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Solid Wood Products

Annual

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Report Highlights:

Imports of forest products continue to grow rapidly. Growth has been especially strong for softwood logs, hardwood logs and hardwood lumber. Growth is forecast to continue, and China's entry into the WTO will provide greater opportunities for imports of processed products.

Includes PSD changes: Yes

Includes Trade Matrix: No

Annual Report

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Summary

Restrictions on logging have caused domestic timber supplies to fall. This is supporting rapid growth in imports. Production is forecast to stabilize within the next few years, but demand will continue growing, leaving plenty of room for continued import growth. Logs imports grew by 159% in 1999, due largely to a sharp rise in imports of softwood logs from Russia. Lumber imports have also grown, with temperate hardwood lumber gaining by 90% over 1998. Exports of both logs and lumber have fallen, and are forecast to remain low for the foreseeable future. In contrast, plywood imports have fallen sharply, while exports have grown, however high quality plywood remains in short supply. Although official statistics imply declining consumption, industry sources believe that consumption estimates are seriously understated, and that demand is actually growing. Smuggling continues to play a significant, but unquantifiable, role.

Reduced timber supplies are a direct result of China's ban on logging in certain parts of China's interior, particularly along the upper Yangtze and Yellow rivers. The ban was recently expanded to include the remaining primeval forests in Northeast China, and is expected to continue growing. Enforcement of the ban appears to be improving, as indicated by the drop in production and growing demand for imports. The logging ban is part of an ambitious plan to increase China's forest cover. Increased funding appears to have given this campaign greater momentum than in 1998. Subsidies to logging companies that plant trees have been increased, and the government is now pursuing a plan to provide subsidies to farmers for converting farmland into forest in environmentally sensitive areas. Increased interest in sustainable forestry by foreign customers has resulted in some efforts to establish a sustainable forestry program in China, though it is still in its infancy. Finding employment for loggers thrown out of work by the logging restrictions remains a problem, though employment opportunities in reforestation, further processing and trade have grown during the past year.

Demand is likely to grow in the future, driven by rising incomes and housing reform. Though the government has recently backed away from a rapid end to subsidized rents for government and state enterprise employees, privatization of housing is continuing at a brisk pace. The rising number of new homeowners has stimulated demand for high-quality wood products for interior decoration, such as furniture, paneling and flooring. The government is also pursuing a massive housing construction program designed to improve the quality of Chinese housing. This should also contribute to demand for wood products for interior finishing (housing in China is typically sold unfinished). Domestic tastes in furniture appear to be moving away from traditional hardwood furniture toward western-style upholstered furniture. Though this trend favors imports, competition from foreign-invested manufacturers based in China is growing. Interest in wood-frame construction continues to grow, but remains restricted to wealthy enclaves in major coastal cities.

Declining timber supplies have made the Chinese government more open to imports, and tariffs on most logs and lumber have been reduced to zero. In addition, new national markets for imported lumber and logs have been established in Beijing and Shanghai. At present, tariffs on some value-added forest products, especially plywood, remain high. This will change once China enters the WTO, as China has made a commitment to reduce tariffs on wood products from an average of 10.6% down to 3.8% by 2004. Foreign companies will also benefit from improved trading and distribution rights under WTO. Competition is increasing however, as Russia has announced a plan to increase forest products exports, and Wood New Zealand has established an office in Shanghai.

Production

Forest Situation/Outlook

According to a survey conducted by the State Forestry Administration (SFA) from 1994 through the end of 1998, China's forests cover 159 million hectares, or 16.5% of total land area. The government aims to double this by 2050. Targets for reforestation were set at a national work conference in February, which included representatives from all provincial forestry departments as well as the SFA. According to the conference, China plans to plant 11.5 million hectares of trees by 2005 (total forest area of 18.2%), expanding to 23 million (19.4%) by 2010 and 46 million (24%) by 2030. SFA estimates forest stock at 11.27 billion cubic meters at the end of 1999. Though this is a significant increase over 1998, the gain is the result of a change in methodology, rather than improved conservation practices. SFA changed the standard for China's coverage density, raising it from 0.3 to 0.2. According to SFA, China has the largest planted forest area in the world at 46.47 million hectares as of the end of 1999. The average standing timber is 78 cubic meters per hectare, with an average of 34.8 for planted forests, but non-government experts consider this number too high. These irregularities point to the fact that official statistics, particularly with respect to forest area, must be taken with a grain of salt. This problem may increase in the future, as local officials are under pressure to increase forest area while at the same time maintaining farm incomes.

Severe dust storms struck northern China, including Beijing, in April this year. These storms were blamed on deforestation, imparting new momentum to the reforestation initiatives announced in 1998. Those initiatives, were originally announced after severe flooding was blamed on deforestation. The initial \$2.3 billion forest conservation project included a ban on logging along the Yangtze and Yellow rivers, which was later extended to China's last primeval forests in Inner Mongolia. In 2000, the area of the logging ban continues to expand, now including 2.5 million hectares in the Great Hinggan Range in Heilongjiang province. China plans to close off another 48 million hectares of forests in the next 12 years, according to the SFA.

The logging ban is part of a larger plan to increase China's forest cover. The plan addresses the problems of different areas by dividing the country into four regions. The first region covers the upper Yangtze and upper and middle Yellow rivers, and will focus on controlling soil erosion. The second region includes over 400 counties in the arid and sandy areas of northwest, north and northeast China. The emphasis in this area will be to halt desertification. The third region covers the natural forests in northeast China and Inner Mongolia, where efforts will center on the conservation of natural forests. The fourth region covers the rest of China, and will focus on the establishment of commercial forest farms. By 2010 SFA plans to add some 23 million hectares of new plantings, especially in remote areas with severe erosion problems.

This year the government will spend \$229.3 million to convert 343,300 hectares of farmland to forest and grassland and 430,000 hectares of wasteland and hills to forest. Over the next 10 years the government plans to invest \$12 billion to increase vegetation coverage along the Yangtze River from 22% to 48%. In the "grain for green" project, the central government has begun subsidizing farmers living in the upper and middle reaches of the Yellow River with 1,500 kg of grain per hectare, and 2,250 kg per hectare to farmers in the upper reaches of the Yangtze, for each hectare converted to woodland. The central government is also supplying an additional \$90 for seedlings and \$38 for living expenses. Seedling distribution is problematic, however, since this remains a government monopoly. The distribution channels are extremely porous, and seedlings frequently fail to arrive at their intended destination. To ensure the effectiveness of its afforestation efforts, particularly in arid regions,

China has launched a technology support program that has budgeted \$26.3 million by 2010 for technology inputs into erosion control. The SFA has selected 187 different technologies for investment, including seedling cultivation, aerial seeding and weather modification, to support afforestation efforts in Western China.

Provincial governments have also made ambitious afforestation plans. Yunnan province plans to turn 74,000 hectares of farmland into forest this year and about 600,000 hectares over the next ten years. Qinghai province will convert 18,000 hectares to forest and grassland this year, growing to 360,000 hectares by 2010. Gansu plans to invest \$200 million to plant trees on 32,000 hectares of barren hills in the next four years, and convert 200,000 hectares of farmland into forest and grassland in the next ten years. The municipality of Chongqing plans to increase forest coverage to 40% over the next ten years, and spend \$1.2 billion on protection for natural forests. Chongqing also plans to convert 183,300 hectares of farmland over the next ten years.

The government has also developed a renewed interest in sustainable forestry. This change has been partly spurred by interest from foreign customers, particularly in Japan, that have voiced greater concern that the wood products they purchase be produced using sustainable forestry practices. Industry sources claim that these efforts are underfunded, and are still in their infancy. China's State Development Bank has plans to increase lending to support both the protection of natural forests and for development of fast-growth, high yield forestry projects.

In 2000, the government plans to cut logging in state-owned forests to 13 million cubic meters, 43% lower than the 1997 total of 23 million cubic meters. With funds now being made available for enforcement at the local level, the logging ban is beginning to have an impact. Many prefectural level forestry enterprises have already been closed down, and the logging ban is gradually taking hold on county level firms as well. The subsidy available for the establishment of ecological forests has been raised from \$90/hectare to \$370/hectare, making reforestation a more financially viable enterprise. These subsidies are provided by the central government to the provincial authorities, who distribute the funds to large forest plantations. As a result, more ex-loggers are being employed in reforestation projects than in 1998, when funding was less widely available. Other loggers have found work cutting trees in Russia to export to China, or in the timber import business. The Heihe Forest Timber Processing Factory has established a timber wholesale market to service the trade in Russian logs, and is now the largest Sino-Russian border timber market. Other provincial level forestry bureaus are attempting to provide jobs by establishing their own wood processing firms to produce plywood, blackboards, chopsticks, flooring, furniture and other value-added products. The scale of these enterprises is small, however, leading to substantial waste. One area in which China is supporting large scale development of further processed forest products is in the paper industry. According to the State Light Industry Bureau, China will integrate its forestry strategy with efforts to develop a clean paper industry based on wood pulp. To this end, the SFA has concentrated its efforts to plant fast-growing species in South China, to support the paper industry there. Plantations in this area have received World Bank loans totaling \$320 million. A number of paper companies in China have already invested in their own commercial forests.

Production statistics confirm that the logging ban is having an impact, however illegal cutting by individuals is more difficult to control. Some sources estimate that such informal cutting may account for as much as half of all the trees taken. The continued success of the logging ban will depend on continued government funding. SFA hopes that some of the shortfall from reduced logging can be made up from the 15% of China's 46 million hectares of planted forests that will reach maturity over the next five years. Many officials now acknowledge, however, that the decline in logging will bring about an increase in imports, and some government agencies are encouraging log imports.

In addition to government initiatives, many forestry projects have been established by the private sector. Guangdong province has signed 113 foreign-funded forestry projects worth a total of \$1 billion. Those projects include afforestation, paper production, orchard growth, timber processing and related research and development projects. Overseas investors have become increasingly attracted to forestry projects in southern China, while the central government is encouraging foreign investors to do the same in western China. The State Development and Planning Commission and the State Economic and Trade Commission have jointly created a new directory of industrial projects in the west, the majority of which are agricultural and forestry businesses. Foreign-funded forestry projects, if they meet the government's criteria, can receive a 15% tax deduction from their income taxes, in addition to the preferential tax treatment now given to foreign funded ventures during the initial three years of operation.

China will soon unveil new investment and management regulations encouraging foreign investment in forestry, according to the State Forestry Bureau. These regulations will set rules for foreign investment in forestry, including qualification requirements, operating procedures and tax and fee requirements. The regulations will allow foreign forestry enterprises and individuals to use land for up to 50 years. In addition, foreign invested firms will be able to apply for subsidized loans for forestry projects.

China has accepted a number of loans and grants for reforestation and plantation forestry projects. In the past 15 years, China has implemented five World Bank financed projects, with loans of about \$840 million. China also receives loans and grants from other international organizations and countries. As noted above, the World Bank has funded the planting of fast-growing species in South China since the early 1980's, primarily to support the paper industry.

Forest Products Strategic Indicator Table

FOREST AREA			
Country:	1999	2000	2001
Report Year:			
Total Land Area (million hectares)	960	960	960
Total Forest Area (million hectares)	159	162	164
--of which, Commercial ('000 hectares)	92185	96960	98640
----of commercial, tropical hardwood ('000 hectares)	4333	4557	4636
----of commercial, temperate hardwood ('000 hectares)	38994	41014	41725
----of commercial, softwood ('000 hectares)	48858	51198	52279
Forest Type			
--of which, virgin ('000 hectares)	14069	14140	14211
--of which, plantation ('000 hectares)	44022	46072	48924
--of which, other commercial (regrowth) ('000 hectares)	14230	15083	15837
Total Volume of Standing Timber (thousand cubic meters)	12490000	12598000	12706000
--of which, Commercial Timber ('000 cum)	9143392	9643393	10143391
Annual Timber Removal ('000 cum) 1/	370752	400383	432413
Annual Timber Growth Rate ('000 cum)	457525	480401	504421

Annual Allowable Cut ('000 cum)	283958	255562	230006
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Solid Wood Products Situation/Outlook

Differing estimates from official and industry sources make it extremely difficult to calculate production and consumption. Post estimates of consumption are based on official statistics, which imply that reduced supplies due to the logging ban have driven down consumption. Large scale smuggling and illegal logging, however, could alter the picture significantly. Some industry sources believe that consumption may be as much as twice as high as official estimates. Production of all types of timber will total 43.1 million cubic meters in 2000, according to government forecasts. Official demand is expected to remain at 65-70 million cubic meters, leaving a substantial gap that will be met through imports and the drawdown of domestic stocks. Timber production fell by 13.8% during the first four months of this year compared to the same period last year, to a total of 9.83 million cubic meters, according to the National Statistical Bureau (NSB).

Preliminary customs data for 2000 indicates that roundwood imports are continuing to climb due to a surge in imports of softwood logs from Russia, which now constitute 57.7% of total roundwood imports. As a result, timber imports are forecast to increase by 35% in 2000, followed by an increase of 21% in 2001. Long-term import growth is likely to continue at lower rates as domestic production begins to stabilize. During 1999, imports of roundwood increased by 159% to 6.96 million cubic meters. Tropical hardwood logs dropped to 28% of imports in 1999, compared to nearly 41% in 1998, due to more rapid growth in temperate hardwood and softwood imports. Imports of temperate hardwood logs jumped by roughly 300%, compared with 79% growth for tropical hardwood logs. Part of the increase in hardwood imports may reflect the effects of the crackdown on smuggling, since the practice of relabeling hardwood as less-expensive softwood is reportedly on the decline. Lumber imports have also increased, albeit at mere double-digit rates. Import estimates may be understated, as numerous sources report large-scale smuggling of logs from Myanmar. Imports are supported by a government policy that provides a full rebate on the VAT for wood that is imported to manufacture goods for export.

Anticipating further market growth, a large number of foreign companies have come to China. In the first four months of 2000 alone, 49 new companies began importing timber. Imports have been further encouraged by the establishment of the Beijing National Timber Exchange Center, which has actively courted participation by foreign companies. A similar market was established in Shanghai when the well-known Shanghai Furen Forest Products Wholesale Market added an import market. For further information on these markets, see reports CH0006 (Beijing) and CH9827 (Shanghai). The China International Timber and Timber Products Exhibition, held in June, was the first timber products show to be held in China. Sponsored by the China Association of Timber Manufacturers, the exhibition and conference signals a growing interest in imported products.

Imports of timber and logs are forecast to continue growing through 2003. In order to minimize dependence on imported wood products, however, China is working to develop substitutes, particularly fiberboard manufactured from bamboo or sugarcane. According to SFA, bamboo acreage has grown by 50,000 hectares annually over the past 20 years, to a current total of 4.2 million hectares. Bamboo products are popular in a wide range of applications in addition to fiberboard, with annual exports amounting to \$500 million.

Wood Products Subsidies Strategic Indicator Table

WOOD PRODUCTS SUBSIDIES			
Country:	1999	2000	2001
Year of Report			
Total Solid Wood Export Subsidy Outlay (\$US million)	N/A	N/A	N/A
Is there a ban on the export of logs, lumber, or veneer? 1/	Partial*	Partial*	N/A
Export taxes (yes/no)? 2/	No	No	No
Total Wood Production Subsidy (\$US million)	N/A	N/A	N/A
Scope (thousands of hectares)			
Other wood products with export expansion activities? 1/	No	No	No
*Sichuan province has banned the export of logs. The Chinese government has also identified certain species of wood for which logging and exports have been prohibited or limited. In Northeast China this includes oak, poplar, walnut and ash.			

Construction Sector

Overview

China plans to start work on 380 million square meters of new housing projects in 2000, according to the Ministry of Construction (MOC), an ambitious target that also aims to expand apartment size. This is likely to compound the problem of oversupply at the high end of the market, however. While the majority of the planned new construction is low-cost housing, a significant proportion has been set aside for high-end residential units. The Chinese government plans to increase average living space from 9.6 square meters per person in 1999 to 12-14 square meters in 2000, and 15-18 square meters by 2010. This will require rapid growth in the housing industry over the next decade, with annual growth targets set at 15%. By 2005, the Chinese government plans to build an additional 1.5 billion square meters of housing in urban areas, 3.5 billion square meters in rural areas, and to renovate another 2.9 billion square meters of decrepit housing. Housing construction in rural areas is likely to have a disproportionate impact on demand for timber. Rural houses are typically constructed of brick with wood and tile roofing, while most urban buildings are flat-roofed concrete or concrete and brick structures.

Improved economic performance in early 2000 has led to increased construction. For the first five months of the year, housing under construction grew by 78% to 364 million square meters and new housing starts climbed 33.8% to 89 million square meters. (Note: housing starts are traditionally low in the first three months of the year, due to cold weather and the long Spring Festival holiday). By comparison, new housing starts in 1999 amounted to 216 million square meters, a 6.1% increase over 1998. The growth rate slowed during 1999 as the Chinese government made a deliberate effort to limit construction of additional office space, due to overcapacity in that area. According to the Ministry of Construction, more than 5,000 overseas real estate enterprises, or 20% of the country's total, have entered the real estate market. More than 4 billion renminbi in overseas investment pours into the development of real estate in China every year. Overseas real estate developers enjoy a number of preferential policies that include exemption from investment regulatory taxes and the freedom to remit their gains abroad after paying relevant taxes. Most of the overseas investment has been

channeled into construction of residential housing. Industry sources expect that the focus of real estate investment will shift from large coastal cities to smaller cities further inland.

In addition to construction of new housing, China is also attempting to reform its housing policies, however these efforts are encountering difficulty. One key component of these reforms is privatization. Since mid-1998, work units have been forbidden to build or purchase more housing, while rents for those already in state-owned housing are to be slowly increased to market levels. This policy has since been modified, with the new regulations changed to 'guidance' for provincial and local governments. Nonetheless, privatization is proceeding: according to the State Statistical Bureau, 55.7 percent of urban residents now own their own housing, of whom 86.9 percent purchased the housing from the government. On average, the value of the homes are equivalent to one and a half years' income. A second component of reform is an increase in rents for government and workplace distributed housing. This component has encountered stiff opposition. Despite a 100% increase in April, rents on government and workplace-distributed housing remain nominal, far below market rates. Rent hikes fall hardest on retirees and laid-off workers, whose ranks have expanded under pressure from state-owned enterprise reform.

The development of housing markets in China is being thwarted by a number of structural deficiencies, key being the lack of secondary housing markets. This, in turn, is the result of inconsistent quality, a lack of market information, confusion over property rights, and a regulatory climate that is unfavorable to the resale of housing. This lack of resale markets, combined with the privatization of work-unit housing caused commercial housing prices to fall nearly 10 percent in 1999. The growth rate for housing construction has fallen to 9.1 percent, and new investment in offices fell by 22.5 percent in 1999. Prices are expected to fall again in 2000. The drop in prices has made the sale of newly constructed housing and offices more difficult, particularly at the already-overbuilt high end of the market. Current statistics show that vacant housing totaled 91.24 million square meters at the end of 1999, including 67.87 million square meters of residential space (up 22.5 percent), 8.95 million square meters of office towers (up 13.7 percent), and 14.42 million square meters of other commercial space (up 25.7 percent).

Policy

China's housing reform policy is in a state of flux, with different groups supporting one of two different models: a rapid marketization approach, and a more gradual model. In 1998, the government attempted to implement the fast approach, which would end the direct distribution of housing, and sell the housing at market prices while providing a limited subsidy to those who wished to purchase their current housing. New employees would receive no subsidy and purchase housing at market prices, with salaries raised to compensate for the difference. This plan has enjoyed the support of renters and would-be home-owners, as well as the Ministry of Finance. Strong opposition from other ministries, state-owned enterprises and provincial governments, however, has shifted the balance in favor of the go-slow approach. Under this approach, only housing on which construction started prior to January 1, 2000, can be sold at subsidized prices (\$180/square meter). This date has since been pushed back to July 1, with a slightly higher price (\$200/square meter) for housing constructed between January 1 and July 1. Industry sources believe that this date will be pushed back to 2001, with yet another small price increase. This approach brings problems of its own, since it does not set a final date for an end to subsidies, and continues to perpetuate a distorted price structure.

The impact of subsidies is immense. A typical 50 square meter apartment now costs \$25,000 - \$50,000 in Beijing, \$18,000 - \$48,000 in Shanghai, and \$18,000 - \$30,000 in Guangzhou, depending on location. The

government allows large reductions for employees who purchase their apartments from state-owned enterprises, and basic prices are set according to the area of the city. For instance, to buy an apartment on Beijing's Fourth Ring Road (about 25 km from downtown), the state-set basic price is \$180 per square meter, compared with a market price of \$500. Discounts of 0.9% per year of service to the government or state-owned enterprise allow a maximum reduction of 80% off of the basic price. The discount is doubled when both husband and wife work for the government or a state-owned enterprise. Thus, a person with 15 years of government service living in a 50 square-meter apartment inside the fourth ring road, would pay \$7,785, instead of the market value of \$25,000.

Finance

Housing reform has faced a number of structural problems, particularly with respect to financing. In 1998 and 1999, new regulations expanded the low-cost housing initiative by permitting all authorized banks in all cities to offer mortgages, then expanding the types of mortgages available. Mortgage lending had previously been restricted to the three major state-owned banks in a small number of cities. By the end of 1999, the balance of loans granted by state-owned banks for real estate purposes reached \$42.9 billion, up by 43.6% over 1998. These loans included \$26.2 billion for real estate development (up by \$4 billion), and \$15.1 billion for home purchases (up by \$9 billion). New loans to individuals in 1999 totaled \$9 billion, posting a growth rate of 150% and accounting for 35% of all real estate loans. In late 1999, banks further loosened loan restrictions, and mortgage terms are now approaching developed-nation levels. Borrowers may now borrow up to 70% of the value of the house, with a maximum term of 30 years. Commercial banks have cut interest rates seven times in recent years, and current rates for loans are 4.14% for five years or less, and 4.59% for six years or more.

Despite the progress in primary mortgage markets, many buyers find it difficult to impossible to get loans on the terms noted above. Part of the problem is related to the lack of a secondary housing market. Although restrictions on the resale of public or economy housing were recently lifted, information remains scarce and the market remains underdeveloped. A key obstacle to further progress is the overall low quality of housing construction, and a lack of standards to judge quality. Western construction experts estimate the useful life of typical Chinese poured-concrete construction at 15 years. After that, the property becomes more valuable for its redevelopment potential. By contrast, in the U.S., properly maintained homes can have a useful life of 50-75 years. The short life-span of Chinese housing places an outside limit on bank lending, since the property loses its collateral value after 15 years; and undercuts the resale value of housing. With 75% of urban housing likely to be replaced over the next 10 years, China has a unique opportunity to improve the quality of housing, providing it can create the market incentives to do so.

In May, 2000, the Chinese Minister of Construction, Yu Zhengsheng, and U.S. Secretary for Housing and Urban Development, Andrew Cuomo, signed an agreement for a housing finance pilot project. This project may represent the first step in developing a secondary mortgage market. The pilot project will investigate the potential and mechanics of mortgage-backed securitization in China. A bi-national steering committee will carry out a detailed study to lay the groundwork for the pilot project, which is scheduled to begin at the end of the year. As a first step toward securitization, China in April authorized the Construction Bank of China to issue mortgage-backed securities in Shanghai. If successful, securitization would increase banks' liquidity, allowing them to extend more loans with longer terms.

Supporters of the initiative contend that it will also improve the quality of housing construction. They point out that whatever entity is responsible for pooling mortgages for securitization will also be able to issue guidelines

for mortgages. These guidelines could include such things as the useful life of the building as determined by official appraisal, and underlying collateral value. Creating such standards would resolve much of the uncertainty that has stifled the development of resale markets. It would also provide market incentives for constructing higher quality, more durable housing by creating resale value for the mortgages on high-quality housing. Detractors contend that, while the development of secondary markets is important, such efforts are premature, as the market for primary mortgages is still in its infancy.

Trade

Current regulations for government and workplace subsidized housing require that building materials be provided by domestic enterprises. Under WTO however, China's regulations will change, providing more opportunities for imported construction materials. Ahead of the WTO deadline, the municipality of Beijing in July announced changes along these lines, which will allow competitive bids by foreign firms for major construction projects. Growing demand will create even more opportunities, though competition is also expected to intensify. Under these conditions, price is likely to remain the primary determinant. Wood frame housing has gained a foothold in Shanghai, but has been slow to develop in other parts of China. Among the most important obstacles are local construction codes that do not recognize wood-frame construction, let alone set standards for it. Existing standards also work against the use of wood doors and window frames, favoring aluminum and vinyl. The American Forest and Paper Association (AFPA) is actively addressing these issues by conducting seminars on a wide range of topics such as proper construction techniques and fire safety for wood frame housing. They are also working with the Chinese government to revise building codes to recognize wood as an effective construction material. AFPA is rapidly expanding its activities in China, having recently opened an office in Shanghai in addition to its existing offices in Beijing. Strong attendance at AFPA's seminars indicates that interest in wood frame construction is strong. Plywood for concrete forming is also a promising market for imports. Use of domestic wood in concrete forming was banned in the 1980's in order to conserve forest resources. Though current import barriers for plywood are high, China's entry into WTO will help to reduce these barriers. Interest from Chinese concrete forming contractors is high, as indicated by a recent industry delegation to the U.S.

Construction Sector Strategic Indicators Table

CONSTRUCTION MARKET			
Country:	1999	2000	2001
Report Year:			
Total Housing Starts (thousand units)	8942	9389	10324
--of which, wood frame (thousand units)	89	93	99
--of which, steel, masonry, other materials (thousand units)	8853	9296	10225
--of total starts, residential (thousand units)	4471	5634	6479
----of residential, single family (thousand units)	447	563	645
----of residential, multi-family (thousand units)	4024	5070	5834
--of total starts, commercial (thousand units)	4471	3756	3845
Total Value of Commercial Construction Market (\$million)	48455	53250	58250
Total Value of Repair and Remodeling Market (\$ million)	N/a	n/a	n/a

Furniture and Interiors Sector**Overview**

One byproduct of China's housing reform is likely to be rapid growth in demand for furniture and interior wood products such as cabinets, flooring, wall units, paneling and molding. A recent study of new homeowners in China indicates that this growing population can be expected to make a much larger investment in interior decoration than they did while living in government or workplace distributed housing. Recent expansion and upgrades to office space have also increased demand for building decoration. According to forecasts by the China Furniture Association, the market for furniture and interior wood combined will be worth over \$20 billion in 2000. The China Building Decoration Association estimates that China will use over 10 million cubic meters for interior decoration, at a forecast value of \$1.8 billion in 2000, while the total value of the interior decoration market will reach \$28.5 billion. Industry sources also show rapid growth in artificial board manufacturing. Current production capacity is 7 million cubic meters, of which fiberboard constitutes 2.33 million cubic meters, and flakeboard another 2.34 million cubic meters. The government plans to increase artificial board production to between 15 and 18 million cubic meters by 2010. Board for outdoor or specialized use is in short supply, while low-quality hard fiberboard supplies are reported to exceed demand.

The furniture market is expected to expand by 10% per year over the next few years. At the end of 1999, China had officially registered more than 35,000 furniture manufacturers, producing furniture valued at over \$12 billion. Demand is high for replacement furniture and interior remodeling for hotels, offices and homes. The average replacement period for furniture has been reduced from over 10 years to between 4 and 8 years. Anecdotal evidence indicates that traditional solid wood furniture is falling out of favor, while western-style upholstered furniture is gaining in popularity. Despite the increase in overall demand, many domestic manufacturers of low quality furniture and inferior copies of existing designs are having difficulty selling their products, as consumers are now demanding higher quality and contemporary designs. Foreign companies and joint-ventures have taken advantage of the gap by providing more contemporary style furniture. Taiwanese

companies have established over 300 factories in China, and manufacturers from Hong Kong, Singapore, Malaysia, South Korea, Japan, the U.S. and Italy have all established plants in China. According to CFA, furniture exports, primarily solid wood furniture, are forecast to grow by 14% annually over the next 10 years, while imports grow at 18% annually. The government supports exports of furniture by providing a rebate on the VAT for exported products, and on wood imported to manufacture goods that are then re-exported.

Laminated wood flooring has become an important part of the interior decoration industry. According to industry press, costs have been reduced to a level where the cheapest laminated flooring undercuts hardwood flooring. Prices for laminated flooring have fallen by 10-25% over the past year, and now stand at between \$8.4 and \$18/square meter. Though demand for the low-end laminated flooring is weak, flooring in the price range of \$12 - \$15.7/square meter is proving quite popular. Sales for 2000 are forecast at 100 million square meters, at a total value of \$1.8 billion. Since 1994, 40 production lines have been established in China, including 30 imported from Europe. Annual production capacity is over 30 million square meters. The Chinese government is encouraging the development of this industry, since laminated wood flooring can utilize smaller pieces of wood and wood from fast-growing tree species.

Trade

During the early 1990's, furniture importers faced little competition. The rapid growth in foreign-funded joint venture (JV) furniture manufacturers has changed this situation. Many JV manufacturers are capable of producing furniture of similar quality to imports at lower prices. Exporters to China also face a disadvantage in that most choose to rely on local or Hong Kong agents for distribution, rather than establishing representative offices in China. As a result, contact with end users is often weak. One example of the kind of problems faced by exporters is the question of the size of the furniture. The average size of a two-bedroom apartment in China is 50 square meters—too small to house European and American style furniture. According to a study conducted in Beijing by the CFA, more than 53% of consumers preferred joint venture manufactured furniture for practical reasons, compared to 3.5% for imported furniture. Domestic manufacturers are becoming more competitive as well, though industry sources indicate that only 10 companies are currently capable of manufacturing furniture comparable with the quality of imports.

Despite the growing competition, prospects for exports of furniture to China remain good. According to industry press, over 300,000 rooms in luxury hotels will need remodeling or replacement furniture in the near future. The market value of this furniture is estimated at \$120 million. In addition, the current surplus of high-end office space has caused rents to drop, in turn leading to a reshuffle as companies seek to take advantage of lower rents. Each office move triggers an upgrade in furniture, and new office space is frequently laid out in a style more typical of American buildings, which lends itself to the use of modular furniture. This situation is expected to continue for the next year or two, creating good export opportunities for manufacturers of modular furniture. CFA forecasts import growth of 20% for modular furniture in 2000.

China currently suffers from overcapacity in low-tech domestic plywood manufacturing, but a shortage of high quality plywood and decorating board. Domestic plywood manufacturers are running at 60% of capacity, and imports have fallen by 41%, down to 70,500 cubic meters during 1999, and another 25% in the first four months of 2000. Industry sources attribute the shift to rising international prices and increases in domestic production capacity. Meanwhile, the price of decorating board has increased sharply since March, and high quality plywood is reported in short supply. Interest is also growing in imported plywood for concrete forming, due to its higher durability. China currently protects plywood with tariffs and VAT totaling 32% (the current

tariff is 15%), but under WTO tariffs are scheduled to fall.

China's rising income levels and growing appreciation for high quality products should continue to stimulate demand for luxury wood products. As consumers become more discerning, the variety of species imported is expected to grow. In 1999, imports of high quality hardwood jumped by 150% over 1998. Anecdotal evidence indicates that this trend is continuing: China Customs reports that imports of high quality beech logs through Shenzhen jumped by 172% in the first four months of 2000. Beech continues to be heavily favored by Chinese manufacturers. Long-term growth is expected to be more modest, with the government forecasting growth rates at an average of 10% over the next 10 years.

Furniture and Interiors Sector Strategic Indicators Table

FURNITURE & INTERIORS MARKET			
Country:	1999	2000	2001
Report Year:			
Residential Housing Starts (number of units)	4,471,131	5,633,625	6479500
Total Number of Households	352,884,615	362,884,615	370884615
Furniture Production (\$US million)	11955	13,285	14,555
Total Furniture Imports (\$US million)	1,08	130	156
Total Furniture Exports (\$US million)	2,712	2,932	3,212
Interiors Market Size (\$US million)	24655	28455	32255

Materials Handling Sector

The most recent year for which statistics on wood packing material have been published is 1997. At that time, 0.8 million cubic meters of wood was used for packing material, primarily for domestic use, an increase over 0.1 million cubic meters over 1996. Growth in the use of wood for packing material is likely to be limited due to a variety of factors. Increasing prices in the wake of the logging ban have made alternative materials more practical. The switch to alternative materials has been given further momentum by the restrictions imposed by various countries on the use of solid wood packing material in exports from China. In June, 1999, the European Union announced restrictions similar to those already used by the U.S. and Canada to prevent the spread of Asian Longhorn Beetle and other wood-boring pests. A general lack of up-to-date statistics on the materials handling sector makes it impossible to calculate the impact of the bans on wood consumption, or the degree to which shippers have changed to other materials. Anecdotal evidence indicates that companies are making increased use of cardboard, honeycomb paper and recycled plastic pallets. The changes appear to be taking place slowly, however, and wood is likely to remain the dominant packing material for domestic use in the near future.

In December, 1999, China announced restrictions on the use of solid wood packing material in shipments from the United States and Japan. The restrictions were implemented to prevent the spread of pinewood nematode from those countries. Exports to China from the U.S. and Japan must either certify that there is no coniferous wood packing material present in the shipment, or provide a certificate describing the packing materials and indicating that the packing material has been properly treated. The currently approved treatment consists of

heating wood packing materials to a minimum core temperature of 56 degrees Celsius for 30 minutes. For further information on the certification requirements, contact USDA's Animal and Plant Health Inspection Service.

Materials Handling Sector Strategic Indicators Table

MATERIAL HANDLING MARKET			
Country:	1999	2000	2001
Report Year:			
Total Value of Industrial Output (\$US million)	455	465	470
New Pallet Production (million units)	N/A	N/A	N/A

Trade

Overview

Imports of logs grew by 159% in volume during 1999, rising from 2.68 million cubic meters in 1998 to 6.96 million in 1999. Preliminary customs data through May of 2000 indicates continued growth at a rate of 48%. Imports are forecast to continue growing at a somewhat slower rate in coming years as domestic production stabilizes, but demand continues to grow. The increase in imports during 1999 and 2000 is due primarily to falling domestic supplies, though a reduction in tariffs during 1998 and falling international prices have also contributed. Imports of softwood logs from Russia dominate roundwood imports, having increased by over 260% in 1999 and continuing to grow during the first half of 2000. Softwood logs from Russia now constitute 57% of all roundwood imports. The actual number may be even higher, as some of the trade is reputed to go unregistered. Official imports of tropical hardwood logs grew by 79% in 1999, with the largest exporter being Gabon (38% market share), followed by Malaysia and Equatorial Guinea. Official statistics indicate that Myanmar has a market share of only 2%, and Cambodia's share was less than 1%. These low numbers for Myanmar and Cambodia indicate that much of the trade is unregistered, as these countries are known to be a major source of logs for China.

The fastest growth for log imports has been registered by temperate hardwood logs, which increased by 301% in 1999. Total imports for temperate hardwood logs remain much smaller than for tropical hardwoods. Log exports dropped again in 1999, posting a 13% decline on an already small base. Exports amounted to only 14 thousand cubic meters in 1999, and are forecast to remain at low levels for the foreseeable future. Lumber exports increased slightly as a 28% rise in temperate hardwood lumber exports offset a decline in exports of both softwood and tropical hardwood lumber. Chinese officials expect that forest preservation efforts will lead to a ban on log exports within the next 2-3 years. Softwood logs are imported primarily for use in construction, plywood manufacturing, materials handling and molding, though use in flooring is growing. Hardwoods are used primarily for manufacturing furniture, flooring and interior decoration, with some use, particularly of tropical hardwood, for decorative plywood.

Overall lumber imports grew by 62% in 1999, with the fastest growth again being temperate hardwood lumber, at 90% growth over 1998. Part of this increase may be due to a reduction in the practice of relabeling hardwoods as softwood in order to evade tariffs and taxes. Import growth is forecast to continue at high rates,

though growth is likely to moderate as domestic production stabilizes. Temperate hardwoods continue to dominate lumber imports, holding a 73% share. Softwood lumber imports fell slightly during 1999, with only marginal growth forecast for the near future. This may be due to massive imports of softwood logs into Northeast China for processing, as well as the relabeling issue mentioned above.

In contrast to logs and lumber, plywood imports dropped by 41% in 1999, down to 705,000 cubic meters. The pattern has continued during 2000, with customs data through May showing a 20.6% drop in imports. Within this, softwood plywood imports fell by 43% and tropical hardwood plywood by 48%. Temperate hardwood plywood imports actually increased by 147%, but this growth took place on a much smaller base and had no significant impact on overall plywood imports. Plywood exports increased by 120% from 86,000 cubic meters to 189,000 cubic meters. Trade sources attribute the change to growth in domestic production capacity and to increases in international prices. The government also provides a partial rebate on the VAT for exports of domestically manufactured plywood.

Outlook

The outlook for imports of forest products from the U.S. remains strong. For roundwood, China Customs data indicate that overall volume fell by 27%, due to a decline in imports of softwood logs. This decline was more than sufficient to offset rapid growth in imports of hardwood logs. Preliminary U.S. Customs data for the first five months of 2000 indicate that imports of U.S. logs and chips are recovering, posting a 21.7% increase. The decline in log imports during 1999 was more than offset by a sharp increase in imports of hardwood lumber, which reached a record \$29.9 million in 1999. U.S. Customs data through May indicate that hardwood lumber imports are on schedule to set a new record in 2000, with over \$23.7 million in sales so far. Imports of U.S. panel products, including plywood, also hit record levels, growing by 56% in value in 1999, and with another 10% growth likely in 2000. The rapid growth in hardwood lumber and panel products is indicative of the demand for high-quality wood products for interior decoration. This is likely to remain the best market prospect for U.S. wood products in the near future.

China's entry into WTO will increase the opportunities for U.S. exporters. China has agreed to reduce tariffs on wood and wood products from a current average of 10.6% down to 3.8%, phased in gradually through January 1, 2004. The benefit will accrue primarily to exporters of value-added products, since tariffs on most logs and lumber are already 0%. U.S. companies will also benefit from the agreement on trading rights and distribution. At present, only a handful of officially approved companies are allowed to import and distribute wood products. Under WTO, this will change, with a larger number of distributors approved each year over a three-year period, at the end of which all entities will be permitted to import and export. The current approved importers are likely to remain major players in this market, as smaller manufacturers will require more time to establish direct contacts with foreign suppliers. The American Forest and Paper Association's expanded activities in China should help to speed this process, by keeping the U.S. industry in close contact with end users.

U.S. Customs data indicate that the value of U.S. imports of forest products from China has increased. The total value of imports increased by nearly 30%, and preliminary data for 2000 imply a further increase of 25%. As in previous years, the vast majority of imports fall into the category of 'other value-added wood products.' Anecdotal evidence indicates that this is composed largely of wooden picture frames, figurines and other small items. U.S. imports of both hardwood lumber and panel products increased in 1999, just as U.S. exports of these products to China also increased. No specific information on the nature of these exports is available at present. It is likely that the lumber imports comprise tropical hardwoods unavailable in the U.S., which were

may have been imported as logs from Southeast Asia then re-exported as lumber to the U.S.

Competition

In January, 1999, China abolished import tariffs on solid wood products. The primary beneficiary has been Russia, which has expanded its exports of softwood logs by 268% to a total of 3.95 million cubic meters. Russian softwood logs now account of 88% of all softwood log imports. Other major beneficiaries of increased trade in softwood logs have been New Zealand (82% increase), Malaysia, Myanmar, Mongolia and Indonesia. The primary losers have been the U.S. (down by 45%) and Australia and Canada. Russia's primary advantage is close proximity to the lumber mills of China's Northeast. In some cases, Chinese logging companies that are no longer allowed to cut in China are purchasing logging rights to virgin forest in Russia, sending loggers to cut the trees, then shipping them back to China for processing. (Similar arrangements are reported in Myanmar). Industry sources indicate that the agreement between Russia and China requires the Chinese logging companies to plant new trees in areas that are logged. In early 2000, Russia announced a plan to increase timber exports that includes a reduction in export tariffs. Russian logs also benefit from a policy that provides preferential treatment to border trade by reducing the VAT by 50%. Such preferential treatment is not WTO compliant, however, and will likely change once China joins the WTO. Some sources indicate significant problems with border trade due to differing rail sizes in the two countries that require logs to be reloaded at the border.

Wood New Zealand recently established an office in Shanghai with two full-time staff to explore the market potential of Eastern China. This is Wood New Zealand's first overseas office, and will promote the use of New Zealand timber in construction. In March, Quebec and British Columbia, Canada, established a joint office in Shanghai to promote the use of Canadian hardwoods and value-added wood products. The Malaysian Timber Council also has an office in Shanghai, established in 1999. More recently, it is rumored that the Nordic Timber Council is planning to become more active in China. Though Russia has the largest share in the Chinese market, its presence is limited to individual companies. Canada and the Nordic Timber Council have both expressed interest in working to revise building codes, similar to AFPA's existing activities.

For hardwood logs and lumber U.S. exports have increased by 62%, imports from Europe, particularly Germany, have risen even more quickly. These imports consist primarily of beech logs. Beech is currently fashionable among Chinese buyers, who are less familiar with other species. Many Chinese buyers consider European beech to be of higher quality, and are willing to pay higher prices for it. European trade rules, which lock prices in for a six month period, have also provided an advantage, as many Chinese buyers are concerned by the risks presented by changing prices. The American Forest and Paper Association and the American Hardwood Export Council conduct regular seminars in China to educate end-users in the wide variety and high quality of hardwood species available from the U.S.

Smuggling

Beginning in 1998, the government began a major anti-smuggling campaign which has seen considerable success and has maintained its momentum. The effect on timber smuggling, however, has been mixed. Smuggling of logs and lumber traditionally falls into two categories in China: smuggling of lumber through sea shipments, and overland smuggling of logs from bordering countries. Smuggling via sea traditionally takes the form of relabeling high-value products, such as hardwood lumber, as low-value softwoods, or simply understating the value or volume of the cargo to avoid paying duties and VAT. Buyers in South China indicate that the campaign against this type of smuggling has been remarkably successful. Though some of the activity

has shifted from well-known smuggling havens to smaller ports, the overall level is reported to be smaller than in the past.

Overland smuggling is a different matter. Large numbers of logs are reported moving across the poorly regulated border between Yunnan and Myanmar, despite relatively low official import figures. One source reports that many Chinese companies purchase logging rights in Myanmar, send workers across the border, then ship the logs back into Yunnan for reshipment to other parts of China. Other sources have reported that entire towns along the border are dedicated to cutting and moving logs across the border. Since imports are limited to government-approved enterprises and must pay VAT, a large proportion of these logs end up going unregistered, in order to avoid the taxes and paperwork. One industry source estimates that one-third of the lumber imported from Myanmar is smuggled, while others believe this figure could be much higher. Post has also received reports of smuggling across the Russian border, though there is no reliable data on the size of this trade.

Tables

General Trade

Table 1. Trade in Major Products

CHINESE TRADE IN MAJOR WOOD PRODUCTS				
(1,000 CM / MT)				
IMPORTS	Unit	Imports 1998	Imports 1999	98-99 change
Softwood Logs	1,000CM	1,480	4,545	207%
Tropical Hardwood Logs	1,000CM	1,083	1,943	79%
Temperate Hardwood Logs	1,000CM	110	442	302%
Total Logs	1,000CM	2,673	6,930	159%
Softwood Lumber	1,000CM	398	393	-1%
Temperate Hardwood Lumber	1,000CM	1,041	1,978	90%
Tropical Hardwood Lumber	1,000CM	238	349	47%
Total Lumber	1,000CM	1,677	2,720	62%
Softwood Plywood	1,000CM	842	477	-43%
Temperate Hardwood Plywood	1,000CM	21	52	148%
Tropical Hardwood Plywood	1,000CM	324	176	-46%
Total Plywood	1,000CM	1,187	705	-41%
Fiberboard	MT	400,676	556,359	39%
MDF	MT	51,711	131,856	155%
Moldings	MT	34,583	24,799	-28%
Particle board	MT	101,614	161,295	59%
Poles	MT	16,105	22,379	39%
Pulpwood	MT	2,170	2,955	36%
Railway Ties	1,000CM	12	36	200%
Veneer	MT	402,256	480,969	20%
Wood Chips	MT	1,522	1,030	-32%

Source: PRC Customs

EXPORTS	Unit	Exports 1998	Exports 1999	98-99 change
Softwood Logs	1,000CM	4	2	-50%
Tropical Hardwood Logs	1,000CM	10	8	-20%
Temperate Hardwood Logs	1,000CM	2	4	100%
Total Logs	1,000CM	16	14	-13%
Softwood Lumber	1,000CM	41	38	-7%
Temperate Hardwood Lumber	1,000CM	209	268	28%
Tropical Hardwood Lumber	1,000CM	5	3	-40%
Total Lumber	1,000CM	255	309	21%
Softwood Plywood	1,000CM	64	129	102%
Temperate Hardwood Plywood	1,000CM	13	17	31%
Tropical Hardwood Plywood	1,000CM	9	43	378%
Total Plywood	1,000CM	86	189	120%
Fiberboard	MT	13,845	13,004	-6%
MDF	MT	2,907	3,805	31%
Moldings	MT	38,225	68,745	80%
Particle board	MT	7,062	10,967	55%
Poles	MT	3,697	4,083	10%
Pulpwood	MT	13,326	1,676	-87%
Railway Ties	1,000CM	-	-	
Veneer	MT	33,799	36,379	8%
Wood Chips	MT	1,570,723	1,600,959	2%
Source: PRC Customs				

Table 2. Tariffs and Taxes

FOREST PRODUCT TARIFFS AND TAXES (percent)		Tariff for 2000	Tariff for 2001	Other		
Country:	Product			Import Taxes/ Fees	Total Cost of Import 2/	Export Tax
Report Year:	Description 1/					
4401	Fuel wood, chips & sawdust, etc.	0	n/a	17	17	0
4403	Wood in the rough	0	n/a	13	13	0
4404	Poles etc	10	n/a	17	27	0
4405	Wood wool, wood flour	9	n/a	17	26	0
4406	Sleepers	0	n/a	17	17	0
4407	Sawn wood >6mm thick	0	n/a	17	17	0
44081010	Coniferous veneer sheets	10	n/a	17	27	0
44081020	Coniferous sheets for plywood	6	n/a	17	23	0
44081090	Other coniferous sheets	8	n/a	17	25	0
44083110	Veneer sheets	8	n/a	17	25	0
44083120	Tropical sheets for plywood	5	n/a	17	22	0
44083190	Other tropical sheets	8	n/a	17	25	0
44083910	Other tropical veneer sheets	8	n/a	17	25	0
44083920	Other tropical plywood sheets	5	n/a	17	22	0
44083990	Other tropical	8	n/a	17	25	0
44089010	Other veneer sheets	8	n/a	17	25	0
44089020	Other sheets for plywood	5	n/a	17	22	0
44089090	Other	8	n/a	17	25	0
4409	Continuously shaped wood	15	n/a	17	32	0
4410	Particle board etc	18	n/a	17	35	0
44111100	Fiberboard >0.8g/cu cm not worked or covered	15	n/a	17	32	0
44111900	Other fiberboard >0.8g/cu cm	18	n/a	17	35	0
44112100	Fiberboard 0.5-0.8g/cu cm not worked or covered	18	n/a	17	35	0
44112900	Other fiberboard 0.5-0.8g	18	n/a	17	35	0
44113100	Fiberboard 0.35-0.5g/cu cm not worked or covered	12	n/a	17	29	0
44113900	Other fiberboard 0.35-0.5g	12	n/a	17	29	0
44119100	Other fiberboard not worked or covered	12	n/a	17	29	0
44119900	Other fiberboard	12	n/a	17	29	0
4412	Plywood, veneer etc	15	n/a	17	32	0
4413	Densified wood blocks etc	10	n/a	17	27	0

4414	Frames for paintings etc	22	n/a	17	39	0
4415	Packing cases, cable-drums, pallets etc	10	n/a	17	27	0
4416	Casks, barrels, vats etc	18	n/a	17	35	0
4417	Tools, tool handles etc	18	n/a	17	35	0
4418	Builders' joinery, carpentry	18	n/a	17	35	0
4419	Tableware, kitchenware	21	n/a	17	38	0
except			n/a		0	0
4419 0010	One-time chopsticks, of wood	10	n/a	17	27	0

1/ If yes, describe in report.

2/ If yes, identify in Tariff and Tax Strategic Indicator Table.

Roundwood

Table 3. Roundwood Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Roundwood					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	52217	48487	49320	45495	0	40225
Imports	5190	6958	5520	9740	0	11800
TOTAL SUPPLY	57407	55445	54840	55235	0	52025
Exports	11	16	8	6	0	6
Domestic Consumption	57396	55429	54832	55229	0	52019
TOTAL DISTRIBUTION	57407	55445	54840	55235	0	52025

Table 4. Roundwood Trade, Imports

Import Trade Matrix			
Country:		Units:	cubic meters
Imports for	1998		1999
U.S.	52726	U.S.	38699
Others		Others	
Russia	1114074	Russia	4018489
Gabon	396962	Gabon	746867
Malaysia	328567	Malaysia	617850
North Korea	177098	Equatorial Guinea	299835
Equatorial Guinea	120047	New Zealand	225980
Cameroon	116734	Germany	204317
Papua New Guinea	100085	Indonesia	185121
New Zealand	75343	North Korea	163736
		Papua New Guinea	141311
		Myanmar	63296
Total for Others	2428910		6666802
Others not listed	198041		252832
Grand Total	2679677		6958333

Table 5. Roundwood Trade, Exports

Export Trade Matrix			
Country:		Units:	cubic meters
Exports for	1998		1999
U.S.	0	U.S.	0
Others		Others	
Japan	12209	Taiwan	560
Indonesia	1492	Thailand	74
South Korea	1356	South Korea	2788
Taiwan	910	Philippines	2149
		Japan	10007
		Indonesia	298
		Myanmar	46
Total for Others	15967		15922
Others not listed	40		
Grand Total	16007		15922

Logs

Table 6. Softwood Logs, Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Softwood Logs					
	1999		2000		2001	
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	32300	33140	30685	31039	0	26310
Imports	3500	4545	3500	6136	0	6825
TOTAL SUPPLY	35800	37685	34185	37175	0	33135
Exports	2	2	2	2	0	2
Domestic Consumption	35798	37683	34183	37173	0	33133
TOTAL DISTRIBUTION	35800	37685	34185	37175	0	33135

Table 7. Softwood Logs Trade, Imports

Import Trade Matrix			
Country:	China, Peoples Republic of	Units:	Cubic Meters
Commodity:	Softwood Logs		
Imports for	1998		1999
U.S.	47790	U.S.	26437
Others		Others	
Russia	1072696	Russia	3945527
North Korea	174293	New Zealand	212452
Malaysia	86072	North Korea	163243
New Zealand	75280	Malaysia	156955
Myanmar	16546	Myanmar	21202
Australia	3245	Kazakstan	13205
Canada	1567	Mongolia	2999
Mongolia	1032	Indonesia	1142
Indonesia	497	Chile	500
		South Africa	398
Total for Others	1431228		4517623
Others not listed	1212		1046
Grand Total	1480230		4545106

Table 8. Softwood Logs Trade, Exports

Export Trade Matrix			
Country:	China, Peoples Republic of	Units:	Cubic Meters
Commodity:	Softwood Logs		
Time period:			
Exports for	1998		1999
U.S.	0	U.S.	0
Others		Others	
Indonesia	1492	South Korea	698
Japan	2401	Japan	428
South Korea	60	Indonesia	298
Taiwan	377	Taiwan	54
		Myanmar	46
		Thailand	35
Total for Others	4330		1559
Others not listed	0		0
Grand Total	4330		1559

Table 9. Temperate Hardwood Logs, Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Temperate Hardwood Logs					
	1999		2000		2001	
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	18960	14519	17825	13649	0	12831
Imports	390	442	420	663	0	775
TOTAL SUPPLY	19350	14961	18245	14312	0	13606
Exports	1	4	0	1	0	1
Domestic Consumption	19349	14957	18245	14311	0	13605
TOTAL DISTRIBUTION	19350	14961	18245	14312	0	13606

Table 10. Temperate Hardwood Logs Trade, Imports

Country:	China, Peoples Republic of		Units:	cubic meters
Commodity:	Temperate Hardwood Logs			
Time period:				
Imports for	1998			1999
U.S.	1480		U.S.	4449
Others			Others	
Russia	37675		Germany	204180
Germany	37158		Russia	68140
France	12724		France	48273
Malaysia	8117		Indonesia	36544
Indonesia	3865		Denmark	20989
North Korea	2805		Malaysia	14277
Belgium	1489		Belgium	11174
Netherlands	1065		Romania	8064
Denmark	941		Papua New Guinea	6046
			Italy	4110
Total for Others	105839			421797
Others not listed	3017			15520
Grand Total	110336			441766

Table 11. Temperate Hardwood Logs Trade, Exports

Export Trade Matrix			
Country:	China, Peoples Republic of	Units:	cubic meters
Commodity:	Temperate Hardwood Logs		
Time period:			
Exports for	1998		1999
U.S.	0	U.S.	0
Others		Others	
Japan	1834	Japan	3728
Total for Others	1834		3728
Others not listed	0		0
Grand Total	1834		3728

Table 12. Tropical Hardwood Logs, Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Tropical Hardwood Logs					
	1999		2000		2001	
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	957	828	810	701	0	610
Imports	1300	1943	1400	2818	0	3565
TOTAL SUPPLY	2257	2771	2210	3519	0	4175
Exports	8	8	6	4	0	4
Domestic Consumption	2249	2763	2204	3515	0	4171
TOTAL DISTRIBUTION	2257	2771	2210	3519	0	4175

Table 13. Tropical Hardwood Logs Trade, Imports

Import Trade Matrix			
Country:		Units:	cubic meters
Commodity:			
Time period:			
Imports for	1998		1999
U.S.	3005	U.S.	393
Others		Others	
Gabon	396962	Gabon	746867
Malaysia	232838	Malaysia	439331
Equatorial Guinea	120047	Equatorial guinea	299835
Cameroon	116717	Indonesia	144834
Papua New Guinea	98074	Papua new guinea	135265
Indonesia	26175	Cameroon	57242
Myanmar	20833	Myanmar	41883
Solomon Island	11507	Guinea	17962
Laos	9460	Thailand	13907
		Brazil	11801
Total for Others	1032613		1908927
Others not listed	47443		33893
Grand Total	1083061		1943213

Table 14. Tropical Hardwood Logs Trade, Exports

Export Trade Matrix			
Country:		Units:	cubic meters
Commodity:			
Time period:			
Exports for	1998		1999
U.S.	0	U.S.	0
Others		Others	
Japan	7974	Japan	5851
South Korea	1296	South Korea	2090
Taiwan	533	Taiwan	506
Italy	21	Thailand	39
Malaysia	19	Indonesia	0
Total for Others	9843		8486
Others not listed	0		0
Grand Total	9843		8486

Lumber

Table 15. Softwood Lumber, Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Softwood Lumber					
	1999		2000		2001	
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	10294	10145	9265	8218	0	7289
Imports	380	393	390	401	0	415
TOTAL SUPPLY	10674	10538	9655	8619	0	7704
Exports	33	38	30	25	0	15
Domestic Consumption	10641	10500	9625	8594	0	7689
TOTAL DISTRIBUTION	10674	10538	9655	8619	0	7704

Table 16. Softwood Lumber Trade, Imports

Import Trade Matrix			
Country:		Units: cubic meters	
Imports for	1998		1999
U.S.	16557	U.S.	18137
Others		Others	
Mongolia	265637	New Zealand	96298
New Zealand	27358	Russia	75749
Indonesia	17345	Mongolia	60134
Myanmar	13590	Canada	26481
Russia	9588	Myanmar	21176
Canada	9473	Kazakstan	16923
Malaysia	9105	Austria	12874
Taiwan	8286	Indonesia	10938
Austria	5365	Malaysia	9628
		Brazil	8605
Total for Others	365747		338806
Others not listed	15617		36469
Grand Total	397921		393412

Table 17. Softwood Lumber Trade, Exports

Export Trade Matrix			
Country:		Units:	cubic meters
Commodity:			
Time period:			
Exports for	1998		1999
U.S.	44	U.S.	0
Others		Others	
Japan	28852	Japan	29535
Taiwan	5026	Taiwan	3688
Hong Kong	4877	Hong Kong	1762
South Korea	899	South Korea	1691
		Sudan	598
		Thailand	437
		United Kingdom	238
		Vietnam	197
		Malaysia	142
		Germany	53
Total for Others	39654		38341
Others not listed	1472		124
Grand Total	41170		38465

Table 18. Temperate Hardwood Lumber, Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Temperate Hardwood Lumber					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	5478	5521	4821	4897	0	4343
Imports	1200	1978	1300	2867	0	3425
TOTAL SUPPLY	6678	7499	6121	7764	0	7768
Exports	190	268	150	115	0	105
Domestic Consumption	6488	7230	5971	7649	0	7663
TOTAL DISTRIBUTION	6678	7499	6121	7764	0	7768

Table 19. Temperate Hardwood Lumber Trade, Imports

Import Trade Matrix			
Country:		Units:	cubic meters
Imports for	1998		1999
U.S.	179697	U.S.	290495
Others		Others	
Malaysia	294063	Indonesia	447142
Indonesia	235867	Malaysia	417413
Germany	70017	Germany	320542
Japan	50617	Thailand	76731
Taiwan	37586	Italy	68984
Myanmar	37522	France	51588
Canada	27698	Taiwan	48743
Thailand	15129	Myanmar	43730
France	14624	Canada	40388
		New Zealand	35404
Total for Others	783123		1550665
Others not listed	78442		136384
Grand Total	1041262		1977544

Table 20. Temperate Hardwood Lumber Trade, Exports

Export Trade Matrix			
Country:		Units:	cubic meters
Commodity:			
Time period:			
Exports for	1998		1999
U.S.	217	U.S.	3469
Others		Others	
Japan	64001	Indonesia	156712
South Korea	11498	South Korea	70719
Hong Kong	7421	Hong Kong	16767
Taiwan	1974	Singapore	6930
Singapore	948	Taiwan	4330
		Thailand	3655
		Malaysia	2092
		Indonesia	1330
		Vietnam	661
		Spain	469
Total for Others	85842		263665
Others not listed	3072		1261
Grand Total	89131		268395

Table 21. Tropical Hardwood Lumber, Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Tropical Hardwood Lumber					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	304	301	274	249	0	224
Imports	215	349	215	489	0	535
TOTAL SUPPLY	519	650	489	738	0	759
Exports	4	3	3	2	0	2
Domestic Consumption	515	647	486	736	0	757
TOTAL DISTRIBUTION	519	650	489	738	0	759

Table 22. Tropical Hardwood Lumber Trade, Imports

Import Trade Matrix			
Country:		Units:	cubic meters
Commodity:			
Time period:			
Imports for	1998		1999
U.S.	16275	U.S.	27859
Others		Others	
Malaysia	96420	Malaysia	134290
Indonesia	65593	Indonesia	133210
New Zealand	13850	Myanmar	8373
Thailand	13656	Taiwan	7187
Myanmar	7491	Brazil	7073
Taiwan	5043	Thailand	6408
Brazil	3952	Canada	3974
Canada	2724	Singapore	2430
Singapore	2409	Cameroon	2334
		Germany	2120
Total for Others	211138		307399
Others not listed	10720		13935
Grand Total	238133		349193

Table 23. Tropical Hardwood Lumber Trade, Exports

Export Trade Matrix			
Country:		Units:	cubic meters
Commodity:			
Time period:			
Exports for	1998		1999
U.S.	56	U.S.	10
Others		Others	
Hong Kong	1798	Angola	195
Indonesia	36	Taiwan	796
Japan	1380	Thailand	130
Malaysia	72	South Korea	40
Singapore	20	Singapore	4
		Malaysia	93
		Japan	1206
		Hong Kong	812
Total for Others	3306		3276
Others not listed	1386		0
Grand Total	4748		3286

Plywood

Table 24. Softwood Plywood Production, Supply and Distribution

PSD Table						
Country:	China, Peoples Republic of					
Commodity:	Softwood Plywood					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		01/1999		01/2000		01/2001
Production	990	728	1089	1185	0	1531
Imports	550	477	500	382	0	355
TOTAL SUPPLY	1540	1205	1589	1567	0	1886
Exports	96	129	110	155	0	241
Domestic Consumption	1444	1076	1479	1265	0	1545
TOTAL DISTRIBUTION	1540	1205	1589	1420	0	1886

Table 25. Softwood Plywood Trade, Imports

Import Trade Matrix			
Country:		Units:	Cubic Meters
Imports for	1998		1999
U.S.	677	U.S.	375
Others		Others	
Indonesia	427079	Indonesia	241345
Malaysia	397209	Malaysia	219055
Taiwan	6943	Taiwan	6010
Japan	1355	China	1835
India	1308	Vietnam	1555
South Korea	1260	Thailand	1155
Thailand	1226	Canada	1025
China	923	Russia	862
Canada	864	Cambodia	820
		Hong Kong	785
Total for Others	838167		474447
Others not listed	3363		2185
Grand Total	842207		477007

Table 26. Softwood Plywood Trade, Exports

Export Trade Matrix			
Country:		Units:	Cubic Meters
Commodity:			
Time period:			
Exports for	1998		1999
U.S.	15824	U.S.	32663
Others		Others	
Hong Kong	26414	Hong Kong	49886
Singapore	7039	Japan	15977
Mongolia	4943	South Korea	11957
Taiwan	2121	Taiwan	4531
		Israel	3425
		Singapore	3345
		Yemen	2310
		Mongolia	1252
		Malaysia	863
		India	639
Total for Others	40517		94185
Others not listed	7668		2251
Grand Total	64009		129099