starting point for small and medium-sized enterprises (SMEs) considering doing business in China. Though geared toward Canadian firms, the site offers basic background information on China's markets and business climate, as well as negotiating tips, information on what to expect in China, and links to more resources. Most useful for SMEs is the outline of the particular strengths and weaknesses of SMEs that may affect their ability to succeed in China.

www.chinapages.com Zhejiang Dife-Hope Information Development Co. Ltd. (Chinapages) features news and links to Chinese companies, arranged by sector. After registering, companies may also sign up for free e-mail newsletters and post announcements of what they wish to buy or sell.

www.sinosource.com Sinosource, a China-based business information provider, offers links to Chinese companies, fairs, and exhibitions. Catering to SMEs, the site also allows visitors to post "wanted and offered" messages.

www.tradepoint.com.cn/english/tp.htm Trade Point Beijing, hosted by the Beijing Municipal Foreign Economic Relations and Trade Commission, features a Beijing investment guide, foreign trade regulations, a virtual arts-and-crafts fair, an enterprise directory, and a link to the electronic Euro-Asian Trade Bridge, a site promoting trade between Europe and Asia. The investment guide includes background information on the city and its economy, as well as relevant tax and investment laws and regulations.

www.bsr.org The US-based Business for Social Responsibility (BSR) is a resource for companies interested in demonstrating good corporate citizenship. While some services are only available to members, the Global Business Responsibility Resource Center is open to anyone that registers. Topics covered include business ethics, environment, governance, human rights, and social audits and accountability.

SITES IN CHINESE

http://home.sina.com.cn China's most popular Internet site, according to China Internet Network Information Center survey respondents, is a huge Chinese-language portal. With lengthy sections covering news, finance and economics, online shopping, sports, culture, travel, and entertainment, among others, visiting Sina.com (or *Xinlang*, as it is known in Chinese) is like getting the Sunday paper online. But *Xinlang* offers more than the paper does—interactive sections also allow readers to track stocks, play games, and visit chat rooms.

—Virginia A. Hulme

E-commerce: The Taming of the Internet in China

Gabriela Kennedy

The flurry of recent Internet legislation may complicate e-commerce development in China, but is unlikely to deter foreign companies

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Linked to the Internet since 1994, China has seen its Internet use grow to some 3.5 million computer hosts and roughly 8.9 million users by the end of 1999, according to official China Internet Network Information Center (CNNIC) figures. The government estimates that the number of Internet users in China will reach 15 to 20 million by the end of this year. And the Ministry of Information Industry (MII) announced that e-commerce revenue doubled during 1999 to ¥200 million ($24.2 million).

So far, the government has been ambivalent to the growing popularity of the Internet and e-commerce in China. Though it seems to encourage e-commerce on the one hand, the government continues to devise measures to control e-commerce activities on the other. This attitude is apparent in, among other pieces of PRC legislation, the guidelines for e-commerce development unveiled by MII Deputy Minister Lu Xinkui in December 1999.

Lu stated that China will actively pursue international e-commerce. Like the United States, the European Union, and other countries, the PRC plans to establish an appropriate legal environment to support this growth. But the guidelines stress that China should create an environment that suits the country and fits in its "global scheme of things." E-commerce will serve the national economy; model e-commerce businesses will be launched; and the government will strictly manage e-commerce development and implement laws, regulations, and procedures to safeguard national security.

In 1996, China had only one law that dealt specifically with the Internet, the Provincial Regulations Governing the Management of Chinese Computer Information Networks Connected to International Networks (Computer Linkup Provisions), issued by the State Council. In 1997, the State Council released the PRC Administration of the Registration of Domain Names for the Chinese Internet, Implementing Rules, as well as the Computer Information Network and Internet Security Protection and Management Regulations (the Internet Security Regulations). A flurry of opinions and legislation regarding the Internet followed in 1999 and 2000 (*see* Table). Whether China is now better prepared for the online age as a result of this legislation is another question.

Getting started

Any company seeking to establish a presence on the Internet in China needs, first, access to the Internet and, second, an address—a domain name. China's first laws relating to the Internet dealt precisely with these two basic requirements.

● Regulating access

Amended in May 1997, the Computer Linkup Provisions set up a four-tier system for access to the Internet and designated MII as the ultimate gatekeeper for transmissions to and from the World Wide Web. The system resembles a wedding cake. At the top of the cake is the MII-operated international gateway. The second tier of the system is made up of four government Internet service providers (ISPs) known as interconnected networks: CHINANET, administered by China Telecom; CHINAGBN, administered by Jitong Communication Co. Ltd.; CERNET, administered by the Ministry of Education; and CASNET, administered by the Chinese Academy of Sciences (*see The CBR*, March-April 2000, p.20).

Connected networks, or private-sector ISPs, form the third tier of the cake. These connected networks can only link to the Internet through the four government interconnected networks. Before they can offer services to users, private-sector ISPs must obtain a linkup business permit from one of the four departments administering the government ISPs. The Ministry of Electronics Industry and the Ministry of Posts and Telecommunications (which merged into MII in 1998) promulgated implementing rules in April and November 1996, respectively, setting out the procedures for dealing with CHINANET and CHINAGBN international linkups.

Internet users—individuals, legal persons, or organizations—are the final tier in the linkup system. Users can obtain Internet access indirectly from a private-sector ISP or directly from one of the four government ISPs. According to the Work of Recordal of Computer Information

Systems Linked to Foreign Networks Circular (Recordal Circular) and the Internet Security Regulations, issued by the Ministry of Public Security on January 29, 1996 and December 30, 1997, respectively, all Internet users must register with the local public security bureaus (PSBs) within 30 days of obtaining an Internet connection. The PSB enforces the Recordal Circular and the Internet Security Regulations.

Access to the Internet is strictly controlled in China. The penalties for not complying with the Linkup Provisions vary from warnings, to suspension of a violator's Internet connection, to fines of up to ¥15,000 ($1,812). Non-compliance with the Internet Security Regulations may bring warnings or fines of up to ¥5,000 ($604) for individuals and up to ¥15,000 ($1,812) for companies.

● Domain-name registration

After securing Internet access, companies will need to register a domain name. Foreign companies may wish to secure a ".cn" (country-level) domain name to indicate their presence in China or to distinguish their China operations from their home-country headquarters.

CNNIC oversees the registration and administration of these domain names, according to the June 1997 Administration of the Registration of Domain Names for the Chinese Internet, Procedures, and the Administration of the Registration of Domain Names for the Chinese Internet, Implementing Rules (together, the Domain Name Rules). The Domain Name Rules, issued by the State Council, stipulate that domain names are available on a first-come, first-served basis. The Domain Name Rules envisaged the registration of names using the *pinyin* romanization system for Chinese characters, but CNNIC began accepting applications for Chinese-character domain names in January 2000. Applicants for a Chinese-character domain name, however, must already have a *pinyin* domain name. CNNIC offered free registration of Chinese-character domain names for the first six months; within only the first two months, it registered some 45,000 names. The registration and annual renewal fee for *pinyin* domain names is ¥300 ($36). The fees for Chinese-character domain names have not yet been confirmed. A recent Network Solutions Inc. survey ranked China seventh in the world in terms of number of total ".cn" and ".com" domain names registered.

The Domain Name Rules at first only allowed companies and institutions to register domain names. But to increase the popularity of ".cn" domain names, MII recently announced that individual Internet users will soon be allowed to apply for domain names in China.

To obtain a domain name in China, applicants must meet certain requirements, including the following:

- Companies and institutions must be registered organizations in China. Foreign enterprises, for example, must have a branch or representative office in China.
- The main domain-name server must be in China.
- The proposed domain name should not include an enterprise name or a trademark registered by a third party in China, unless consent has been obtained from the third party.

According to the Domain Name Rules, companies must renew their registration annually. They must pass an annual CNNIC inspection and pay a fee. Domain names may be amended or cancelled but cannot be sold or transferred.

The ".cn" system is far from perfect, however. An alternative to ".cn" domain name is a ".com" address, which is easier to locate during Internet searches. Statistics show that both foreign and domestic PRC companies prefer ".com" to ".cn" registration. In October 1999, the Internet Corporation for Assigned Names and Numbers (ICANN) approved China-Channel.com as an international domain-name agency, the first and only such agency in China. China-Channel offers ".com" domain-names using a real-time, automatic registration system. By the end of March 2000, it had already registered 30,000 domain names, or some 30 percent of the Chinese market for international domain-name registrations. ICANN recently approved Eastern Communications Co. Ltd. and Xin Net Corp. as international domain-name agencies, though these companies have yet to begin such operations. ICANN offers protection of ".com" names through its Uniform Domain-Name Dispute-Resolution Policy, which provides for the resolution of disputes by agreement, court action, or arbitration. Trademark owners can file complaints with courts or submit complaints to an ICANN-approved dispute-resolution provider.

The registration of Chinese-character domain names does not appear to be supported by a framework that enables ISPs to read their location on the Internet. CNNIC, I-DNS.net International, and Taiwan Network Information Center (TWNIC) are currently the only companies that offer registration of Chinese-character domain names in China, Singapore, and Taiwan respectively. As the bilingual domain-name system maintained by these registries is not implemented on a global basis, only the Internet subscribers of ISP partners of CNNIC, I-DNS.net, and TWNIC can access Chinese-character domain-name sites.

CNNIC, TWNIC, and the NICs of Hong Kong and Macao formed a consortium last May to coordinate the administration and technical development of Chinese-character domain names and to facilitate communication with ICANN.

Unlike ICANN, CNNIC lacks administrative mechanisms to resolve registration disputes. Under the Domain Name Rules, CNNIC has no duty to conduct searches with the State Administration for Industry and Commerce (SAIC) or with the Trademark Office to establish whether a proposed domain name conflicts with a regis-

CNNIC, TWNIC, and the NICs of Hong Kong and Macao formed a consortium last May to coordinate the administration and technical development of Chinese-character domain names and to facilitate communication with ICANN.

Once a company jumps through all the regulatory hoops for getting started on the Internet in China, it might assume that it can now get on with business without having to worry about further regulation, right? Wrong.

tered trademark or existing company name. If the owner of an enterprise name or registered trademark objects to the registration of a particular domain name, he or she needs to submit evidence of registration to CNNIC, which will verify ownership. Should it confirm ownership, the parties have 30 days to resolve the dispute, failing which the registration of the disputed domain name is automatically cancelled. The Domain Name Rules do not stipulate a timeframe within which CNNIC should respond once proof of ownership of an enterprise name or trademark is submitted. This uncertainty has prompted parties to take action through Chinese courts.

Domain-name disputes can be settled through the courts following normal civil law procedure. The downside of taking court action is cost, both in monetary and time terms. Despite these drawbacks, Procter & Gamble Company (P&G) recently filed a lawsuit against Shanghai-based Chenxuan Science and Trading Co. over the domain name *www.safeguard.com.cn.* Chenxuan registered this domain with CNNIC, but P&G has objected, claiming that Safeguard is one of its well-known soap brands. Chenxuan argued that P&G did not obtain SAIC recognition of "safeguard" as a famous trademark. Another recent domain-name case is that between E. I du Pont de Nemours & Co. and Guowang Information Consulting, a Beijing company that registered the name *dupont.com.cn.*

At the local level

In addition to the general, central-level requirements, a number of local governments have recently released their own rules, which indicate a trend toward greater regulation in this area. For example, the Circular of the Beijing Municipal Administration for Industry and Commerce Concerning E-commerce Activities Registration, issued on March 28, 2000, broadens the scope of e-commerce companies required to register. The circular applies to Beijing-based companies that conduct trade or business on the Internet, advertise on the Internet, design websites, provide Internet access or network technical support services, or engage in any other profit-making activity on the web. Existing e-commerce businesses have six months to register under the new system. Although the circular does not charge a registration fee, it does impose yet another bureaucratic layer on e-commerce in China.

Jumping through more regulatory hoops

Once a company jumps through all the regulatory hoops for getting started on the Internet in China, it might assume that it can now get on with business without having to worry about

China's E-commerce Legislation

Legislation	Issuing Body	Date of Issue
Current Legislation		
Provisional Legislation Governing the Management of Chinese Computer Information Networks Connected to International Networks	State Council	February 1996
Revised Provisional Legislation Governing the Management of Chinese Computer Information Networks Connected to International Networks	State Council	May 1997
Administration of the Registration of Domain Names for the Chinese Internet, Implementing Rules	State Council	June 1997
Computer Information Network and Internet Security Protection and Management Regulations	Ministry of Public Security	December 1997
The Commercial Use Cryptography Management Regulations	State Encryption Management Commission (SEMC)	October 1999
Notice No. 1	SEMC	November 1999
Administration of the Qualifications to Integrate Computer Information Systems Procedures (Trial Implementation)	Ministry of Information Industry (MII)	December 1999
State Secrecy Protection Regulations for Computer Information Systems on the Internet	State Secrets Bureau	January 2000
Circular on Relevant Issues Concerning Online Business of Audiovisual Products	Ministry of Culture	March 2000
Circular of the Beijing Municipal Administration for Industry and Commerce Concerning E-commerce Activities Registration	Beijing Municipal Administration for Industry and Commerce (AIC)	March 2000
Circular on Online Educational Activities	Ministry of Education	April 2000
Provisional Methods on the Price Management of E-commerce	Shanghai Municipal Government	April 2000
Interim Regulations for the Online Securities Brokerage Sector	China Securities Regulatory Commission (CSRC)	April 2000
Procedures for the Examination and Approval of Securities Companies for Engaging in Online Brokerage Activities	CSRC	May 2000
Pending Legislation		
Advertising Proposal	Beijing Municipal AIC	
Online Copyright Protection Proposal	State Copyright Administration	
Regulations on Investment in and Operation of ISPs	MII	

further regulation, right? Wrong. Some companies must heed a number of other regulations, including those regarding encryption products, and relating to China's defense of state secrets.

Encryption

Encryption is considered an important element of the infrastructure for electronic commerce and exchange. The emergence of strong encryption products and the expanded application and impact of encryption on the daily lives of citizens have alerted many governments to public safety, law enforcement, and national security risks associated with encryption. China has been no exception, though unlike other countries, China has opted for domestic control of encryption—most countries that have controls on encryption opt for export controls only. Domestic control is achieved by bringing the supply and use of encryption products under an authorization scheme. Authorizations are denied or granted under certain conditions, such as the strength of the encryption product. Generally, the conditions are scalable to satisfy security needs. Domestic regulation of encryption is rare, and China is now one of the few countries in the world to have such regulation.

The PRC State Council issued the Commercial Use Cryptography Management Regulations (Encryption Regulations) in October 1999 (*see The CBR*, March-April 2000, p.61). On November 8, 1999, the State Encryption Management Commission (SEMC) publicly announced the implementation of the Encryption Regulations, which apply to developers of encryption and require the registration of all individuals and companies selling, buying, and using encryption products in China.

As written, the regulation requires that all encryption products must obtain approval from SEMC prior to importation. Once a product is sold to a registered user, its transfer is strictly prohibited. Foreign entities or individuals also must obtain SEMC approval to use encryption products in China. Discarded or destroyed encryption products must be placed on file with SEMC. Violators may be subject to penalties, which range from the confiscation of encryption products to fines of between one and three times the amount of the illegal income derived from the unauthorized manufacture, sale, or importation of encryption products. Divulging commercial encryption-technology secrets (presumably native encryption secrets), attempting to break commercial encryption codes, and using encryption to jeopardize state security, among other offenses, are considered criminal acts and thus may be subject to penalties stated in the PRC Criminal Law.

The Encryption Regulations appear far reaching at first sight as they offer no defining criteria for encryption products, such as key length or encryption strength. Companies and organizations thus initiated dialogue with the PRC government to soften the effect of the Encryption Regulations. As a result of this lobbying, led by The US-China Business Council, SEMC has clarified that the Encryption Regulations will only apply to hardware or software for which encryption and decoding operations are core functions. The regulations apply to DES (Data Encryption Standard) and RSA (Rivest-Shamir-Adelman) encryption technology, regardless of strength, but not to password-protected devices such as PIN numbers or log-on passwords. The Encryption Regulations will not apply to encryption used as an ancillary function for mobile handsets, Microsoft Windows software, browser software, and other similar applications. SEMC also clarified that business travelers carrying laptop computers with ordinary office-use software that may contain some encryption capability would not need to register their laptops.

Despite SEMC's clarifications and the slight narrowing of the scope of the Encryption Regulations, certain gray areas remain. For example, SEMC has failed to define the term "core function," and it is still unclear whether the manufacturer, distributor, or enduser of encryption products should bear the ultimate responsibility for non-compliance. Thus, if technology moves forward, the Encryption Regulations will still apply, even to products intended for the mass market, for which there are no exceptions.

Commentators were quick to argue that the implementation of the Encryption Regulations would be costly and difficult. Though the deadline for registering foreign encryption products already in China at the time of the rules' promulgation was January 31, 2000, very few foreign businesses complied, in part because the rules were so confusing. Some analysts warned that the Encryption Regulations could also be seen as "the straw that broke the panda's back" when it comes to investing in technology in China or securing the country's entry into the World Trade Organization (WTO). The regulations treat domestic and foreign entities differently, but the WTO principle of national treatment stipulates that domestic and foreign firms must be treated equally.

The regulations might also prevent companies from employing certain devices that use encryption to protect intellectual property rights in China. Some might view this as contradictory to China's commitment to adhere to the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights.

One of the main concerns driving the Encryption Regulations seems to be national security. China seems to be intent on developing its own encryption products (Article 2 of the Regulations deals exclusively with the native manufacture of encryption products, and Article 23 sneaks in the possibility of criminal penalties for "leaking of technical encryption" [presumably native technology]).

Whether the Encryption Regulations will be able to regulate imports remains doubtful. Encryption software has been available as freeware or shareware on the Internet since 1991.

Domestic regulation of encryption is rare, and China is now one of the few countries in the world to have such regulation.

As in the case of the Encryption Regulations, the efficacy of the Secrecy Regulations, at least with regard to the consumer, will likely be poor so long as Chinese users can make use of proxy feeds and daisy-chain their Internet connections to non-Chinese servers.

State secrets

The State Secrets Bureau under the Ministry of State Security issued the State Secrecy Protection Regulations for Computer Information Systems on the Internet (Secrecy Regulations) on January 1, 2000 to prohibit the dissemination, storing, and processing of state secrets by Internet-connected computer systems. State secrets are broadly defined to include not only confidential information about national defense, the economy, foreign affairs, and other areas but also information regarding social development and technology. The Secrecy Regulations apply to all content transmitted through the Internet in all forms, including e-mail, bulletin boards, chat rooms, and Internet newsgroups. The breadth of the application of the Secrecy Regulations and the lack of a clear definition of state secrets mean that all entities engaged in any type of e-commerce activity in China have a strong incentive to exercise self-censorship to ensure compliance.

Anything not officially cleared for publication may be deemed a state secret, sometimes retroactively. Internet content providers (ICPs) in general thus must review content before posting it on a Chinese website. The State Secrets Bureau and its local branch administer the Secrecy Regulations and have the power to close entities found in violation.

Although the Secrecy Regulations were widely viewed as a setback for the growth of e-commerce in China, in practice, given the nature of the linkup of PRC computer systems, many ISPs already routinely block access to certain websites and newsgroup channels. As in the case of the Encryption Regulations, however, the efficacy of the Secrecy Regulations, at least with regard to the consumer, will likely be poor so long as Chinese users can make use of proxy feeds and daisy-chain their Internet connections to non-Chinese servers.

Digital certificates

Electronic contracts and digital certificates constitute one e-commerce area in which China is in sync with the rest of the world. Many countries have passed or drafted legislation to ensure that electronic contracts are given the same status as traditional paper counterparts. The new PRC Contract Law, passed in October 1999, recognizes contracts made by Electronic Data Interchange and e-mail.

The Shanghai Municipal Government issued the Provisional Methods on the Price Management of E-commerce (the Methods) in April 2000, outlining the procedures for issuing digital certificates, which authenticate digital signatures. The Methods also set up the Shanghai Electronic Certificate Authority Center Co. Ltd. as the sole body responsible for issuing digital certificates. Although rather sketchy and applicable only in Shanghai, the Methods take the development and recognition of China's e-commerce market one step further in the right direction.

Sector-specific regulation

China has also passed regulations pertaining to specific Internet activities:

The Administration of the Qualifications to Integrate Computer Information Systems Procedures (Information Systems Integration Procedures), issued by MII in December 1999, ensures the quality of computer information systems in China. In effect, the Information Systems Integration Procedures give MII broad supervisory powers over the creation and maintenance of computer information systems. The Information Systems Integration Procedures require Chinese companies and foreign-invested enterprises (FIEs) engaged in the maintenance or creation of information systems to obtain certification from MII of their competency and qualification to do such work. Only certified entities can carry out systems-integration work. Certified companies are subject to bi-annual systems inspections as well as renewal inspections once the four-year certification expires.

Any company wishing to have systems integration work performed in China for an e-commerce platform or business must bear in mind that MII may examine both the work and the systems.

The Circular on Relevant Issues Concerning Online Business of Audiovisual Products (Audiovisual Circular), issued by the Ministry of Culture in March 2000, stipulates that only certain businesses properly licensed by the State Press and Publications Adminstration to produce, sell, and rent audiovisual products in stores can qualify to do so online. FIEs cannot offer audiovisual products online. Moreover, only legal products manufactured by domestic audiovisual products manufacturers can be offered online.

Qualified companies must register online with the State Press and Publications Administration before making audiovisual products available online. Registered online audiovisual businesses must display their registration number on their website together with the telephone number of the authority that issued the license. The Audiovisual Circular specifically prohibits wholesale transactions, the sale and dealing of imported products, and the downloading of MP3 music products from the Internet.

The Interim Regulations for the Online Securities Brokerage Sector, issued by the China Securities Regulatory Commission (CSRC) in April 2000, and the supplementing **Procedures for the Examination and Approval of Securities Companies for Engaging in Online Brokerage Activities**, issued by CSRC in May 2000, (together, the Online Securities Regulations) lay out the regulatory system for the provision of online trading services.

Only online securities brokerages with a valid license from CSRC may apply to register to provide online services. To obtain such authorization, businesses need to prove that they have an information-system management system, considerable risk-control capacity, a stable high-quality management team, and no record of a major technical accident in the past two years.

The Circular on Online Educational Activities, issued by the Ministry of Education in April 2000, like the other sector-specific regulations requires that educational institutions wishing to go online be properly regulated first in the "bricks and mortar" world before moving on to the "clicks" world. In an attempt to route all dissemination of knowledge through the approved computer linkup system within China, the circular bans institutions from using satellite networks to provide online education.

Such sector-specific e-commerce regulation is likely to proliferate. The Beijing Municipal Administration for Industry and Commerce, for example, has called for the regulation of all Internet advertisers. The proposal is currently under consideration, and a pilot scheme has been launched under which 20 domestic Internet advertisers were recently issued licenses to advertise online. Following the example of Beijing, the Shanghai Administration for Industry and Commerce launched its own pilot scheme under which seven websites were recently licensed to carry advertisements. China still forbids all advertisers to promote products and services prohibited or restricted by PRC laws and regulations, or to publish false and misleading advertisements.

Turf wars and more regulations

Turf wars among various regulators slowed the development of the Internet in China for many years. After much wrangling MII Minster Wu Jichuan recently indicated that MII will cede some control over ICPs—acknowledging a distinction between ISPs and ICPs. MII will retain control over ISPs and will draft and release new regulations regarding the investment and operation of such companies later this year.

The regulation of ICPs will likely be divided among different government bodies depending on the content they provide. In February, the State Council released some information regarding the proposed regulation of ICPs. ICPs will most likely be required to obtain approval from the appropriate branch of the State Council Information Office and will also be required to obtain an operating license from MII. It does therefore appear that MII will retain the final say in what does or does not go on the Internet.

The reluctance of officials to allow Chinese Internet companies to list overseas is a further hindrance to Internet growth. Until recently the criteria for obtaining such approval was unclear. It now appears that approval must be secured from both MII and CSRC. State Council approval may soon be required as well. The Chinese government is expected to formulate rules for the approval of listings.

Sina.com, China's most popular portal, was the first to obtain such approval and the first to suffer. To gain approval, Sina.com had to agree not to list its Chinese content services and assets. In the end Sina.com had to use a Cayman Islands company as its listing vehicle. The approval took months to secure. When Sina.com finally listed on the Nasdaq exchange, it did so at the worst time possible—on April 13, 2000—when high-tech stocks were plummeting.

There are also signs that unlike other countries, China will impose tax on online revenues. Bringing in a licensing system will certainly help China with its plans to tax e-commerce. However, as long as other countries continue to have moratoria on e-commerce taxation (like the United States for example) a move to tax e-commerce businesses in China may be counter-productive, as businesses will most likely move abroad.

Certain other obstacles will likely be overcome with time. The scarcity of credit cards and supporting infrastructure for online payments has beset the growth of business-to-consumer e-commerce in China. This will change as consumer attitudes evolve and credit cards become more widely available. The prohibition of foreign investment in Internet-related companies will also end. Under the terms of the US-PRC market-access agreement signed last November, China will allow foreign firms to own up to 49 percent of Chinese Internet companies upon WTO accession.

E-commerce: the future

A few years ago, one of the main reasons why the Internet was not popular in China was the scarcity of Chinese-language content on the Internet. All this has changed. Today, there are large, well-established portals such as *Sina.com*, *Sohu.com*, and *Netease.com*; and online auction sites such as *Eachnet.com* and *Coolbid.com*. Online retailer *8848.net* alone has some 367,000 registered users and completes between 3,000 and 5,000 transactions a day. There are also entertainment sites such as *Zhaodaola.com*; *Chinanow.com*; finance sites such as *Stockstar.com* or *Homeway.com*; and job search sites such as *Zhaopin.com* and *51job.com*.

Despite all this enthusiasm, it is hard to predict how e-commerce will develop in China. The opinions of e-commerce players appear equally divided. Some executives see Internet investment as a series of continuing waves. Others believe that if China continues to regulate the Internet at the current pace, it will become commercially unviable.

With the signing of the market-access agreement between the European Union and the PRC in May and the likely granting of permanent Normal Trade Relations status to China by the United States, equity involvement in China's Internet market appears closer and more tantalizing than ever. Freedom of information in China, however, is still a long way away. 完

Software Research In—and For—China

Catherine Gelb

Microsoft's basic research facility takes global R&D a step further

The research facilities that leading foreign high-technology companies have established in China in recent years are standard components of large-scale foreign investment there. They are a result, in part, of Chinese policymakers' sensitivity to technology's contribution to economic growth. They also reflect foreign firms' efforts to demonstrate a long-term commitment to China.

The PRC labs of Microsoft Corp., IBM Corp., Lucent Technologies, Intel Corp. and others are working, in a variety of ways, on basic problems of computing. The solutions will belong to the companies, not China—but the facilities cooperate substantially with local educational institutions. And the labs are staffed by highly skilled PRC researchers, whose expertise China evidently hopes domestic firms ultimately will be able to tap.

With computer and Internet use leveling off in the West, China is among the most important growth markets for high-technology companies. It is thus no surprise that foreign research labs are focusing heavily on problems particular to Chinese-language computer use. At the same time, some of the research at these labs, particularly in facilities devoted to basic research as opposed to product development, has the potential to improve computing productivity not just in China, but worldwide.

Basic research

Microsoft set up its fundamental research facility in Beijing in 1998 with a pledge of $80 million. One of four Microsoft research labs worldwide, it is only the second outside the United States after the company's facility in Cambridge, England. Microsoft Research China (MSR China) is developing Chinese-language and user-interface technologies, and next-generation multimedia and Chinese PC technologies. Prominent US and PRC scientists direct the facility's current staff of around 60 researchers; the lab will eventually hire up to 100 scientists.

One motivation for setting up a basic research operation in China was to recognize the PRC's computing talent, according to MSR China Managing Director Kai-Fu Lee. The math training in China is good, he says, and PRC universities have produced graduates of "the highest caliber." Lee comes to Beijing from Silicon Valley, where he built a reputation for his work in multimedia research. His career has included six years at Apple Computer Inc., specializing in multimedia technologies. Most recently, Lee was vice president of the multimedia software unit of Silicon Graphics Inc.

MSR China employs a large number of ethnic Chinese, some foreign and some PRC citizens. Of the facility's 20 senior researchers, about half are from Canada, Japan, Singapore, and the United States. The PRC staff includes top researchers such as Jin Li, said to be one of the finest graduates Qinghua University, China's top science and technology institution, has ever produced.

MSR China, like other Microsoft units in China (and other foreign-funded labs), has initiated cooperative arrangements with a number of PRC institutions. In particular, MSR China has a co-funding arrangement with China's National Science Foundation, and runs numerous training and research courses for interns and local scholars and students. The lab has a policy of discussing its research results openly—and in Chinese first. The lab also publishes openly. MSR China researchers have published 128 papers in leading international journals. Other instances of cooperation between foreign-funded labs and PRC institutions include agreements under which each side will share equally in any results.

Aside from its basic research facility, Microsoft operates a more product-oriented research and development center, also in Beijing. While the R&D center works on product development, MSR China engages in fundamental research, the products of which may take five to ten years to reach the market. Though the market potential of a given research project clearly lurks in the background, Lee stresses that MSR China evaluates the scientific value of a project—its potential to advance scientific understanding—before looking at the bottom line.

Computing in Chinese

MSR's longer timeframe may well be necessary to conquer the "unique challenges," as Lee puts it, that the Chinese language and its 6,000-character set pose to computing. Two of the areas MSR China is pursuing relate specifically to the problems of computing in Chinese. But to the extent that their results may make computers more user-friendly in general, they will help all computer users.

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Anyone familiar with entering Chinese on a Western-designed, 40-plus character keyboard knows how painstaking this process can be. Typical Chinese-language word-processing software converts *pinyin*, the Chinese-language romanization system, into characters on screen. Typists must manually confirm that the software has suggested the correct characters, and the computer's error-checking system can slow the keyboard-input process to 20 to 30 characters a minute (the equivalent of only 10-15 English words per minute). Another type of software employs a complex system in which each character can be entered into the computer using a series of coded keystrokes. Experienced users of this system, Microsoft notes, can type up to 100 words a minute. But these methods still leave Chinese computer users at a productivity disadvantage compared to users typing in alphabet-based languages.

Part of the solution, Lee believes, lies in combining methods of data entry—particularly speech and handwriting input methods—so multimodal user interface development is a significant area of focus. Microsoft is by no means alone in this pursuit. IBM's China Research Lab, for one, has been working steadily on speech and handwriting recognition technology since its launch in 1995 (*see The CBR*, September-October 1997, p.28).

Other MSR China projects are looking at face and gesture recognition, and at biometrics—user recognition and verification—as alternative modes of data entry for computers. Within two years, Lee predicts, Microsoft will have helped Chinese computer users to type more quickly; within four to five years, Chinese will be using multimodal input methods regularly.

Developing more sophisticated ways to process Chinese on the computer will also be essential to future improvements in error-free word processing. To that end, MSR China has been developing technologies that analyze actual language processing, an area the lab refers to as "natural language" computing. MSR has already created a statistical model of the Chinese language, based on a corpus of annotated Chinese writings.

Because context is so important to correct word selection, the researchers must perform the breathtakingly tedious task of tagging words by pronunciation, part of speech, syntax, context, and sense, among other criteria. For example, there are several senses of the word "bank" in English, including "bank" as in a financial institution, and "bank" as in the spit of land alongside a river. In the same way, the corpus Lee's researchers are compiling tags each Chinese word by its multiple senses. This corpus will never be either "quantitatively or qualitatively complete," Lee explains. "We have about 3 billion characters [tagged], but I think we will need to increase that by a factor of 100 in the next 10 years."

The statistical language model can be used to correct a user's word-processing input, whether by keyboard or by speech recognition. One prototype software application Lee demonstrates to visitors performs three tasks in a matter of seconds—if that. After a user types out a sentence in *pinyin*, the software first attempts to identify all of the possible characters that each *pinyin* word might represent. Next, it assesses every possible way to break the characters into words, and then how to break the words into sentences. Finally, the application uses the statistical language model to determine which sentence among these possibilities is the most likely, statistically, to be correct. It takes much more time to explain than it takes the computer to complete these tasks.

MSR researchers have been able to create a digital, three-dimensional room that shifts realistically as the viewer navigates through it.

Multimedia—computing in pictures

MSR China is also focusing resources on next-generation multimedia. Much of this research will focus on the Internet. Lee predicts that people will want to experience television more interactively than they do now, and will want to experience online shopping, for example, as if it were the "real" world—in a three-dimensional environment that changes as they move around in it.

Current technology allows the user to rotate through an online space, but there is little if any real change in the background image of the space. Lee explains that actual movement differs from this sort of rotation in that movement makes occluded objects visible, and also allows objects to appear larger as the user "moves" toward them.

In the "video mall" of the future, a shopper should be able to "walk" in any direction and have the "stores" change accordingly. In one fascinating demonstration, Lee showed how MSR researchers have been able to create a digital, three-dimensional room that shifts realistically as the viewer navigates through it.

The process by which they created this "reality" was just as fascinating: A camera, on a pole, took roughly 1,000 photos of an arbitrary set of scenes. "Our approach," Lee explains, "takes sets of 1,000 photographs, which capture 'enough' of views of all objects from all angles, so that we can warp or interpolate photos to either show occlusion or perspective effects, or give the illusion that this is the case." One problem the researchers have encountered is that of modeling light rays. It is impossible to capture truly realistic lighting on computers because, in real life, there are an infinite number of light rays, a phenomenon that is impossible to model—so far. Another problem was that the photos in the demonstration first became a single 400 megabyte image—too large for easy transfer over most current Internet pipelines. Lee notes that recent MSR China work has reduced this image to a more viable 300-odd kilobytes, while still maintaining acceptable quality (one-third of all of MSR China's work is devoted to networking and compression).

What appears crucial is whether the R&D is yielding technology advances that complement the company's existing product/service strengths. In this sense, Microsoft and others are making a statement about the value to their global operations of bringing R&D efforts to China.

Eventually, videoconferences could take place in "virtual" conference rooms, in which each participant's body (and not their surroundings) would be projected from their actual seats into virtual rooms on screen. In this way, computers could some day become so-called "interpersonal conduits," or aids to human interaction through "natural" input methods.

Another area MSR researchers are tackling is online searching technology, particularly multimedia searching. MSR China has developed a set of algorithms that can "learn" the structures of images, videos, and sounds. The goal is to enable people to search not just for text but for images, music, and interactive activities. The technology is able to analyze an image's content—whether it depicts a figure or natural landscape—and to call it up via search engine.

The researchers are, in a related project, looking into multilingual searching, which is particularly relevant for non-English speakers searching the Internet today. As many believe that Chinese could well become the dominant language on the Internet in future, however, this technology would likewise enable non-Chinese speakers to search through Chinese-language offerings.

Yet another MSR China project is what Lee calls "browsable TV," software that recognizes the kind of news story covered, and summarizes its contents. A user can then select the saved and analyzed content by type.

One of the latest areas of progress involves Internet and wireless transmission of multimedia. To overcome the transmission problems that arise when large amounts of data travel over the Internet, MSR China has developed several new techniques. One method constantly assesses the status of Internet transmissions, and sends less when the Internet is running slowly and more when it is running faster. Another method analyzes video content in such a way that more important parts of a stream are given priority. "For example," Lee notes, the software can determine that "during a newscast, when the anchor is speaking, [the transmission] must not distort his/her face, but the background may remain static for a second or two."

The other players

Other technology companies are working on advanced research projects in China, some with similar goals to Microsoft's—with China applications at the forefront and the global market not far behind. Motorola Inc. has invested $155 million in 18 R&D centers in China, which together employ 650 people. Though hardware technologies appear to be the central focus of these facilities, Motorola's $19 million, nearly 200-strong Software Research and Development Center has, since 1993, conducted research on new technologies.

Lucent Technologies set up two Bell Labs R&D facilities in China in 1997 to work on telecommunications hardware and software infrastructure and product development, with a particular emphasis on China. In mid-1998, Lucent set up the ¥200 million ($24.2 million) Asia Pacific Communications Software Regional Technical Center in Beijing to concentrate on software products for China and elsewhere.

In the late 1990s, Intel committed $50 million over five years to its Intel China Research Center, which conducts fundamental research on Internet and information-technology problems, including speech recognition and other software. In addition to this operation, Intel has promoted science education in China through a number of cooperative programs.

Who owns the results?

These labs' innovations belong to the companies that fund them. Since its 1998 inception, MSR China has filed 78 invention disclosures (which will turn into about 60 patents). In China, where intellectual property protection is among companies' greatest concerns, such protection of technology is essential. And yet, though these patents are proprietary to Microsoft, researchers from Lee's lab lecture frequently at universities. Lee estimates that about 35,000 students have heard him speak over the past 18 months. The lab's open publishing policy also fosters exchange of ideas with the wider research community.

This openness raises another question: What degree of technology transfer is a company willing or, by home country law permitted, to conduct? Though the software research that foreign-funded labs in China undertake generally does not fall under the jurisdiction of home countries' export-control regimes, in theory high-tech companies may someday run up against these limitations. From China's perspective, such export-control and technology-transfer issues merely provide further incentives to build its domestic talent base. China's moves to keep tabs on domestic technology development, reflected in recent rules imposed on encryption technology, risk counteracting these incentives, however (*see* p.34).

The corporate R&D game

Establishment of a research facility may be a necessary part of a foreign high-tech company's China strategy. But these labs are also part of the larger, ever-more competitive world of corporate-funded fundamental research. Worldwide, there are dozens of such operations racing to come up with the next big invention.

And it is becoming increasingly important to focus R&D efforts in ways that are most helpful to companies' future productivity. Companies are realizing that throwing as much money as possible into R&D efforts does not always yield the productivity gains that translate into higher share prices. Scholarly management studies have found that it is not how much money a company devotes to R&D, but how the money is spent. Specifically, what appears crucial is whether the R&D is yielding technology advances that complement the company's existing product/service strengths. In this sense, Microsoft and others are making a statement about the value to their global operations of bringing R&D efforts to China.

Nurturing talent—and protecting it

The funding of research in China is another example of how the goals of foreign companies and of China's economic reformers can occasionally intersect. Foreign companies enlist talented Chinese researchers to help ensure their future competitiveness, especially in China, which could be one of the cornerstones of the so-called new economy. The PRC benefits from what has, in effect, become a reverse brain drain, as these companies are able lure some Chinese back from abroad, and keep some valuable researchers from leaving. Senior PRC staff of MSR China and other foreign-funded labs may one day direct the research efforts of China's rising information-technology firms.

Success, for both foreign and Chinese companies, hinges on these talented researchers. Foreign companies must make appropriate use of their top-flight researchers' years of education and experience, or risk both undermining corporate R&D goals and driving their staff away, in search of more challenging opportunities.

Chinese policymakers, meanwhile, need to focus on developing the conditions necessary to maintain a thriving domestic research community. One of the most important of the conditions they will need to put in place is a credible and effective intellectual property protection regime. But just as important will be the creation and support of institutions that offer similarly challenging, and rewarding, opportunities for these researchers. Otherwise, PRC policymakers' insistence on the establishment of foreign-funded research efforts in China will yield only the most marginal of benefits. 完

The Fight Against Smuggling

Benjamin C. Ostrov

Many Chinese and foreign producers are well acquainted with the injuries that smugglers have inflicted on their legitimate business. South China's sugar industry is a case in point. In the past two years, according to the *China Daily*, the large quantity of white sugar that has been smuggled into Guangdong Province and the Guangxi Zhuang Autonomous Region has forced the closure of sugar mills and spelled significant losses for sugar cane farmers.

The PRC must wage war not only on smuggling, but also on corruption within its antismuggling forces

Smuggling also affects the PRC government, which has reportedly "conceded that smuggling, especially...by legal persons [companies], has been eating away at [the state's] revenue and undermined the national economy." Thus, the government's efforts to legislate and control smuggling activity may protect individuals and businesses and also benefit the state.

The need for an antismuggling force

The Chinese government has long justified limiting imports of certain goods on the grounds that smuggling can challenge not only revenues, but also a state's sovereignty, and as such is a crime against the state (*see* p.45). Over the past five years, this challenge has grown impossible for the PRC government to ignore. From January to November 1998, the number of smuggling cases increased 23 percent over the same period in 1997, and the value of smuggled goods skyrocketed 95 percent, to ¥12 billion ($1.4 billion). Media sources indicate that smuggled items range from low-technology goods, such as automobiles, foodstuffs, oil, and textiles, to high-tech electronic gadgets and mobile communications products.

In July 1998, the Central Committee of the Chinese Communist Party (CCP) and the State Council held a joint working meeting to address smuggling on a national level. They called for a coordinated, carefully considered campaign that would deploy the resources necessary to attack smuggling on a large scale. That month, Premier Zhu Rongji announced the imminent establishment of the Antismuggling Investigation Bureau (ASIB), under the State Council

In 1999, State Councilor Luo Gan, secretary of the Central Political Science and Law Committee, was reported as saying that an antismuggling unit would have "to investigate major cases and arrest smugglers regardless of the status of the individuals or departments involved...[and]...warned that members of the force should scrupulously avoid corruption and graft." His statement implied that the leadership recognized that many of the potential combatants against smuggling were financially compromised and could prove to be unreliable. Indeed, according to official figures, some 158,000 CCP members were disciplined for corruption in 1998.

Establishing the Antismuggling Investigation Bureau

As most of the existing combatants against smuggling had been implicated in smuggling activities (*see* p.47), Beijing decided a fresh start was needed. The Antismuggling Investigation Bureau commenced operations on January 5, 1999. ASIB was established in two phases. Initially, 6,000 special police officers were recruited into units called antismuggling police corps, which formed 18 special investigation bureaus. In the first half of 1999, 24 more bureaus were formed. Altogether, 10,000 officers now staff 42 bureaus in cities across China. Gongbei, Guangzhou, Jiangmen, Shantou, Shenzhen, and Zhanjiang in Guangdong Province; Fuzhou and Xiamen in Fujian Province; Nanjing in Jiangsu Province; and Shanghai and Beijing were among the first cities to set up offices. Clearly, the emphasis was on port cities and commercial centers, but branch offices were also set up in landlocked cities such as Xining, Qinghai Province.

According to Xinhua News Agency and *South China Morning Post* reports, ASIB has recruited personnel mainly from the General Administration of Customs (GAC) and the Public Security Bureau (PSB), but also from the People's Liberation Army (PLA), other government departments, and universities. Staff were recruited for ability and character, and received specialized training. Party control is intended to guarantee their loyalty, integrity, and resistance to corruption. A political commissar system is to operate at the sub-bureau level and above. At each level, a Party commissar parallels with the state unit's leader. A Party committee would supervise the unit leader and commissar.

ASIB is an arm of the police, but is also meant to be a specialized customs force. Reports suggest that it is run directly by GAC, but that the Ministry of Public Security retains some administrative jurisdiction. According to a well-

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placed informant, the Guangzhou ASIB branch is located in the back room of the Guangzhou GAC office.

Sensitive to the danger that corruption-fighters could themselves become corrupt, National People's Congress (NPC) legislators are considering revising Customs legislation. NPC Standing Committee members and NPC Financial and Economic Committee Vice Chairman Chi Haibin have suggested that Customs officials should not stay at one post for more than two or three years, but should "be rotated nationwide so that they are not tempted by the spoils of corruption." Beijing already rotates leading military officials to maintain central-government and Party control, and prevent warlordism, reviving the traditional "doctrine of avoidance" practiced during imperial times. To maintain the loyalty and integrity of the civil service, this system rotated top civil-service officials regularly every few years, and rarely, if ever, stationed them in their home regions.

Only after ASIB had been in operation for nearly a year did the State Council propose a draft amendment to China's Customs Law that would, in part, ratify the agency's establishment and recruitment of officers. The amendment would clearly define smuggling to improve the criminal code, which stipulates liability of smugglers but fails to define smuggling. The amendment would also impose stricter rules on Customs officials while giving them more power to fight smuggling, including the right to detain vehicles, cargo, and goods suspected of being contraband, a right not guaranteed under the current Customs Law. The amendment would streamline import and export orders, guarantee state tax revenues, and efficiently promote economic development, according to GAC Director Qian Guanlin. The NPC is currently considering this amendment, and is likely to pass it.

Performance

In the absence of such legislation, ASIB's jurisdiction remains unclear. Formally charged only with fighting tariff-related crime, it was reportedly to work with local PSBs to combat tax evasion and tariff-related smuggling by conducting investigations, arresting suspects, and holding preliminary hearings. ASIB was explicitly excluded from concerning itself with other crimes such as the smuggling of drugs, guns, and other controlled commodities. Nor was it to concern itself with the general maintenance of social order. Though ASIB may have avoided these areas, the bureau's actual performance suggests it is less independent than its mandate would indicate.

According to *China Daily* and *People's Daily* reports, ASIB solved tax-evasion cases involving ¥277 million ($33.4 million) during its first four months of existence. Yet 81 percent of smuggling cases ASIB uncovered during this period involved freight transportation. These cases accounted for around 95 percent of all known smuggling cases at this time. Another 120 cases handled during this period, worth ¥555 million ($67 million), involved the processing trade.

The *China Daily* also reported on a major antismuggling operation coordinated by a number of government departments that occurred in June and July 1999. ASIB officers, along with units from the State Economic and Trade Commission, Ministry of Public Security, and the State Administration for Industry and Commerce, took part in this GAC-led operation at the mouth of the Pearl River and nearby waterways. In 17 boats, ASIB staff from the Jiangmen, Guangzhou, Gongbei, and Shenzhen, and the Haikou (Hainan Province) offices took part in seizing around 33,000 tons of oil and a batch of suspect electric appliances with a total value of ¥70 million ($8.4 million). GAC staff—in 33 boats—led the operation. In the course of this effort, 2,964 vessels were searched, of which 462 were suspected of smuggling activities. This was the second time that these government departments carried out a joint antismuggling operation; the first occurred between February and May 1999.

The difference between ASIB's formal jurisdiction and its actual operational behavior is clear, though it is too early to pinpoint the reasons for this discrepancy. One can only speculate that ASIB's formal subordination to GAC has enabled GAC to command ASIB resources for enforcement operations. Thus, in practice, GAC appears able to override ASIB's jurisdictional limitations as it sees fit.

Results

Chinese authorities publicly claim that ASIB has significantly contributed to a reduction in the incidence of smuggling. According to press reports, antismuggling investigation units across the country solved cases in the first quarter of 1999 involving a total of ¥950 million ($114.7 million). Some 560 traffickers received a variety of penalties, including death. Overall, 994 smuggling cases were solved during the period. Though the number of cases dropped 19 percent from the same period of 1998, their value increased 36 percent, to nearly ¥1.5 billion ($181.1 million).

Reports also indicate that ASIB efforts have boosted tariff income. For example, the Qingdao office reportedly investigated five smuggling cases in the first half of 1999, involving ¥41.3 million ($5 million). As a result, Qingdao Customs reported a record ¥3.3 billion ($400 million) in total revenue during the first half of 2000. As this case directly illustrates (and others illustrate less directly), a significant benefit of these law-enforcement activities is income generation for state agencies.

Because of the crackdown on smuggling, an increase in imports, and overall Customs reform, China's Customs revenue hit a record high of ¥158.9 billion ($19 billion) in 1999—80.8 percent larger than the previous year and almost double the annual target. GAC officials said the government's campaign against smuggling and rising

Chinese Reactions to Smuggling

In nineteenth-century China, the Qing government banned the importation of opium. The country then had to contend with smugglers, mainly British, bringing the product into the country. When necessary, the smugglers bribed and otherwise corrupted Chinese government officials to get the product to market. In 1838, the government appointed an honest official, Lin Zexu, to enforce the imperial ban. After taking measures to stamp out demand among Chinese, Lin turned to foreign traders to quell supply. When they refused to hand over their supplies, he blockaded foreign factories. After six weeks, the traders finally surrendered 20,000 chests of opium, which Lin promptly destroyed. Soon after this episode, the Opium War broke out.

Many scholars believe that the Chinese government's actions against the opium trade were motivated by the humanitarian desire to stop drug addiction. However, a less charitable interpretation is presented in Maurice Collis's classic, *Foreign Mud* (Norton, 1968). He notes that Chinese economists were concerned about how the continued outflow of silver would affect the economy, as most opium was purchased with silver. These economists believed that the opium trade would wreck the financial stability of the country and damage the state.

Chinese officials today are still concerned about the threat smuggling poses to the state's financial health. Modern PRC leaders are all too aware that Chinese officials at the time of the Opium War were bribed to allow banned commodities into China—and that the same phenomenon exists today.

—*Benjamin C. Ostrov*

domestic demand had effectively stemmed illegal imports and greatly increased legitimate trade.

The antismuggling drive may indeed have produced economic benefits of its own. PRC market sources attribute an increase in sales of Chinese-made household appliances to the antismuggling drive. For example, according to the State Statistical Bureau, the production of color TV sets from January to November 1999 hit 39 million, a 28.1 percent increase year on year. In addition, China produced 12.5 million air conditioners during this period, an increase of 30.6 percent on an annual basis, and 11.7 million washing machines, up 9.5 percent.

In a regime in which an elite monopolizes power, any campaign against smuggling, or corruption generally, is likely to be limited. This problem occurs not only in countries like China but in democracies as well.

Despite these assertions, it is unclear whether demand has risen, or whether antismuggling efforts have led consumers to buy legitimate goods instead of smuggled ones. To credit what seem to be increases in demand to the antismuggling drive presumes that the rise in supply in such commodities reflects an increase in demand. Furthermore, this increase in demand would be attributed to the decline in supply from competing goods originating across the border. The validity of such assumptions remains unproven.

Assessment

Any evaluation of ASIB's performance requires a certain degree of skepticism. The unit has been in existence for only a year and a half. The discussion thus far suggests that in this short time it has been highly successful. Nonetheless, reports suggest that Chinese authorities have been overzealous in proclaiming ASIB's success.

For example, Xinhua reported that the Guangzhou ASIB office had been credited with handling the case of two employees of Hong Kong's New World Shipping Co. who had reportedly had tried to smuggle diesel oil across the border into Guangdong. The Guangzhou Intermediate People's Court found them guilty of smuggling more than 300 tons of diesel oil, from which they gained ¥58,000 ($7,005) each; sentenced them to one year's imprisonment; and fined them ¥120,000 ($14,492). If successful, they would have evaded ¥112,000 ($13,527) in tariffs.

The two were arrested on January 6 red handed, but the Guangzhou ASIB office was not established until January 8, according to official reports. Indeed, Xinhua reported that the Panyu Customs unit caught and arrested the two men, not ASIB. Clearly, ASIB did not carry out any investigative work leading to the arrest of the two Hong Kong seamen. At most, after the men were caught, ASIB may have aided the procurator and court.

Another indicator suggesting that ASIB's performance amounts to less than has been claimed is the silence surrounding the current Xiamen, Fujian Province, smuggling scandal. According to a number of reports, investigations have implicated several leading Xiamen figures in alleged smuggling activities carried out by the head of the Yuanhua [Farewell] Group. They include two Xiamen deputy Party leaders, the local Customs chief, the son of former CMC Chairman Liu Huaqing, and Lin Youfang, the wife of Politburo member Jia Qinglin. Jia had been Fujian provincial Party secretary and reportedly once shared an office with current PRC President Jiang Zemin when the two worked at the First Ministry of Machine-Building Industry in the early 1960s.

Jia Qinglin and his wife are apparently close to Jiang Zemin. This case suggests that in a regime in which an elite monopolizes power, any campaign against smuggling, or corruption generally, is likely to be limited. This problem occurs not only in countries like China but in democracies as well. Consider the recent difficulties of Germany's Christian Democratic Party, the problems of some British Conservatives near the end of the Thatcher/Major era, and even of local governments—in New York City, many around Mayor Ed Koch fell to charges of corruption even though he remained untainted. The cause is a corruption born of the arrogance of those who have been in power too long. Indeed, "power tends to corrupt and absolute power corrupts absolutely," as Lord Acton wrote in 1887.

The Xiamen Smuggling Scandal

Much has been made of the fact that President Jiang Zemin and Politburo member Jia Qinglin shared an office at the First Ministry of Machine-Building Industry in the early 1960s. The implication is that they were equals and contemporaries. However, it is more likely that Jia was Jiang's protégé. Both had been trained in electrical engineering, and they served together from 1962 to 1969 at the ministry. But while Jia served as a technician, Jiang was deputy director of the ministry's Shanghai Electric Appliances Institute, and director and acting Party committee secretary of its Wuhan Thermo-Engineering Machinery Institute. Furthermore, while Jia Qinglin was born in 1940, Jiang Zemin was born in 1926—a difference of nearly a generation. Patron-client relations have long been significant in Chinese politics and probably have much to do with Jia's rise to the Politburo.

In 1997, Jia replaced Chen Xitong, who had been found guilty of corruption charges, as Beijing Party secretary. Jia's wife Lin Youfang continued to head a provincial trading company in Fujian Province.

Lai Changxing reportedly established the Yuanhua [Farewell] Group in Fujian Province while Jia Qinglin was Party secretary there. The firm dealt in real estate, imports and exports, and electronics and storage, and even owned a local soccer team. It allegedly imported illegally nearly $10 billion worth of automobiles, petroleum, tobacco, and other goods through Xiamen. Lai fled the country after authorities, acting on a tip from a dissatisfied employee, began investigating his company.

A Kyodo News Service report, among others, indicated that Lin Youfang appeared to be under investigation, and Jia supposedly had divorced her in December 1999. However, Lin is now out of difficulty, apparently still married to Jia, and has been seen at official functions with him.

—Benjamin C. Ostrov

Few, if any, reports mention ASIB's involvement in the Xiamen investigation. This silence is significant since the regime has been eager to trumpet ASIB's successes, in large part to reassure the public that it is cracking down on crime.

ASIB's professional integrity also warrants concern. There is no mechanism to prevent the excessive use of force, or the abuse of Chinese citizens' rights, as understood according to PRC constitution. There is a built-in incentive to be aggressive in the enforcement of antismuggling regulations or even to manufacture evidence, as 35 percent of the proceeds from confiscated goods revert to the antismuggling units, according the *South China Morning Post.* The rest of the funds are split between provincial governments and the central government. Prior behavior of other Chinese organizations presented with the opportunity to obtain wealth is not reassuring. As presently constituted, ASIB is endowed with a money-making privilege that presents the danger of corruption.

Other than removing the monetary incentive for prosecution, however, China has already taken most of the steps possible to combat corruption. If nothing else, this suggests the political will exists to put an end to smuggling—though the odds of achieving long-lasting success are perhaps limited. As corruption is rooted in the monopolistic character of the regime, China's government can do little more—short of transforming itself—to fight smuggling at its roots. 完

Corruption Fighters Succumb

The very forces meant to fight corruption in China have, in many cases, become part of the problem. PRC press reports have exposed high-profile cases that many observers suspect to be only the tip of the iceberg. Of course, they also reflect the top leadership's willingness to air the government's dirty laundry in public.

The People's Liberation Army (PLA) initially was to have a critical role in the war on smuggling, but longstanding questions about the integrity of certain units posed problems for Beijing. The roots of these problems stretch back to the 1970s and the Four Modernizations campaign, which placed military modernization last on the list for reforms. This ranking translated into small defense budgets through the 1980s and 1990s. To make up the financial shortfall, many units created sideline businesses. Beijing initially encouraged this military entrepreneurship, but later discovered that allowing military units to go into business had created opportunities for corruption.

Some officials began renting out the license plates of military transports to smugglers in the 1980s. As early as 1988, certain individuals in the Guangzhou military region even rented out some military transports. In November 1988, PRC courts fined two units of the Shenyang military region for illegally buying goods. By 1998, it was reported that PLA regiments, especially those in Guangdong Province, had been running a smuggling empire.

Part of Beijing's antismuggling campaign involved the 1998 ordering of the military and, later, other government organs, to surrender their multibillion-dollar businesses. Military leaders, concerned that business activities were distracting soldiers from military activities and harming military professionalism and preparedness, supported this move. The government announced that it had completed the transfer of military businesses by January 1999. Most of the surrendered businesses, primitive small-scale factories near military bases that provided jobs to PLA family members, were subsidized by local governments. Many of these businesses now face bankruptcy, as local-government subsidies have dried up. Until recently, however, the PLA managed to retain control of its profitable investments in telecommunications and probably in other areas as well. While the top leaders clearly wish to shut the PLA out of all commercial activity, implementation has proved to be another matter.

Local governments and Customs join in

Besides the military, other government bodies that have battled smuggling, including local leaders, the police and even some courts, have themselves been compromised by criminal involvement.

Rather than viewing smuggling as a crime, some local leaders rationalize that smuggling is in the public interest, as commerce, whether legal or not, can help economic development. Such a situation makes recruiting personnel to stop such trade difficult. In the Guangxi Zhuang Autonomous Region, for example, leaders apparently use smuggling as a development strategy between anticorruption or antismuggling campaigns. The region has derived much benefit from illegal cross-border trade with Vietnam. In January 1999, Beijing revealed it had sent a task force to Zhanjiang, Guangdong, to investigate leaders suspected of taking part in a large smuggling operation.

Such corruption is not limited to the provinces. In the same month, two of China's top police officers, including a deputy minister of the Public Security Bureau (PSB), were detained for corruption. According to Premier Zhu, they were likely to be executed. Li Jizhou, PSB vice minister since 1995 and China's top antismuggling official, was dismissed from his post in December 1998 and arrested in January 1999 on corruption charges. And the National People's Congress dismissed Luo Ji and Huang Lizhi, director and deputy director, respectively, of the anticorruption bureau of the Supreme People's Procuratorate, from their positions in November 1998.

General Administration of Customs (GAC) staff have also been involved in smuggling. Since the launch of the antismuggling campaign, over 100 Customs officers, including five officers at department or bureau-chief levels, have been investigated or arrested for smuggling and bribery, including the Zhanjiang Customs chief. A senior GAC official, who was implicated in the Li Jizhou smuggling case, has also been arrested. And in late 1998, Huang Rufeng, head of GAC's Disciplinary Commission, reportedly said that "638 Customs personnel—some 2 percent of the total strength of 30,000—have been punished in the past five years for their involvement in about 450 cases."

Punishment seems to vary according to the rank of the accused and the nature of the crime. Luo Ji and Huang Lizhi, both of high rank, were not actually charged with corruption. Their penalty, dismissal from their posts, seems light, as lower-ranking people tend to suffer heavier penalties, including death. Zhu Rongji appears to be very serious about stamping out smuggling and corruption and wants to impose heavy penalties on even high-ranking individuals accused of corruption and smuggling. But it is still too early to tell whether the punishments to date are having a deterrent effect.

—Benjamin C. Ostrov

Dashed Hopes in the Leasing Industry: A Cautionary Tale

Contrary to popular belief, what is considered a good business practice at home is also good in China

Rainer Thomm

Rainer Thomm
(chinareads@cinet.com.cn, www.chinareads.com) is a consultant in Beijing. He has served as an executive with major banks in Australia, Asia, and Europe, and in the 1980s was instrumental in building up the Asian investment banking business of Australia's Westpac Group. He was later appointed a member of the board of management of a joint-venture leasing company in Beijing. Thomm is the author of *Doing Business in China* (Marshall Publishing Ltd., 1999), *China: Mission Impossible?* (World Affairs Press, 2000), and *Win/Win in China! Getting the Very Best Out of Your China Negotiations* (World Affairs Press, forthcoming), from which this article has been excerpted.

In the early 1980s, almost every Western bank dreamed of lending money in China, which many saw as a paradise of "virgin" borrowers. China also had a dream: to stimulate foreign trade and promote economic and technological development. China was also keen to obtain much-needed financial know-how.

It did not take long to find a way to bring these dreams together. Western banks soon began setting up joint-venture (JV) leasing companies with Chinese export/import corporations and banks. This neatly sidestepped the prohibition (in force until the early 1990s) on the opening of new foreign bank branches or wholly foreign-owned subsidiaries. Chinese organizations were able to obtain affordable foreign technology and expertise, while foreign banks found a way to do business in China.

Within just a few years, dozens of JV leasing companies set up shop. But what seemed to make sense on the surface turned out to be a classic case of "sharing the same bed but dreaming different dreams," a well-known Chinese proverb.

The mirage

On paper, this method seemed to work smoothly. For example, let's say the No. 218 Cotton Spinning Mill in a small town in China wanted to buy Italian spinning machines costing $2 million. As it lacked the cash to do so, it would ask the export/import corporation for an introduction to the JV leasing company. The leasing company would purchase the machines and lease them out to the factory. The proceeds from the sale of the yarn produced would be available to repay the leasing company.

Leasing company staff would see that all official approvals for the transaction were obtained, make sure there was what was called a "guarantee" from the relevant industry bureau and—presto!—the money would be on its way!

The reality

Though hard to believe, the Western bankers asked no questions. There was no financial analysis, no feasibility assessment.

The Chinese managers delegated by the Chinese shareholders to the JV leasing companies came primarily from Chinese export/import corporations. They had experience in purchasing machinery, not in financial analysis. They had no concept of how a market economy worked, but they liked having the opportunity to acquire the latest technology for their old friends in the provinces.

Foreign bankers had not considered that aspect of the leasing process. Their executives naïvely thought that everything would be all right in China. After all, the factories were owned by the state, and the state would not default. What a great way to make money!

The foreign bankers never realized that they were not dealing with the state, but rather with companies that were accountable for their own liabilities. So they didn't ask any questions at all about the No. 218 Cotton Spinning Mill—questions like: How would the lessee be able to pay back the $2 million? Is there really a market for the product? What shape is that factory in, in terms of management, employee morale and efficiency, organization, and finances?

Some of the people foreign banks sent to China had little, if any, hands-on experience in leasing, but were chosen because of their willingness to accept a "hardship posting." For example, one senior leasing executive in China began his career on a cruise ship, and then worked as a low-level officer at a European vehicle-leasing company before assuming his China post.

Few foreign lenders took the trouble to board an ancient Antonov 24 (a plane affectionately known as "The Flying Whale") and make their way to the back of beyond to inspect the factory. After all, the lights might go out at their destination airport just as they were about to land, and they could be unceremoniously diverted to a town hundreds of miles away, late on a midwinter evening. The prospect of getting their hands or expensive shoes dirty during the factory visit was similarly unappealing.

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> **The Chinese seem to be a great deal more curious about the West than the average Westerner seems to be about China.**

Such individuals tended to prefer to meet for drinks at Beijing's Shangri-La Hotel and exchange opinions with like-minded expat "experts" on a China they had never seen, rather than discuss questions like whether the industry bureau would be able to lay its hands on the necessary foreign exchange in case of default. For although one particular transaction might amount to $2 million, the total amount of the so-called guarantees issued by just one industry bureau was in the tens of millions of dollars within the first few years of operation of the Chinese leasing industry.

In fact, the industry bureaus had *no way* of coming up with the kind of money detailed in the guarantees. The amount of even one such guarantee exceeded the total available funds of most industry bureaus by a wide margin. On top of that, just one industry bureau in a given province might issue dozens or hundreds of such guarantees.

Another problem was that these guarantees were denominated in foreign currency, but the industry bureaus had no access to foreign currency. China has a restrictive system of foreign-exchange control, the practical effect of which was that the industry bureaus would *never* be able to obtain the required dollars, yen, or marks to honor the guarantees they had issued. When there is no cash, the best of guarantees is a waste of ink and paper: you can't squeeze blood out of a stone.

What went wrong? Evidently, at least some bankers believed in the power of red stamps on bits of paper most of them could not read. In a typical scenario, the head honcho of a Western bank might ask his Chinese-speaking assistant, "Mike, is that documentation all right?" And Mike would reply, "Looks like it, sir!"

Neither Mike nor his boss ever thought about the possible connections and behind-the-scenes maneuvers among the enduser, the industry bureau, and the people in the business department at the leasing company. They substituted hope for hard-core information and analysis. So much for the transfer of financial know-how.

Mr. Puy Chan, area sales manager for Regus Management Ltd., a company that provides instant offices at its business centers worldwide, summed it up neatly, "You'd be surprised. Some people come in—they haven't got a clue."

Realization sinks in

Still, after a while, one or two bankers began to wonder what was going on. One foreign businessman asked his Chinese colleague:

"Mr. Wu, does your bank lend money to its customers without asking for financial information?"

"Of course not," Mr. Wu replied. "We get three years' financial statements. We regularly go to see our customers and look over their operations. We ask the most detailed questions and, through our network of contacts, we do what we can to verify that information."

"Then, can we do the same in our leasing company, please?" the foreign banker went on. "And one more thing, Mr. Wu. How about taking a few of your colleagues with you, and visiting lessees? Stay for as long as you like, but come back with some money, all right?"

No sooner said than done. Everyone enjoyed those trips, by all accounts. And yes, they frequently came back with sizeable chunks of money from the debtor companies.

Alas, it was a case of shutting the stable door after the horse had bolted. By that time, the leasing company's bad and doubtful debts already exceeded shareholders' funds by a wide margin. One leasing company managed to run up losses of $70 million (on an initial paid-in capital of $5 million) after 15 years of operation.

The chickens come home to roost

It took five years from the time the leasing companies were established for a very few insiders to realize that something had gone seriously awry. It took another five years for the bubble to burst. When it did in 1994, there was a great deal of wailing and finger pointing, with complaints along the lines of "The People's Bank of China won't allocate the foreign exchange!"

But what foreign exchange were they talking about? And how did the People's Bank of China (PBOC) get into the picture? PBOC was not a party to those transactions. Trying to blame the central bank for not allocating foreign exchange was both spurious and, more importantly, pointless.

Western bankers simply had not done their due diligence in the first place. They had not asked the right questions. All they had done was to look at the big picture: China.

The money that the foreign banks lost through their pursuit of a one-sided dream may never be counted. Still, bankers continue to look at the big picture. Five years after the leasing company bubble finally burst, the Guangdong International Trust & Investment Corp. (GITIC) applied for protection from its creditors (*see The CBR*, May-June 1999, p.36). Here is what the *International Herald Tribune* (*IHT*) had to say on January 23, 1999:

> *People boarding the Sunday morning train from Hong Kong to Guangzhou...were treated to a novel sight: Dozens of Western bankers in suits sat among the Chinese travellers, briefcases stashed between lumpy bags of food and clothing.*
>
> *The pin-striped passengers were...about to learn the fate of one of China's largest state-owned companies.... Although GITIC was in danger of defaulting on nearly $1.5 billion in loans and guarantees from foreign banks, few of the creditors believed they would be left in the lurch.*

Their optimism would not last. The *IHT* article continued:

Three hours later, they rode the train back to Hong Kong in stunned silence. Chinese officials had told the creditors that they planned to throw GITIC into bankruptcy. Bankers who inquired about when they might get repaid got a blunt response: Take a number and get in line.

Who was to blame? Everyone knew that GITIC was a limited liability company, but few apparently took any notice. In China, as in the rest of the world, the concept of a limited liability company means precisely that: There is no recourse against the shareholders beyond the amount unpaid or owing on their holdings.

It was a fundamental oversight—yet another in a long history of Western parties' failure to do their homework in China. The *IHT* succinctly summed up the consequences:

By refusing to bail out GITIC, China is signalling that investors will be held accountable for their lending. Gone are the days when foreign bankers could rely on political connections as a substitute for proper credit-risk analysis.

Curiosity may save the cat

The problem actually may go a lot deeper. Judging from personal experience, the Chinese seem to be a great deal more curious about the West than the average Westerner seems to be about China. I have been to literally hundreds of presentations of things Western all over China and have been overwhelmed by the enthusiasm of Chinese visitors. It is plain that they are eager to learn about the West. Western visitors and expatriates often have good conversations about their home countries with the Chinese they run into—from shopkeepers to taxi drivers.

I have also been to hundreds of presentations about China back home. The number of Westerners—specifically people who were doing business with or intending to do business with China—who would turn up at these events could be counted on the fingers of one hand. I have been to other presentations both within China and outside where a hundred Westerners—for whom the displays were intended—walked right by, exhibiting no sign of interest. But the three Chinese citizens who came anywhere near the displays would invariably stop and ask questions.

Perhaps, many of us really believe the adage "curiosity killed the cat." Whatever the reason may be, if you are dealing with a place as complex as China, the opposite is true—curiosity will save your skin!

The lesson is clear: If you wish to have any success in China, do yourself a favor and don't follow in the hapless bankers' footsteps. Get the information you need, then move on and enter the fray. 完

Whither Hong Kong?

Continued from page 20

The environment has also become a pressing issue. Tung's most recent policy address focused on cleaning up the city's increasingly polluted air, water, and land, and building more affordable and modern housing. In addition, he emphasized the importance of maintaining Hong Kong's "foundation of prosperity and progress"—institutions and governmental structure, including the rule of law, free markets, open trade, and free speech.

Various post-handover events are not making things easy for Tung or his government. The controversy over the right of abode of mainland-born children with a Hong Kong-resident parent has raised concern about the strength of the rule of law. (The PRC's National People's Congress was called on to review the Hong Kong Court of Final Appeal decision, potentially undermining judicial independence from the mainland.) Also, the SAR government needs to find ways to reduce its participation in the city's stock and property markets. The government's 1997 intervention in the stock market to protect the Hong Kong dollar has left it with a $10 billion portfolio that must be divested without driving down the Hang Seng Index. Similarly, a freeze on land sales during the Asian financial crisis has been criticized as a needless government intervention to prop up property prices. Finally, sporadic calls by junior mainland officials to curb news coverage and control Internet access in Hong Kong have revived concerns about freedom of the press and access to information.

Asia's world city?

Amidst the different proposals and pressures over how to lead Hong Kong, the government will likely continue to tread the middle path as it reshapes the economy. It will likely strengthen economic ties with the mainland and encourage both the manufacturing and high-tech sectors, but be careful not to intervene too heavily in the economy.

As apparent in Tung's 1998 and 1999 policy addresses, the goal of transforming Hong Kong into Asia's "world city" is now a central theme of the Hong Kong government's long-term economic vision (*see* p.18). This vision first appeared in an HKTDC report on Hong Kong's manufacturing sector.

Whether Hong Kong will succeed in becoming Asia's world city remains unclear. What is clear is that over the last 150 years, Hong Kong has become much more than what former British Foreign Minister Lord Palmerston once described as a "barren rock." During that time, Hong Kong has reshaped itself—literally and economically—many times and in many ways. It is hard to imagine that it will not be able to reshape itself once again. 完

Council Bulletin

Event Wrap-Up

Washington

May
Pharmaceuticals Briefing on Capitol Hill

Issues Lunch: What if we win in the House? Perspectives on PNTR in the US Senate Featured Nao Matsukata, office of Senator Joseph Lieberman; Ira Wolf, office of Senator Max Baucus; Ben McMakin, office of Senator Patty Murray; and Faryar Shirzad, Republican staff, Senate Finance Committee

June
Encryption Meeting Featured Deputy Director of the Council's China Operations Iain McDaniels

Luncheon Featured State Council Office for Restructuring the Economic System Vice Minister Shao Bingren

Environmental Meeting Featured Qian Yi, professor at Qinghua University and director of the State Key Joint Laboratory of Environmental Simulation and Pollution Control

Luncheons: PNTR in the Senate

Issues Lunch: China in the WTO: Next Steps for Business Featured Thomas Lee Boam, US and Foreign Commercial Service

Council Holds Gala Dinner and Annual Meeting in Washington

Over 400 member company executives and representatives; distinguished government officials and academics; and their guests attended The US-China Business Council's Biennial Gala on June 1 in Washington. After opening remarks by Council Chairman Michael R. Bonsignore and President Robert A. Kapp, the Council recognized US Trade Representative Ambassador Charlene Barshefsky for her work in support of stable US-PRC commercial relations. Barshefsky rallied the Council and the business community to continue their efforts to see China's accession to the World Trade Organization through, including the successful passage of permanent Normal Trade Relations (PNTR) status for China. PRC Ambassador to the United States Li Zhaoxing also addressed the audience, thanking the business community for its work on PNTR.

After dinner, Ambassador Joseph Verner Reed, undersecretary of the United Nations, and John G. Ryden, director of Yale University Press, introduced the Culture and Civilization of China (CCC), an endeavor that brings US and foreign scholars together to collaborate on a 75-book project on China's cultural heritage. James Cahill, professor emeritus at the University of California at Berkeley, then delivered a presentation entitled "How the Chinese Conquered Space (In Painting) and Lost and Found It Again."

At the end of the evening, President Kapp gave a brief update on the US-China Legal Cooperation Fund, which provides grants to support US-China projects in the field of law.

Annual Membership Meeting Focuses on WTO

Over a hundred member company representatives participated in the Council's 27th Annual Membership Meeting on June 2. The panel discussion on World Trade Organization (WTO) implementation in China featured James Feinerman, James M. Morita Professor of Asian Legal Studies and director of Asian Law and Policy Studies at the Georgetown University Law Center; C. Christopher Parlin of Kaye, Scholer, Fierman, Hays & Handler, LLP (formerly counsel for Winthrop, Stimson, Putnam & Roberts); and Roberto Echandi, adjunct professor at the Georgetown University Law Center and director of International Trade Negotiations in Costa Rica's Ministry of Foreign Affairs. Gina Capalbo, manager of Government Affairs at the Ford Mo-


Anna Ng

Ambassador Charlene Barshefsky, US Trade Representative

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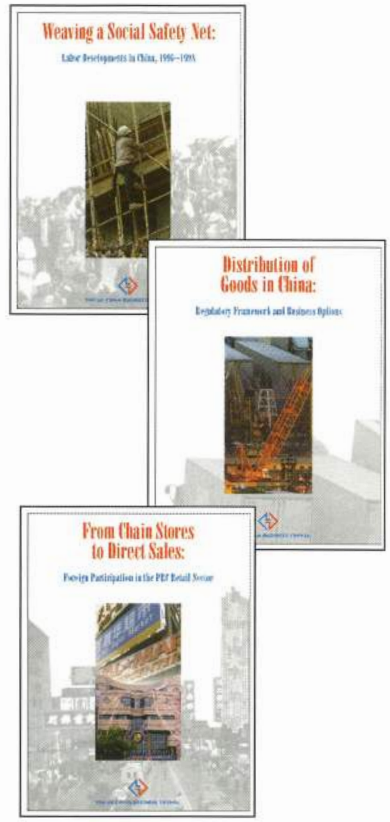

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❑ ***Weaving a Social Safety Net: Labor Developments in China, 1996-1998***
February 1999 (USCBC members $25, non-members $75)
How China's social insurance reforms affect foreign firms.

❑ ***Distribution of Goods in China: Regulatory Framework and Business Options***
June 1998 (USCBC members $25 , non-members $75)
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tor Company, and Orit Frenkel, senior manager of International Trade and Investment at General Electric Co., wrapped up the panel with talks on corporate strategies to promote WTO compliance in China.

Lissa Michalak

Donald Phillips, Assistant US Trade Representative for China, Hong Kong, Taiwan, and Mongolia

The second morning panel focused on the business climate in China. Speakers were Iain McDaniels, deputy director of China Operations at the Council's Beijing office; James McGregor, vice president and chief representative for Dow Jones & Co. in China; and Michael Stich, US liasion for Dell Computer Corporation's Dell Ventures Asia.

The keynote speaker was Donald Phillips, assistant US Trade Representative for China, Hong Kong, Taiwan, and Mongolia, who discussed China's 2001 chairmanship of the Asia-Pacific Economic Cooperation.

Frederick W. Smith Elected Council Chair; Council Board Welcomes New Members

At the Council board meeting on June 1, and membership meeting on June 2, Frederick W. Smith, chairman, president, and chief executive officer of FedEx Corporation, was elected Council chairman, succeeding Michael R. Bonsignore, chairman and chief executive officer of Honeywell. Roger Ackerman, chairman and chief executive officer of Corning Incorporated, was chosen to join Carla Hills, chairman and chief executive officer of Hills & Company, as a vice chairman. Vaughn A. Koshkarian, vice president of Ford Motor Company and president of Ford Asia Pacific Operations, was elected secretary-treasurer.

Annual meeting attendees approved as new members to the Council's Board of Directors Alexander R. C. "Sandy" Allan, senior vice president, The Coca-Cola Company, and group president, Coca-Cola Asia Pacific; Richard B. Cheney, chairman and chief executive officer, Halliburton Company; Maurice R. Greenberg, chairman and chief executive officer, American International Group, Inc.; William J. Ketelhut, president, The Foxboro Company; Robert Y. L. Mao, senior vice president, Nortel Networks, and president and chief executive officer, Nortel Networks (China) Ltd.; James A. McClung, vice president, FMC Corporation; Bill Neukom, senior vice president, Law & Corporate Affairs, Microsoft Corporation; Dean R. O'Hare, chairman and chief executive officer, The Chubb Corporation; Carlos Pascual, executive vice president, Xerox Corporation, and president, Developing Markets Operations; David W. Raisbeck, vice chairman, Cargill, Incorporated; Robert W. Staley, senior advisor-Asia and retired vice chairman, Emerson Electric Co.; and George Vradenburg III, senior vice president for global and strategic policy, America Online, Inc.

Those who have completed their three-year terms on the Board are Michael Bonsignore; William E. Bradford, chairman, Halliburton Company; Douglas N. Daft, chairman and chief executive officer, Middle & Far East Group, The Coca Cola Company; Edgar Hotard, director, Global Industries, Ltd.; L. Oakley Johnson, senior vice president, corporate and international affairs, American International Group, Inc.; James R. Long, president, Enterprise Networks, Nortel Networks; Patrick J. Martin, corporate senior vice president, president, developing markets operations, Xerox Corporation; George W. Sarney, chief division executive, Invensys Intelligent Automatic Division; Joseph F. Toot, Jr., chairman of the executive committee/board of directors, The Timken Co.; Morton L. Topfer, vice chairman, Dell Computer Corporation; and William J. Warwick, chairman, AT&T China.

Beijing

June

China Operations 2000

Member company representatives gathered in Beijing June 20-21 for the Council's China Operations Conference 2000. Speakers included Yu Xiaosong, chairman of the China Council for Promotion of International Trade; Robert Kapp, Council president; Alan Turley, minister councilor, the US and Foreign Commercial Service in Beijing; Li Shantong, director of the State Council Development Research Center's Research Department of Development Strategy; and Hu Angang, research fellow and senior economist at the Chinese Academy of Social Sciences.

Afternoon workshops focused on new trends in human resources compensation; state-owned-enterprise reform and debt-equity swaps; new PRC distribution models and outsourcing; and investing in China in the new WTO environment.

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China Business

Sales and Investment

MARCH 15, 2000 – MAY 15, 2000

Compiled by Beth Burghaze and Mark Dunn

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.

Accounting and Insurance

CHINA'S IMPORTS

KPMG Canada LLP
Signed contract to provide the China National Accounting Institute with curriculum-planning and -design consulting services. 5/00.

INVESTMENTS IN CHINA

Prudential Assurance Co. Ltd. (UK)/CITIC
Will form a joint-venture life insurance firm in Guangzhou, Guangdong Province. (UK:50%-PRC:50%). $24.2 million. 4/00.

Banking and Finance

OTHER

United Overseas Bank (Singapore)/Beijing Centergate Technologies
Formed a joint venture to invest in emerging technology companies in China. 4/00.

Reuters Plc (UK)/ChinaWeb Ltd.
Reuters will supply its online "Reuters Investor Service" to ChinaWeb's Internet portals. 3/00.

Chemicals, Petrochemicals, and Related Equipment

CHINA'S IMPORTS

Phosphate Chemicals Export Association Inc. (US)
Sold 1.1 million tons of diammonium phosphate fertilizer to China. 4/00.

Recycled Solutions for Industry Inc. (Canada)
Will provide its weather-resistant coatings to Baoding General Petroleum & Anti-Corrosion Engineering Co. structures in Shenzhen, Guangdong Province. $1.5 million. 3/00.

Abbreviations used throughout text: ADB: Asian Development Bank; BOC: Bank of China; CAAC: Civil Aviation Administration of China; 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.; CNPC: China National Petroleum & Gas Corp. ETDZ: Economic and Technological Development Zone; ICBC: Industrial and Commercial Bank of China; MII: Ministry of Information Industry; NA: Not Available; NORINCO: China North Industries Corp.; P&T: Posts and Telecommunications; PBOC: People's Bank of China; SEZ: Special Economic Zone; SINOCHEM: China National Chemicals Import-Export Corp.; SINOPEC: China National Petrochemical Corp.; SINOTRANS: China National Foreign Trade Transportation Corp.; SDPC: State Development Planning Commission; UNDP: United Nations Development Program; UNICOM: China United Telecommunications Corp.

INVESTMENTS IN CHINA

Albemarle Corp. (US)/Jinhai Chemical and Industry Co. (Zhejiang)
Formed joint venture Ningbo Jinhai Albemarle Chemical and Industry Co., Ltd. to manufacture, sell, and export specialty polymer stabilizers, flame retardants, and selected chemicals. 3/00.

Aventis SA (France)/Hangzhou General Pesticide Plant (Zhejiang)
Will launch joint venture to produce Regent brand insecticides in Beijing. (France:75%-PRC:25%). 3/00.

OTHER

Bayer AG (Germany)
Will open a technical service center for applied polymer technology in Shanghai. $10 million. 4/00.

ChemIndustry.com (US)/China Chemical Network
Signed an agreement to add the websites of 1,500 Chinese chemical companies to the ChemIndustry.com database. 3/00.

DuPont Photomasks, Inc., a unit of E. I. DuPont de Nemours and Co. (US)
Installed a new manufacturing line at its majority-owned joint-venture facility in Shanghai. 3/00.

Consumer Goods

INVESTMENTS IN CHINA

MyWeb Inc.com (US)/Jingqi.com (Beijing)
Agreed that MyWeb would take an equity interest in Jingqi.com, one of the largest retail bookstore chains in China. 3/00.

OTHER

NRS Group Pty Ltd. (Australia)
Signed a memorandum of understanding for a television production joint venture in China. 4/00.

TRB Systems Inc., a subsidiary of TRB Systems International Inc. (US)/Shenzhen Xidesheng Bicycle Co., Ltd. (Guangdong)
Signed a licensing agreement under which Shenzhen Xidesheng will manufacture a proprietary line of outdoor bicycles for the Chinese market. $1 million. 3/00.

Electronics and Computer Software

CHINA'S IMPORTS

Haansoft (South Korea)
Will provide three Chinese firms with its united messaging system (UMS) technology. 5/00.

iSquare Solutions, a unit of Datacraft Asia Ltd. (Singapore)
Won contract from China-I-Capital Ltd. to design and implement a business-to-business e-commerce portal for China's household appliance industry. $1.3 million. 5/00.

ViAlta.com, Inc., a subsidiary of ESS Technology, Inc. (US), Internet Corp. (Cayman Islands)
Everbright Securities will use ViAlta.com's Internet set-top box as its platform on which to launch online stock and financial services in China. 3/00.

Xin Net Corp. (Canada)
Will build, implement, and maintain an online ordering, transaction, and management platform for Guangdong Xin Na Te Electronics Co. Ltd. 3/00.

INVESTMENTS IN CHINA

Hytel Group, International Technologies (US)/Dalian Daxian Group (Liaoning)
Will build a joint-venture facility to manufacture electronics components. $8 million. 5/00.

tom.com (Hong Kong)
Purchased stake in PRC entertainment-content provider Maya Online. $25 million. 5/00.

Cheuk Nang Technologies Holdings Ltd. (Hong Kong)/Dawning Computer Co. (Beijing)
Formed a joint venture to focus on system integration and sale of networking software in China. $2.1 million. 4/00.

Chinadotcom Corp. (Hong Kong)
Acquired CASTnet Co., a network software developer in Beijing. 4/00.

Chinadotcom Corp. (Hong Kong)
Bought a 35% stake in Shanghai-based Internet game company, Stame.com. 4/00.

Chinadotcom Corp. (Hong Kong)
Purchased a minority stake in and formed joint venture with Chinese entertainment website KP.com, which will be made available on Chinadotcom's Chinese language portals. 4/00.

Haansoftnet, a subsidiary of Haansoft Inc. (South Korea)/Guangming Group (Beijing)
Will establish Internet PC room franchise "Webstation China." (S. Korea:48%-PRC:52%). 4/00.

Leitch Technology Corp. (Canada), Macostar (Hong Kong)
Will build a joint-venture manufacturing facility in Wuhan, Hubei Province, to produce video and audio equipment. 4/00.

LG Electronics Co. (South Korea)
Will invest $430 million over the next three years to expand its capabilities in Huizhou, Guangdong Province, and Shanghai and Tianjin municipalities. 4/00.

South China Information & Technology (Hong Kong)/Nanjing Skytech (Jiangsu)
Formed joint venture South China Skytech to provide system solutions to Jiangsu Province police units. (HK:70%-PRC:30%). 4/00.

Web Connection, a subsidiary of Chinadotcom Corp. (Hong Kong)
Acquired Beijing-based web solutions company WayX. 4/00.

Adatom.com, Inc. (US)/China Product Trade Net Center (Shanghai)
Will form Beijing-based joint venture to develop and implement Internet applications, services, and support systems to enable the marketing and sale of industrial and consumer goods between China and the United States. 3/00.

American Champion Entertainment (US)
Will purchase 80% controlling interest in Beijing Wisdom Network Technology Co. Ltd. through an exchange of stock and cash. 3/00.

Tianrong Internet Products and Services, Inc. (US)/China Commodity City (Zhejiang)
Signed a joint-venture agreement to launch a new business-to-business website. (US:60%-PRC:40%). 3/00.

OTHER

Intel Corp. (US)/Huawei Technology Co. (Guangdong)
Signed a memorandum of understanding to build a joint development center for Intel's Internet Exchange (IX) system in Shenzhen. 5/00.

Unisys Corp. (US)/Dynamic Technology (Beijing)
Signed an agreement to market Unisys e-@ction Enterprise Server ES7000 systems and other Unisys servers in the Asia-Pacific region. 5/00.

Bluepoint Linux Software Corp. (US)
Signed an agent agreement with software vendor Beijing Federal Software Corp. to market Bluepoint Linux. 4/00.

Bluepoint Linux Software Corp. (US)
Signed an agent agreement with software vendor Nanjing Shusifang Co. to market Bluepoint Linux. 4/00.

Bluepoint Linux Software Corp. (US)
Signed an agreement with software vendor Shenzhen Ruokewei to market Bluepoint Linux. 4/00.

CNET Networks Inc. (US), Asiacontent.com (Hong Kong)
Launched China.CNET.com, a Beijing-based site dedicated to technology news and product reviews. 4/00.

Hollywood.com, Inc. (US)/Legend Holdings Ltd. (Beijing)
Will form a strategic partnership to distribute Hollywood.com content in Chinese on all new Legend PCs, and on Legend's new Chinese-language portal, FM365.com. 4/00.

NexMedia Technologies Inc., Pacific E-Link Corp. (Canada)
Signed a memorandum of understanding to market selected, respective, Internet advertising products in China. 4/00.

SineTec Holdings Corp. (Canada)/Jiangsu Zijin Electronics Information Industry Corp.
Signed an agreement to produce SineTec-designed peripheral cellular products. 4/00.

CBQ, Inc. (US), NoMatterWare.com (Canada)
Will offer free access to an e-commerce website development system in China. CBQ will modify the system to support the Chinese language. 3/00.

Compaq Computer Corp. (US)
Opened a $5 million e-commerce center in Shanghai. 3/00.

iAsiaWorks (US), iAdvantage, a subsidiary of Sun Hung Kai Properties Ltd. and a SUNeVision Holdings Ltd. member company (Hong Kong)
Will lease space for data center facilities in Beijing and Shanghai. 3/00.

National Semiconductor Corp. (US)/Legend Holdings Ltd. (Beijing)
Opened a joint information appliance laboratory that will focus on research and development. 3/00.

Red Hat Inc. (US)/Forlink Software Corp. Inc. (Beijing)
Signed an agreement to add Forlink's Linux-based software to Red Hat's Application CD library and website. 3/00.

Environmental Technology and Equipment

CHINA'S IMPORTS

Cummins Engine Co. (US)
Will provide Beijing Public Transportation Co. with 500 environmentally friendly engines powered by natural gas. 5/00.

INVESTMENTS IN CHINA

Conex Continental Inc. (US), Dominion Capital Pty. Ltd., Technology Licensing Ltd. (Australia)
Will form a joint venture to manufacture, sell, and distribute environmental products in China. 3/00.

Food and Food Processing

CHINA'S INVESTMENTS ABROAD

The Coca-Cola Co. (US)/China National Cereals, Oils, and Foodstuffs Import and Export Corp. (Shanghai)
Will set up Cofco Coca-Cola Beverage Co., a bottling group, in Hong Kong. (US:35%-PRC:65%). 4/00.

INVESTMENTS IN CHINA

Affco Holdings (New Zealand)/Chengdu Xinhua Jinli Industrial Co., Wu Liang Ye Group (Sichuan)
Opened a joint-venture meat-processing plant in China. (New Zealand:30%-PRC:70%). 5/00.

China Premium Food Corp. (US)
Will acquire Beijing-based Mandarin Fine Foods Co. 5/00.

Sugar Bun Services Corp. Bhd. (Malaysia)
Will open a second fast-food restaurant in Urumqi, Xinjiang Uygur Autonomous Region. 5/00.

Andre & Cie. (Switzerland)
Bought a 10% stake in COFCOTIANDING International Trading Co. Ltd., a joint venture of China National Cereals, Oils, and Foodstuffs Import and Export Corp. and Japanese commodities trader Nichimen Corp., located in Shenzhen, Guangdong Province 3/00.

OTHER

Hangzhou Meilijian Dairy Co., a joint venture of China Premium Food Corp. (US)/NA
Introduced vitamin-enriched, extended shelf-life milk pouches in China. 4/00.

Rocky Mountain (Fuzhou) Drug Co. Ltd., a unit of Rocky Mountain Ginseng, Inc. (Canada), Wal-Mart China Ltd., a unit of Wal-Mart International (US)
Agreed that Wal-Mart will carry Rocky Mountain products in all of its PRC stores. 3/00.

Starbucks Coffee International, a wholly owned subsidiary of Starbucks Coffee Co. (US)/Shanghai President Coffee Co., Ltd.
Signed a licensing agreement to open Starbucks retail stores in Shanghai. 3/00.

Metals, Minerals, and Mining

CHINA'S INVESTMENTS ABROAD

Minerven, a state-owned mining company (Venezuela)/Shandong Gold Group Corp.
Shandong Gold will invest in an idle gold mine in southeastern Venezuela. 3/00.

INVESTMENTS IN CHINA

Pechiney (France)/Southwest Aluminum Fabrication Plant and parent China Aluminum Group Corp.
Will form aluminum production joint venture. 4/00.

Vega-Atlantic Corp. (US)/Yunnan Bureau of Geology and Mineral Resources
Will acquire, via joint venture, majority control in the Luomachang silver mine, located in Ludian County, Yunnan Province. 3/00.

Miscellaneous

INVESTMENTS IN CHINA

Exel (UK)/Chengtong Distribution Group (Shanghai)
Launched a dedicated supply-chain solutions company in Shanghai. 5/00.

Charoen Pokphand Group, Safari World Plc (Thailand)/Shanghai Municipal Government
Formed a joint venture to build a theme park in downtown Shanghai. 4/00.

OTHER

TIC Beijing Digital Pictures Ltd., a wholly owned subsidiary of Tengtu International Corp. (Canada)/Guangdong Southern Natural Museum Co.
Signed a letter of intent to co-produce and market globally a 224-episode animated science program. $14 million. 4/00.

Trilogy International, Inc., a wholly owned subsidiary of AmeriNet Group.com, Inc. (US)
Signed a distribution agreement granting Dr. Fukman Yip the rights to distribute Trilogy's products in China through his offices in Zhongshan, Guangdong Province. 4/00.

Alpha Communications Corp. (Canada)/China International Publishing Group
Will co-develop, -publish, and -distribute English-as-a-Second-Language learning materials in China. 3/00.

Babson College (US)/Bright China Management Institute (Beijing)
Entered into a three-year affiliation through which Babson will provide consulting services and the rights to market its entrepreneurship programs. 3/00.

Headway Corporate Resources, Inc. (US)/Shanghai Foreign Service Co. Ltd.
Signed a letter of intent to represent information-technology specialists from China working in the United States. 3/00.

UBUYTIMESHARE.COM, an E-Pawn.com, Inc. joint venture (US)
Reached an agreement with joint-venture partners Silverhawk Development Co. and Yunnan Tobacco Co. to market vacation ownership units in 65 hotel properties of Yunnan Tobacco. 3/00.

Packaging, Pulp, and Paper

OTHER

Dransfield China Paper Corp. (Hong Kong)

Signed on franchised distributors in 12 cities to distribute its hygienic paper products in Guangdong Province. 3/00.

Petroleum, Natural Gas, and Related Equipment

INVESTMENTS IN CHINA

Cheung Kong Infrastructure Holdings Ltd. (Hong Kong)/Liaoning Petroleum Industrial Co. Ltd., a subsidiary of PetroChina Co.; Shenyang Road Main Hub Group Co. Ltd., a unit of Shenyang Transport Bureau (Liaoning)

Will form a liquefied petroleum gas joint venture. (HK:51%-PRC:49%). 4/00.

China Continental, Inc. (Hong Kong)

Will acquire the outstanding shares in the steel drum manufacturing plant, Jinan Xin Dashan Co. Ltd., Shandong Province. 4/00.

BP Amoco (UK)/PetroChina Co.

Will form joint venture to market natural gas in eastern China. (UK:20%-PRC:80%). 3/00.

Pharmaceuticals

INVESTMENTS IN CHINA

Alta Natural Herbs & Supplements Ltd. (Canada)/Qingdao Haier Pharmaceutical Co., Ltd. (Shandong)

Will cooperate to promote the sale of Alta Natural's "nutraceutical" products in China. 5/00.

J & M Consultants (Hong Kong), Xechem International, Inc. (US)

Will form joint venture Xechem Pharmaceutical China Ltd. in Beijing and Hong Kong. (HK:55%,US:45%). 4/00.

Ports and Shipping

INVESTMENTS IN CHINA

Cosco Pacific Ltd., Hutchison Whampoa Ltd. (Hong Kong)/Shanghai Industrial Holdings Ltd.

Will form joint venture, Shanghai Pudong International Container Terminal Co., in the Waigaoqiao Free Trade Zone in Shanghai. 3/00.

OTHER

Port Said Co. for Container Circulation (Egypt)/NA

Signed a contract to make Port Said a Mideast distribution center for Chinese containers. 5/00.

Power Generation Equipment

CHINA'S IMPORTS

Pirelli Cables and Systems (Italy)

Won contract from China's State Power Corp. to supply optical power ground wire cables for its hydro-power infrastructure project. 3/00.

INVESTMENTS IN CHINA

Meiya Power Co. Ltd. (Hong Kong)/Government of Huangshi City (Hubei), Hubei Huangshi Power Generation Co.

Will establish a joint venture to construct, own, and operate a 700 MW thermal power plant in Hubei Province. (HK:49%-PRC:51%). $400 million. 5/00.

Property Management and Development

INVESTMENTS IN CHINA

Hefei World Trade Centre Co. Ltd., a wholly owned subsidiary of Sateras Resources Bhd. (Malaysia), Wesbo Investment Ltd., a wholly owned subsidiary of Canadian Prosperity Property Development Inc.

Formed joint venture to develop Hefei World Trade Centre in Anhui Province. 4/00.

Telecommunications

CHINA'S IMPORTS

AsiaInfo Holdings, Inc. (US)

Signed a contract with China Mobile Communications to build the first national wireless Internet backbone in China. 4/00.

Oy Nokia AB (Finland)

Signed contract to provide Jilin Mobile Communications Co. with its Wireless Application Protocol (WAP). 4/00.

3Com Corp. (US)

UNICOM will deploy 3Com's CommWorks IP telephony solution within its GSM mobile network. 3/00.

LM Ericsson AB (Sweden)

Will provide Guangdong Mobile Communications Co. Ltd. with network infrastructure equipment, software, and services. $630 million. 3/00.

Lucent Technologies (US)

Won contract to provide CITIC Pacific Ltd. with optical networking equipment. $80 million. 3/00.

Lucent Technologies (US)

Will provide Guangdong Eastern FiberNet Co. with optical networking systems and fiber-cable products. $65 million. 3/00.

Motorola Inc. (US)

Won contract from Shandong Mobile Communications Corp. to deploy its GSM 1800 network in Shandong Province. $14.5 million. 3/00.

Oy Nokia AB (Finland)

Will supply Hainan Mobile Communications with a GSM 900 network expansion and Wireless Application Protocol solution. $30 million. 3/00.

Oy Nokia AB (Finland)

Nokia's Beijing joint venture, Beijing Nokia Mobile Telecommunications, will supply a GSM 1800 network to Chongqing Mobile Telecommunications. 3/00.

Shanghai Bell Alcatel Mobile Communications Co. Ltd., an Alcatel joint venture (France)

Awarded three new contracts for GSM networks extension by UNICOM's Mobile Communication Companies of Shanghai and of Guizhou and Jiangsu provinces. $87 million. 3/00.

INVESTMENTS IN CHINA

HiNet Holdings (Hong Kong)/Guangzhou South China Telecommunication Investment (Guangdong)

Will build an optical fiber network linking Shanghai and Beijing to Guangzhou, Guangdong Province. 5/00.

JDS Uniphase Corp. (Canada)

Acquired Fujian Casix Laser Inc. of Fuzhou, Fujian Province. 5/00.

Motorola Inc. (US)
Will build a facility in Tianjin for the production of semiconductors and telecommunications equipment. $1.9 billion. 5/00.

Nokia Investment Co., a unit of Oy Nokia AB (Finland)/Capitel Corp. (Beijing)
Plan to build an industrial park in Beijing for the manufacture and development of telecommunications equipment. (Finland:50%-PRC:50%). 5/00.

Galaxy OnLine Inc. (US), I-Tec Communications (Canada)/Guangdong Advanced Technology Development Co., Ltd., Pinnacle Technology Ltd. Co. (Fujian)
Will form a joint venture to provide high-speed satellite and traditional Internet service in China. (US:49%-PRC:51%). 3/00.

OTHER

Telpac Industries, Inc. (US)
NetGod Network Technology Co. Ltd., Telpac's Beijing joint venture, received the required business license to begin operations. 4/00.

Yam.com (Taiwan)/Chinese Academy of Sciences
Signed an agreement to exchange Internet content. 4/00.

China Telecom (Hong Kong), Korea Telecom
Signed a pact to expand the Internet backbone capacity between Hong Kong and China and launch international data services for multinational companies. 3/00.

Transportation

INVESTMENTS IN CHINA

Citroën Corp. (France)
Will invest $116 million in its Chinese subsidiary, Dongfeng Citroën Automobile Co. Ltd., to reduce the company's debt and provide investment financing for equipment. 5/00.

General Motors (US)/Shanghai Automotive Industry Corp. (SAIC)
GM and SAIC will each acquire 40% stakes in Wuling Motors Minicar Factory, located in Guangxi Zhuang Autonomous Region. 5/00.

Volvo Truck (Sweden)/China National Heavy Truck Corp.
Will establish a joint-venture truck-production plant in Jinan, Shandong Province. $542 million. 5/00.

Irisbus, a Franco-Italian joint venture (Spain)/Liaoning Huanghai Automobile Group
Will form a joint venture to improve Huanghai's operation and produce an estimated 4,500 vehicles per year. 4/00.

OTHER

Emery Worldwide, a unit of CNF Transportation (US)/China National Electronics Import and Export Corp.
Will expand their Beijing-based freight forwarding joint venture into Shanghai. 5/00.

China Southern Airlines
Launched transpacific cargo operation with Boeing 747 freight service between Shenzhen, Guangdong Province, and Chicago, IL. 4/00.

China Tire Holdings Ltd. (Hong Kong)/Chongqing Tyre Chief Factory
Agreed to terminate joint venture Chongqing C.S.I. Tyre Co. Ltd. 4/00.

NRMA Auto Association (Australia)/Continental Auto Association (Beijing)
Established joint venture Enbao Continental Auto Club in China. 4/00.

Shanghai General Motors, a joint venture of General Motors Corp. (US) and Shanghai Automotive Co. Ltd., a subsidiary of Shanghai Automotive Industry Corp.
Will cut sticker prices for its Buick models by $2,416. 4/00.

Shanghai General Motors, a joint venture of General Motors Corp. (US) and Shanghai Automotive Co. Ltd.
Will introduce a new sporty, high-performance Buick sedan. 4/00.

Shanghai Automotive Co. Ltd.
Increased its stake in Shanghai General Motors from 19% to 20% by paying $8.58 million to its parent, Shanghai Automotive Industry Corp. 4/00.

Aubryn International Inc. (US)/Shanghai Baolong Co. Ltd.
Signed a letter of intent to franchise Aubryn's Automotive Warranty and Service Program in Shanghai. 3/00.

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