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Korea, Republic of

Forest Products

Forest and Products

1998

Approved by: **Mr. William L. Brant**
U.S. Embassy, Seoul

Drafted by: **Mr. Sun Chul Choi/ Mr. Michael Henney**

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Executive Summary

Korea imported $2.37 billion in 1997, down seven (7) percent from 1996. Imports through May 1998 total $369,000, down 61 percent compared the same year earlier period. Imports from the United States were on the decrease in 1997 prior to the onset of the economic turmoil. In 1997, U.S. origin wood products trade totaled $324,948 down seven (7) percent over 1996 totals. Imports from the U.S. through April 1998, though, are down 52 percent compared to the same year earlier period.

In 1997, US softwood log imports declined slightly in value, as did imports from other suppliers. New Zealand and Chile continue to be the principle suppliers of logs. U.S. hardwood lumber imports reached a record level, as the furniture and interiors sectors continued developing applications for this quality of wood. Renewed interest in U.S. panel products, mainly driven by price, sparked a mini-surge in imports.

Demand for forest products is expected to drop eight (8) percent in 1998 on account of the economic situation. The outlook for 1999 is marginally better. The Government of Korea recently revised its economic growth projections for 1998 and 1999 to negative four (-4) percent and zero (0) percent, respectively.

Since November 1997, Korea's construction industry has been especially hard hit by the economic crisis plaguing the country. Contraction in the business sector and lack of consumer's confidence in the near-term revival of the economy have had a negative impact on commercial and residential construction demand. Budgetary constraints have caused curtailment or cancellation of 26 major public infra-structure projects. Compounding the situation is the chaos in the financial sector caused by bankers near total withdrawal from the commercial loan market. Their action is taken in effort to meet requirements of newly implemented government banking standards. Credit availability remains a significant problem for businesses and individuals seeking to build during this period.

Based on current economic indicators, many financial experts forecast Korea is, at minimum, a couple of years away from full economic recovery. The turn-around in the economy should, in part, be sparked by the restructuring of the financial sector. Restructuring of the financial sector then, in turn, should result in broader availability of credit throughout the economy. Credit is the lifeline for the construction industry, reportedly having the highest debt/asset ratio and highest rate of bankruptcies among all Korean industries.
The three-to-five year outlook is more bullish. The economy will rebound, and if structural readjustments are fully implemented, should result in the country returning to the high rate of economic growth it is accustomed to.

Strategic Indicator Tables

STRATEGIC INDICATOR TABLE: FOREST AREA (million hectares/million cum)			
Country: Korea	Previous	Current	Following
Report Year:1998	Calendar Year	Calendar Year	Calendar Year
Total Land Area	9.93	9.93	9.93
Total Forest Area	6.448	6.441	6.435
--of which, Commercial	77%	77%	77%
----of commercial, tropical hardwood	na	na	na
----of commercial, temperate hardwood	20%	20%	20%
----of commercial, softwood	80%	80%	80%
--of forest area, non-commercial	23%	23%	23%
Forest Type			
--Of which, virgin	na	na	na
--Of which, plantation	na	na	na
--Of which, other commercial (regrowth)	na	na	na
Forest Ownership			
--Nationally owned and no commercial access	0.306	na	na
--Nationally owned, commercial logging permitted	1.092	na	na
--Other publicly owned land, no commercial access	0.109	na	na
--Other publicly owned, logging permitted	0.38	na	na
--privately owned commercial forest	3.499	na	na
Total Volume of Standing Timber	324	340	357
--Of which, Commercial Timber	251	262	275
Annual Timber Removal 1/	1	1	1
Annual Timber Growth Rate	5%	5%	5%
Annual Allowable Cut	1	1	1

1/ If Removals exceeds growth rate, analyze impact in text.

STRATEGIC INDICATOR TABLE: CONSTRUCTION MARKET			
Country: Korea	Previous	Current	Following
Report Year:1998	Calendar Year	Calendar Year	Calendar Year
Total Housing Starts (number of units)	596,435	500,000	500,000
--Of which, wood frame	na	na	na
--Of which, steel, masonry, other materials	596,435	500,000	500,000
--Of total starts, residential	596,435	500,000	500,000
----Of residential, single family	52,948	50,000	50,000
----Of residential, multi-family	543,487	450,000	450,000
--Of total starts, commercial	596,435	500,000	500,000
Total Value of Commercial Construction Market ($US million)	na	na	na
Total Value of Repair and Remodeling Market ($US million)	na	na	na
Are tariffs on softwood from the United States higher, equal or lower than softwood imported from other countries? 1/	equal	equal	equal
Are tariffs on plywood from the United States higher, equal or lower than plywood imported from other countries? 1/	equal	equal	equal
Are non-tariff barriers on softwood from the United States higher, equal or lower than softwood imported from other countries? 1/	equal	equal	equal
Are non-tariff barriers on plywood from the United States higher, equal or lower than plywood imported from other countries? 1/	equal	equal	equal
Are there market development programs for construction, softwood or plywood imports funded by foreign governments?	no	no	no
If yes, identify the following:	-		
--Country(ies)	-	-	-

--Form(s) of competition: Export subsidy, trade show, trade servicing, permanent market representative (number), permanent office (location), or other. 2/	Australia, Canada, New Zealand and Scandinavian countries attend trade show		
--Estimated annual market expansion outlay ($US million) by country	na	na	na
Is the acceptability of U.S. style timber frame construction (i.e., per building codes, mortgage availability, etc.) high, medium or low? 3/	low	low	low
Are consumer preferences for solid wood materials vis-a-vis non-wood materials in construction high, medium or low? 3/	high	high	high
From Post's experience, is the willingness of U.S. suppliers to deliver product per importers' specifications low, medium or high? 3/	medium	medium	medium
If price quotes for construction and structural wood products are available, identify the leading source(s)	Traders, Forestry Administration		

1/ If other than equal, explain in report text.
2/ If "other", then explain in report text.
3/ If low or medium, explain in report text.

STRATEGIC INDICATORS TABLE: FURNITURE & INTERIORS MARKET			
Country: Korea	Previous	Current	Following
Report Year:1998	Calendar Year	Calendar Year	Calendar Year
Total Housing Starts (number of units)	596,435	500,000	500,000
Total Number of Households)	11,544,000	na	na
Furniture Production ($US million)	3,637	na	na
Interiors Market Size ($US million)	na	na	na
Total Furniture Imports ($US million)	293	150	na
Total Furniture Exports ($US million)	196	180	na
Are tariffs on hardwood from the United States higher, equal or lower than hardwood imported from other countries? 1/	equal	equal	equal
Are non-tariff barriers on hardwood from the United States higher, equal or lower than hardwood imported from other countries? 1/	equal	equal	equal
Are there market development programs for furniture or interiors market expansion funded by foreign governments?	na	na	na
If yes, identify the following:	-	-	-
--Country(ies) 2/	-	-	-
--Form(s) of competition: Export subsidy, trade show, trade servicing, permanent market representative (number), permanent office (location), or other. 3/	-	-	-
--Estimated annual market expansion outlay ($US million) by country			
From Post's experience, is the willingness of U.S. suppliers to deliver product per importers' specifications low, medium or high? 4/	-	-	-
If price quotes for furniture and interiors products are available, identify the leading source(s)	-	-	-

1/ If other than equal, explain in text.
2/ If more than one country, report each country individually.
3/ If "other", explain form of subsidy in text.
4/ If low or medium, explain in test.

STRATEGIC INDICATOR TABLE: MATERIAL HANDLING MARKET			
Country: Korea	Previous	Current	Following
Report Year:1998	Calendar Year	Calendar Year	Calendar Year
Total Value of Industrial Output ($US million)	2	1.5	1.5
New Pallet Production (million units)	8	6	6
Are consumer preferences for solid wood pallets and packaging materials vis-a-vis non-wood materials high, medium or low? 1/	high	high	high
Are industry/trade preferences for repaired/recycled pallets over new pallets low, medium or high? 1/	high	high	high
From Post's experience, is the willingness of U.S. suppliers to deliver product per importers' specifications low, medium or high? 1/	na	na	na
Identify leading source(s) of price quotes:	producers	producers	producers
Are there market development programs for the materials handling market expansion funded by foreign governments?	na	na	na
If yes, identify the following:	na	na	na
--Which Countries?	na	na	na
--Form(s) of competition: Export subsidy, trade show, trade servicing, permanent market representative (number), permanent office (location), or other. 2/	na	na	na
--Estimated annual market expansion outlay ($US million) by country	20%	-30%	na

1/ If low or medium, explain in text of report.
2/ If "other", explain in text of report.

STRATEGIC INDICATOR TABLE: WOOD PRODUCTS SUBSIDIES			
Country: Korea	Previous	Current	Following
Year of Report:1998	Calendar Year	Calendar Year	Calendar Year
Total Solid Wood Export Subsidy Outlay ($US million)	none	none	none
Is there a ban on the export of logs, lumber, or veneer? If yes, which?	none	none	none
Are there export taxes (yes/no)? 1/	na	na	na
If yes, for which products? (Identify export tax level in tariff table)	na	na	na
Source(s) of Export Subsidy Information	na	na	na
Total Wood Production Subsidy Outlay ($US million)	na	na	na
Are there any programs favoring the development of commercial forestry?	yes	yes	yes
If yes, Post best estimate of scope (thousands of hectares)	25	na	na
If yes, Post's best estimate of financial outlay ($US million)	0.14	na	na
Source(s) of Production Subsidy Information	na	na	na
Does the country support export expansion activities similar to the Cooperator Program?	na	na	na
--Which country markets are targeted?	-	-	-
--Which products are targeted?	-	-	-
Are there significant wood products export expansion activities at the provincial or regional level?	-	-	-
--If yes, identify key players	-	-	-
--If yes, identify key market segments	-	-	-
--If yes, identify key country markets	-	-	-
--If yes, identify key products	-	-	-
--Post's estimate for combined outlay ($US million)	-	-	-
Source(s) of Provincial/Regional Support Information	-	-	-
Are there other wood products export expansion activities? If yes, describe in report.	na	na	na

STRATEGIC INDICATOR TABLE: FOREST PRODUCT TARIFFS AND TAXES (percent)						
		Tariff	Tariff	Other		
Country: Korea	Product	Current	Following	Import	Total Cost	Export
Report Year:1998	Description	Year	Year	Taxes/Fees	of Import	Tax
4401	Wood Chips, fuel wood 1/	2	2	12		na
4403	Tropical Roundwood 2/	1	1	12		na
4403	Other Roundwood 2/	2	2	12		na
4404	Sticks.etc	2	2	12		na
4405	Wood wool	5	5	12		na
4406	Railway ties	5	5	12		na
4407	Lumber	5	5	12		na
4408	Veneer 3/	5	5	12		na
4409	Finished Lumber	8	8	12		na
4410	Particle board	8	8	12		na
4411	Fiberboard	8	8	12		na
4412	Plywood, veneered Panels and	8	8	12		na
	similar laminated wood 4/			12		na
4413	Densified wood	8	8	12		na
4414	Wooden frames	8	8	12		na
4415	Packing cases, boxes, crates	8	8	12		na
4416	Casks	8	8	12		na
4417	Tools	8	8	12		na
4418	Builders' joinery	8	8	12		na
4419	Tableware/Kitchenware	8	8	12		na
4420	Wood marquetry	8	8	12		na
4421	Other articles of wood	8	8	12		na
4422	na	na	na	12		na
4423	na	na	na	12		na
4424	na	na	na	12		na
4425	na	na	na	12		na
9406	Pre-fabricated Houses	8	8	12		na

1/ Quota tariff reduced one percent for Temperate Hardwood Chips.
2/ Quota tariff reduced to zero percent for all imported logs.
3/ Quota tariff reduced to 2.5 percent for all imported veneer thicker than 1 mm for the purpose of plywood manufacture.
4/ Adjusted tariff increased to 15 percent for CY 1998.

Market Segment Analysis

A. Construction Sector

Overview

Korea, a country with limited arable land, imposes stringent land-use laws that force vertical rather than horizontal development. Multi-story high-rise office/apartment buildings dominate the urban landscape. During the first quarter 1998, registered new construction starts declined 35 percent. The weak economy and diminishing supply of credit combined to constrain demand for new construction by both individuals and companies.

The traditional Korean house is made near totally with wood. However, the average person is not able to build this style of house. High land and construction costs, plus zoning regulations that encourage construction of high-density housing units make it cost prohibitive. Since the Korean war, housing construction has been driven by the above noted constraints. Today, single-family and multi-family units are of brick/cement exterior/interior wall construction with wood molding for interior doors and interior window frames. Roof support structures on single-family units are of wood construction. Office buildings are of steel/concrete construction typically with metal moldings, window frames and interior doors.

Housing policy and domestic market development programs are set and guided by the Ministry of Construction and Transportation (MOCT).

Building code regulations recently were changed to allow use of temperate climate soft woods in interior construction.

Outlook

The economic crisis prompted the government into a deregulation mode for a number of industries, including construction.
- Land acquisition and zoning regulations are being eased to boost housing construction in the suburban and quasi-farmland areas. Opportunities for wood frame residential construction will be enhanced by the easing of these regulations.

- In February, price controls on new-to-market housing units in metropolitan areas were lifted. The current glut in unsold new housing units has diminished speculative interest which justified price controls measures. Lifting of price controls should encourage demand for higher quality finish material as builders now will be able to recoup input costs incurred to meet customer preference.

In 1997, new housing units added to the market increased only one percent over the year earlier period. Construction of new housing units was proceeding briskly until the country's economic problems became visible last fall. When the problems emerged, the financial sector tightened credit which forced many building contractors into bankruptcy.

In 1998, more than 90,000 new apartment units that have come on-line so far remain unsold. Housing planners are now revising the government's housing supply plan which calls for 500,000 new units to be constructed this year and next, with the ultimate goal of a 100 percent housing supply by the year of 2002. No clear indications have been given as to how much the planners are considering changing the master plan.

Further, how the changes in the master plan will affect the Ministry of Construction and Transportation (MOCT) projects at Kyoha and Junbuk is not known. The MOCT projects involve the development of two new towns, similar to Ilsan and Bundang projects. The two projects, once completed, would add 62,000 new homes for 240,000 people. Given the distance these two new towns would be from Seoul, land rezoning should be favorable for single and low-rise multifamily housing development.

Official 1997 data on wood frame housing imports have not been released. Unofficial data, released by the Korean Forestry Service, shows 1,100 wooden housing units were imported last year. Of that total, approximately 800 units were of the American-style 2x4 homes. For the first quarter 1998, the value of imported wood frame housing units stood at 1.8 million dollars, a third of the value of imported wooden houses record in for the same period in 1997.

Five large government infrastructure projects should regain priority funding once the budget situation stabilizes along with the economy. The projects are: a new international airport outside Seoul; a Seoul-Pusan high-speed railway line; a new container terminal near the port city of Pusan; and two new harbor expansion works aimed at making Korea an international shipping hub. Total expenditures for these projects through the year 2000 had been estimated at $25 billion.

Market Opportunities

Prior to the onset of the country's economic difficulties, wood frame construction was showing the greatest growth for U.S. wood products in this market. Although admittedly from a relatively small base, Korean imports of wood frame houses have jumped dramatically in recent years. Imports jumped 29 percent, to US$ 29.2 million, in 1997 after recording an increase of 105 percent, to US$22.7 million, in 1996. Of these totals,

the United States supplied US$17.1 million worth in 1997 and US$14.4 million worth in 1996. Ample marketing opportunities continue to exist in this sector, especially if the MOCT projects are fully funded.

Public/Private Sector Contacts

Housing & Urban Affairs Bureau
Ministry of Construction & Transportation
Phone: 011-2-504-9130
Fax: 011-2-504-6128

Korea Housing Association
4th fl., Construction Bldg., 71-2, Nonhyun-dong, Kangnam-ku, Seoul 135-010, Korea
Phone: 011-2-548-1078/9
Fax: 011-2-215-1312

Korea Specialty Contractors' Association
Construction Bldg., 71-2, Nonhyun-dong, Kangnam-ku, Seoul 135-010, Korea
Phone: 011-2-549-8985/6
Fax: 011-2-549-8987

Korea Housing Builders Association
#205, Donghwa Bldg., 25-5, Yiodo-dong, Youngdeungpo-ku, Seoul 150-010 Korea
Phone: 011-2-782-2966/7
Fax: 011-2-782-5738

Korea Wood Construction Research Group
Dept. of Forest Products, Chungnam National Univ., Taejon-si 305-764, Korea
Phone: 011-42-821-5756
Fax: 011-42-822-3503

Commercial Impediment

Impediments, both direct and indirect, are varied and numerous. Presently, the economy and the financial system are the two biggest constraints to demand and trade of U.S. wood products. Smaller businesses and consumers are finding financing extremely difficult to come by. Regulatory requirements too, though some are changing, still constrain construction of wood-frame buildings and the use of wood in framing and concrete forming.

In terms of direct constraints, the Korean building code remains the largest regulatory barrier. The code includes restrictions to areas such as height of a wooden building and total allowable floor area. Equally important, the building code provides very few guidelines on the construction of a wooden dwelling.

As interest in wood frame construction has grown, another constraint has developed--and that is a severe lack of skilled carpenters. Korean construction workers are greatly skilled in masonry work and other skills associated with the construction of high-rise apartments. However, their experience in wood frame construction is almost non-existent. Since 1996, the AFPA has organized an annual two-week training program for Korean carpenters in an attempt to begin to address this very real problem.

Perhaps the biggest--albeit indirect--constraint is Korea's almost total emphasis in the housing sector on high-rise apartments. As alluded to earlier, however, the thinking among government and industry officials is changing. As a result, the local cooperator office for the American Forest & Paper Association (AFPA\Seoul) has placed additional emphasis on promoting wood frame housing construction using U.S. lumber products.

Third Policy and Consumption Constraints

Policy is set by the Ministry of Construction and Transportation (MOCT). MOCT maintains the Korean building code that is implemented by regional and local officials. There are no quotas for imported logs or wood. However, end-users, developers, distributors and processors must purchase through a registered importing agent.

Third-Party Competition

The primary competition for U.S. softwood logs are tropical hardwood logs (which are apparently becoming increasingly scarce) and radiata pine from New Zealand and Chile. Russian softwood also enters the market, mainly through barter deals with Korean trading companies. In the lumber sector, the primary competition comes from Canada and New Zealand. The New Zealand Timber Industry Federation Inc. is actively promoting its radiata pine lumber while the Canadian industry is aggressively pursued the market for wood frame houses.

B. Furniture/Interiors Sector

Overview

The country’s economic situation has led to a general curtailment in construction of high-end hotels and office buildings, interior remodeling and rebuilding projects, and purchases of general consumer items such as furniture and electronic equipment. The economy is still contracting. The prevailing thought is that it will be

many months before the economic situation stabilizes and a couple years before it fully recovers. During this period, demand across the forest products spectrum should be soft.

Prior to the onset of the economic crisis, the Korean furniture industry had experienced rapid expansion over the past decade. An estimated 3,300 furniture manufacturers employing over 50,000 people existed. Small manufacturers--less than 50 employees--account for over 95 percent of total furniture manufacturers. This has changed. The government has not published official data showing the extent of the fall-out to date in the industry due to economic and fiscal crisis. Anecdotal evidence indicates the industry may have contracted upwards of forty percent.

For 1997, the industry estimates total wood products consumed by the furniture sector at 2.36 million CUM broken down as follows: MDF, 900,000 CUM; plywood, 300,000 CUM; logs, 285,000 CUM; lumber, 264,000 CUM; particle board, 600,000 CUM; and veneer, 14,000 CUM. Total market size was approximately $3.6 billion (3.5 trillion Won), led by home furniture (43 percent: 1.5 trillion Won); kitchen furniture (20 percent: 0.7 trillion Won); office furniture (25 percent: 0.9 trillion Won); and bedroom furniture (12 percent: 0.4 trillion Won).

According to the Interior Contractors Committee (ICC), in 1997 the Korean interior market was estimated at $2 billion (2 trillion Won) and included approximately 1,800 interior companies. If small, family-operated companies, are included, the interior market would have been about 4 trillion Won and would have included more than 5,000 interior contractors.

Outlook

The near through mid-term outlook for the domestic furniture and interiors industries are ones of low growth in response to soft demand in both the domestic and export markets for furniture, electronic equipment and cabinetry products.

Korea Federation of Furniture Industry Cooperatives (KFFIC) projects the Korean furniture market will contract 25 percent in 1998 due the economic slowdown. In value terms, they estimate the market size will decline to US$1.9 billion (2.65 trillion Won).

The Interior Contractors Committee (ICC) projects the Korean interior market will contract about 50 percent in 1998. Koreans are giving this area of consumption a low priority.

Market Opportunities

In the absence of this economic situation, consumer furniture preference is for light-colored, solid hardwood pieces. With the economic situation, consumer furniture buying patterns have shifted to less expensive processed wood pieces made using MDF and particle board, or imported from Southeast Asian countries.

Additional opportunities as highlighted by AFPA\Seoul in its monthly reports are as follows:

Office furniture: The market has slowed due to the high-rate of restructuring and/or financial difficulties within the business community.

Bedroom furniture: Between 400,000 - 500,000 marriages occur annually in Korea, offering a continuous market for bedroom furniture. In recent years a definite trend towards western style bedrooms, particularly among the young couples, has emerged. This year, however, the ability of newlyweds to purchase new furniture is being constrained by uncertainty about the economy.

Kitchen furniture: This market has continued to grow with an emphasis on convenience. Growth will not be near as rapid as experienced in recent years due to the slowdown in new housing starts construction and remodeling/rebuilding projects.

Building materials: The 1997 decision by the Korea National Housing Corporation (KNHC) to use door and window frames made of softwood lumber (Douglas fir) in its housing projects benefitted the U.S. wood door and window frame manufacturers. Tropical hardwood has dominated this market for over 30 years. KNHC, a government funded corporation, builds around 60,000 units annually--mostly high rise apartments intended for low and middle income home buyers.

Interior: The Korean interior market for wood products is dependent on the strength of the construction sector. Most designers, however, are not overly familiar with American hardwoods and softwoods used in interior design. This situation is improving as a result of recent marketing efforts. Many local designers do complain that it is difficult to purchase American hardwood locally. Despite this, the demand for U.S. softwoods and hardwoods has increased significantly in recent years, especially for flooring, walling, and doors, as the market begins to shift in response to demands of a more quality-conscious consumer. Korea’s economic downturn is expected to bring only a temporary delay in this trend.

Public/Private Sector Contacts

Korea Federation of Furniture Industry Cooperatives
374-2, ChangAhn-Dong, TongDaeMoon-Ku, Seoul, Korea
Phone: 011-2-215-8838
Fax: 011-2-215-9729

Interior Contractors Committee
Jeon Yeon Building, 106-8, Nonhyon-Dong, Kangnam-Ku, Seoul, Korea
Phone: 011-2-511-5672
Fax: 011-2-514-9922

Commercial Impediments

Market competition and price differentials are key impediments to expanded U.S. exports to Korea. Though changing gradually, Korea remains a price-sensitive market within the wood furniture sector. This leads to a greater dependence on paneled products such as plywood, particle board, and MDF--sectors where the United States is not price competitive with imports from Southeast Asia.

The U.S. hardwood continues to be limited by the lack of familiarity among local consumers. AHEC\Korea has taken a number of steps to address this impediment.

While overall awareness of U.S. products is improving, access to materials remains a major obstacle. A number of smaller companies indicate that they would like to experiment with U.S. hardwoods, but are simply unable to purchase the lumber locally.

Even if demand for raw wood materials or furniture were to grow in the near-term, new financial impediments imposed by a banking sector undergoing a major restructuring initiative would inhibit imports. Bank loan collateral requirements often exceed the capital capabilities of many small-medium size firms.

Trade Policy and Consumption Constraints

Policy is set by the Ministry of Construction and Transportation (MOCT). MOCT maintains the Korean building code that is implemented by regional and local officials. There are no quotas for imported furniture or interior finishing materials. However, end-users, developers, distributors and processors must purchase through a registered importing agent.

Third-Party Competition

Italy dominates the high-end furniture market while Southeast Asian countries and China control the low-to-medium end market. The United States is not price competitive with imports from Southeast Asia.

C. Material Handling Industry

Overview

Korea's material handling industry has evolved along with the export focused economy. The domestic industry produces pallets, crates and containers using wood, plastic and steel materials. Pallet construction is principally made with wood. Korea Pallet Association data shows the pallet industry had enjoyed a 20 percent rate of growth for several years prior to 1998. The Association projects growth will decline 30 percent this year. In

1997, 7.5 million pallets were produced; 70 percent with wood, 27 percent with plastic, the balance with steel or paper.

Korea Pallet Association (KPA)
Mr. Park, Eun Kyu,
Managing Director
Tel: (02) 715-1281/2
Fax: (02) 715-1283

Outlook

Korea's economy is based on production and export of consumer goods. For that reason, demand for packaging material will always exist. Even with the contraction in the local economy, export of consumer goods remain ahead of year earlier levels.

Market Opportunities

The Korea Logistics and Packaging Center (KLPC), which is composed of packaging material manufacturers, recently developed a new type of reusable wood box for packaging. The new box can be easily assembled or disassembled by users without using nails or adhesives. The newly-developed product will be used for packing various manufactured goods such as electronic appliances, machinery and automobile components. According to industry sources, U.S. softwood lumber is the most appropriate raw material for the new packaging product. With Korean industry increasingly moving assembly plants off shore, this could represent a growing market for U.S. softwood suppliers.

Commercial Impediments

The primary market impediment in this sector has been price competitiveness. Radiata pine is the wood of choice because of its low cost.

Trade Policy and Consumption Constraints

Policy is set by the Ministry of Construction and Transportation (MOCT) and implemented by regional and local officials.

Third-Party Competition

New Zealand, as the major supplier of radiata pine, is the U.S.'s chief competitor in this market.

Tables of Market Section

Korea: Key Economic Indicators (Million of U.S. Dollars, unless otherwise noted)

	1995	1996	1997 1/	1998 1/
Real GDP Growth(percent) 2/	8.9	7.1	5.5	(4.0)
GDP (nominal/factor cost)	457,110	483,305	437,480	319,000
By Sector:				
-Agriculture/Fisheries	29,887	30,330	24,998	Na
-Manufacturing	122,609	124,765	112,394	Na
-Electricity/Gas/Water	10,365	10,781	10,278	Na
-Construction	63,773	70,122	64,046	Na
-Financial Services	78,099	83,925	77,030	Na
-Govt/Health/Education	35,903	38,961	36,386	Na
-Other	116,474	124,421	112,348	Na
Per Capita GDP (U.S.$)	10,037	10,548	9,511	6,930
Labor Force(1,000)	20,797	21,188	21,500	21,800
Unemployment Rate(percent)	2.0	2.0	2.5	8.0
Retail Inflation (percent)	4.5	4.9	4.5	9.4
Wholesale Inflation (percent)	4.7	2.8	3.9	15.0
Consumer Price Index (1995 base)	100.0	104.9	109.6	119.9
Average Exchange Rate(Won/US$)	769.6	809.9	962.3	1,400
Home Ownership Ratio(percent) 3/	86.1	89.2	92.0	Na

1/ Based on published data as of March 1998.
2/ Growth based on the Korean Won.
3/ Sourced from the Year Book of Korea Housing Statistics (Korea Housing Corporation)

Source: Economic Section and Ag. Affairs of U.S. Embassy in Seoul

Korea: Value Of Domestic Construction Orders
Received by the type of construction
(Billion Won)

Year	Total	Dwellings	Others
1992	27,861	10,225	17,636
1993	33,246	15,109	18,137
1994	39,394	16,127	23,267
1995	49,025	18,396	30,656
1996	59,535	21,033	38,502
1997	63,258	20,975	42,283

SECTOR	1996	1997	CHANGE(%)
Building:	35,229	35,574	+ 1.0
-Dwelling	21,033	20,975	- 0.3
-Office & Stores	7,168	7,120	- 0.7
-Factory & Storage	3,246	3,490	+ 7.4
-Public Offices 1/	2,804	2,493	-11.1
-Others	977	1,496	+53.1
Civil Engineering Works:	23,932	27,373	+14.4
-Forestry Conservancy & Water Control	112	119	+ 6.3
-Agriculture & Fisheries	405	568	+40.2
-Roads & Bridge	10,023	10,949	+ 9.2
-Harbors & Airports	1,444	3,576	+147.6
-Railways &Track	1,646	2,914	+77.0
-Water Supply & Sewage	1,596	1,670	+ 4.6
-Generation of Electricity 2/	2,498	1,973	-21.0
-Land Development	3,357	3,181	-5.2
-Dams	22	92	+318.2
-Installation of Machinery	2,488	1,897	-23.8
-Others	342	434	+26.9
Other Construction	373	310	-16.9
Total	59,535	63,258	+6.3

1/ Including schools and hospitals
2/ Including transmission transformation, distribution
3/ Including gardens and grounds

Source: National Statistical Office (NSA)

Korea: Building Construction Permits (Floor area, Thousand Square meters)

1) By Structure

Year	Total	Ferro-Concrete	Brick & Stone	Wooden	Others
1994	116,211	102,727	8,527	123	4,854
1995	117,327	103,134	9,086	89	5,022
1996	113,820	101,940	7,193	131	4,557
1997	113,374	104,214	5,105	173	3,881

2) By Use

Year	Total	Dwelling	Commercial	Factory	Educational & Social	Other
1994	116,211	63,387	27,501	13,291	5,936	6,107
1995	117,327	62,614	28,549	13,727	6,281	6,157
1996	113,820	61,062	26,862	11,921	6,289	7,682
1997	113,374	62,677	27,918	8,796	6,603	7,379

Source: Ministry of Construction and Transportation (MOCT)

Korea: Housing Starts ('000 units)

Year	Total
1992	575
1993	695
1994	623
1995	619
1996	592
1997	596
1998 1/	500

1/ Projection
Source: Ministry of Construction and Transportation

Korea: Import of Wood Frame Housing Per Country
(Unit: 1,000 US$ on a CIF basis)

Country	1992	1993	1994	1995	1996	1997
United States	2,181	1,227	2,282	7,665	14,400	17,152
Canada	131	171	434	1,138	5,305	8,627
Finland	284	453	1,058	724	1,148	1,424
Sweden	-	-	320	45	44	98
New Zealand	-	-	-	304	121	345
Australia	-	-	-	106	443	515
Russia	-	-	-	10	218	189
EU	-	-	-	744	478	473
Others	3	7	72	307	503	370
Total	2,599	1,858	4,166	11,043	22,660	29,193

Source: Korea Customs Service

Korea: Production of Wood-Based Products
(1,000 pieces)

Year	Vehicle 1/	Furniture 2/	Sinkboard	Musical Instruments	
				Pianos	Guitars 3/
1992	762	1410	2714	267	1370
1993	616	1392	2797	245	1342
1994	603	1305	3205	212	1391
1995	624	1303	3013	212	1500
1996	625	1213	2808	166	1400
1997	563	1162	2702	134	1300

1/ Bus, truck, and shipping container
2/ Freestanding wood-based furniture
3/ KMIIA's estimated data because official stat. doesn't include the number of guitars products made by small-medium sized companies.

Source: National Statistical Office (NSO) and
Korea Musical Instrument Industry Association (KMIIA)

Trade

Overview

In 1997, Korean imports of all wood products decreased to US$2.37 billion, down 7.5 percent from the 1996 import level of US$ 2.57 billion. The contraction in the construction sector led the country's decline in demand for all imported wood products. The exception was veneer. Import demand increased, in part, due to the halving of its import tariff to 2.5 percent.

Korea is actively participating in the Asia-Pacific Economic Council's (APEC) early-sectorial liberalization negotiations for forestry products. Domestic interests have been very vocal against Korea's early liberalization of this sector. Negotiations are scheduled to be conclude within the next year. Even with full market liberalization, Korean imports of forestry products are not expected to increase substantially.

Outlook

The 1998 forecast issued by the Forestry Administration projected Korean demand for wood products to reach only 24.4 million cubic meters, a decrease of 5.8 percent from the 1997 level. Import demand was projected at 7.7 million cubic meters for round logs and 15.2 million cubic meters for (round wood equivalent) of lumber, plywood, veneer, particle board, MDF, building products, wooden flooring and other types of wood products. This forecast has not been modified.

However, trade data for January-April 1998, show total imports down more than 50 percent from the comparative period in 1997. Data reveal sluggish import demand from all industries (e.g., construction, furniture, interior and other wood related industries).

Over the next 3-5 years, trade volume is expected to rebound in tandem with the economy. In addition to APEC, trade negotiations under the WTO are scheduled to commence by the end of 1999. Between the two, APEC and WTO, markets for specific wood products should benefit if hoped for reductions in tariffs are agreed to.

Domestic Factors Effecting Trade

Domestic interests have been very vocal against Korea's early liberalization of the forest products sector. Their argument has been that the economic hardships the country is experiencing this year is the direct result of the market liberalization measures implemented by the government in recent years. Therefore, in the name of protecting the domestic industry, they are arguing against early liberalization of the market.

Market Development Strategies

The overall size of the domestic market will contract in unison with the economy. In the short-term, market maintenance should be the operative objective. In the mid-to-longer term, market expansion should be more feasible.

Trade Data and PS&D Tables

Korea: Total Forest Product Imports
('000 cum and $ Million)

HS Number/Type	1995 Volume	1995 Value	1996 Volume	1996 Value	1997 Volume	1997 Value
4401 Wood Chips 1/	656	102	647	99	753	95
4403 Logs	8229	1047	8138	963	8266	877
4407 Lumber	946	409	1103	465	1003	452
4408 Veneer	61	49	72	64	407	112
4409 Finished Lumber 1/	100	114	117	142	95	120
4410 Particle Board	498	91	408	77	293	54
4411 Fiber Board	72	40	53	26	58	25
4412 Plywood	1307	594	1061	531	949	449
4418 Door & Window 1/	56	80	69	110	69	101
All Others	NA	79	NA	91	NA	116
Grand Total	NA	2605	NA	2568	NA	2375

1/ based on 1,000 MT

Source: Korea Customs Service (KCS) for value and some volumes,
Korea Forestry Administration (KFA) for volumes of panel products and
FAS Seoul for volumes of logs and lumber.

Korea: Imports of Forest Products:
(Unit: 000 US$ on a CIF basis)

HS No.	Description	1996	1997	Change (%)
4401	Chips	99,335	95,183	-4.2
4403	Logs	963,172	877,117	-8.9
4407	Lumber	465,016	452,520	-2.6
4408	Veneer	63,982	111,708	+74.6
4410	Particle board	77,049	53,651	-30.4
4411	Fiberboard	26,226	25,350	-3.3
4412	Plywood	531,451	449,052	-15.5
4415	Package	5,871	5,267	-10.2
4418	Door and Window	110,533	100,970	-8.7
	Other Articles of Wood	225,691	204,756	-9.2
	Total	2,568,326	2,375,574	-7.5

Korea: Imports of U.S. Forest Products:
(Unit: 000 US$ on a CIF basis)

HS No.	Description	1996	1997	Change (%)
4401	Chips	38,055	22,333	-41.3
4403	Logs	158,840	144,998	-8.7
4407	Lumber	90,327	95,438	+5.7
4408	Veneer	13,746	13,564	-1.3
4410	Particle board	6,336	8,207	+29.5
4411	Fiberboard	10,145	9,232	-9.0
4412	Plywood	6,281	5,351	-14.8
4418	Door and Window	18,144	18,830	+3.8
	Other Articles of Wood	6,776	6,995	+3.2
	Total	348,650	324,948	-6.8

Korea: Imports of Wood Frame Housing

(Unit: 000 US$ on a CIF basis)

Products	1996	1997	Change (%)
From World	22,661	29,193	+28.8
U.S.A.	14,400	17,152	+19.1

Korea: Imports of Forest Products
(Unit: 000 US$ on a CIF basis)

HS No.	Description	1997 (1-4)	1998 (1-4)	Change (%)
4401	Chips	31,862	24,951	-21.7
4403	Logs	271,434	132,825	-51.1
4407	Lumber	158,411	61,392	-61.2
4408	Veneer	29,858	16,702	-44.1
4410	Particle board	18,793	9,977	-46.9
4411	Fiberboard	9,397	3,447	-63.3
4412	Plywood	168,681	49,021	-70.9
4418	Door and Window	32,755	12,242	-62.6
	Other Articles of Wood	74,448	29,540	-60.3
	Total	795,643	340,097	-57.3

Korea: Imports of U.S. Forest Products
(Unit: 000 US$ on a CIF basis)

HS No.	Description	1997 (1-4)	1998 (1-4)	Change (%)
4401	Chips	7,309	8,649	+18.3
4403	Logs	37,736	19,405	-48.6
4407	Lumber	35,088	11,645	-66.8
4408	Veneer	5,002	1,730	-65.4
4410	Particle board	2,376	1,283	-46.0
4411	Fiberboard	3,457	950	-72.5
4412	Plywood	1,180	666	-43.6
4418	Door and Window	5,076	2,481	-51.1
	Other Articles of Wood	2,436	985	-59.6
	Total	99,658	47,794	-52.0

Korea: Imports of Wood Frame House
(Unit: 000 US$ on a CIF basis)

	1997 (1-4)	1998 (1-4)	Change(%)
From World	8,037	2,530	-68.5
U.S.A.	5,592	997	-82.2

PSD Table Country: Korea, Republic of Commodity: Softwood Lumber						
		1997		1998		1999
	Old	New	Old	New	Old	New
Market Year Begin		01/1997		01/1998		01/1999
Production	4700	4460	0	3000	0	3500
Imports	400	352	0	200	0	250
TOTAL SUPPLY	5100	4812	0	3200	0	3750
Exports	30	19	0	10	0	10
Domestic Consumption	5070	4793	0	3190	0	3740
TOTAL DISTRIBUTION	5100	4812	0	3200	0	3750

Export Trade Matrix Country: Korea, Republic of Commodity: Softwood Lumber Time period:		Units: 1000 CUM	
Exports for	1996		1997
U.S.	0	U.S.	0
Others		Others	
Japan	28	Japan	17
Total for Others	28		17
Others not listed	1		2
Grand Total	29		19

Import Trade Matrix			
Country: Korea, Republic of		**Units: 1000 CUM**	
Commodity: Softwood Lumber			
Time period:			
Imports for	1996		1997
U.S.	26	U.S.	19
Others		Others	
Canada	41	Canada	50
New Zealand	91	New Zealand	77
Chile	144	Chile	130
Russia	17	Russia	8
		Brazil	30
Total for Others	293		295
Others not listed	47		38
Grand Total	366		352

Korea: Softwood Lumber Imports From U.S.
(1000 CUM and $ Thousand)

	1995		1996		1997	
Species	Volume	Value	Volume	Value	Volume	Value
Cedar	-	187	2	498	-	134
Douglas Fir	6	1,091	2	966	1	461
Whitewood or Fir	7	1,404	4	3,813	5	3,482
Spruce	21	20,609	11	12,845	9	11,011
Other	11	4,806	7	5,419	4	5,691
TOTAL	45	28,907	26	23,541	19	20,779

Source: Korea Customs Service (KCS)

PSD Table						
Country: Korea, Republic of						
Commodity: Tropical Hardwood Lumber						
		1997		1998		1999
	Old	New	Old	New	Old	New
Market Year Begin		01/1997		01/1998		01/1999
Production	150	364	0	200	0	250
Imports	450	402	0	200	0	250
TOTAL SUPPLY	600	766	0	400	0	500
Exports	0	0	0	0	0	0
Domestic Consumption	600	766	0	400	0	500
TOTAL DISTRIBUTION	600	766	0	400	0	500

Export Trade Matrix			
Country: Korea, Republic of		Units: 1000 CUM	
Commodity: Tropical Hardwood Lumber			
Time period:			
Exports for	1996		1997
U.S.	0	U.S.	0
Others		Others	
Total for Others	0		1
Others not listed			
Grand Total	0		1

Import Trade Matrix
Country: Korea, Republic of **Units:**
Commodity: Tropical Hardwood Lumber
Time period:

Imports for	1996		1997
U.S.	1	U.S.	1
Others		Others	
Malaysia	379	Malaysia	303
Indonesia	82	Indonesia	66
Total for Others	461		369
Others not listed	28		32
Grand Total	490		402

PSD Table
Country: Korea, Republic of
Commodity: Temperate Hardwood Lumber

		1997		1998		1999
	Old	New	Old	New	Old	New
Market Year Begin		01/1997		01/1998		01/1999
Production	100	68	0	40	0	50
Imports	200	249	0	150	0	200
TOTAL SUPPLY	300	317	0	190	0	250
Exports	0	3	0	0	0	0
Domestic Consumption	300	314	0	190	0	250
TOTAL DISTRIBUTION	300	317	0	190	0	250

Export Trade Matrix
Country: Korea, Republic of **Units: 1000 CUM**
Commodity: Temperate Hardwood Lumber
Time period:

Exports for	1996		1997
U.S.	0	U.S.	0
Others		Others	
		Japan	2
Total for Others	0		2
Others not listed			1
Grand Total	0		3

Import Trade Matrix
Country: Korea, Republic of **Units: 1000 CUM**
Commodity: Temperate Hardwood Lumber
Time period:

Imports for	1996		1997
U.S.	99	U.S.	156
Others		Others	
China	56	China	46
Canada	12	Canada	9
		Malaysia	9
		New Zealand	4
		E.U.	6
Total for Others	68		74
Others not listed	24		19
Grand Total	191		249

Korea: Hardwood Lumber Imports From U.S.
(1000 CUM and $ Million)

	1995		1996		1997	
Species	Volume	Value	Volume	Value	Volume	Value
Oak	67	34	43	37	84	37
Maple	20	13	21	15	50	23
Poplar	5	2	3	1	2	1
Basswood	3	2	3	2	1	1
Walnut	-	-	-	-	-	-
Ash	5	2	3	2	2	2
Other	16	8	26	9	17	10
TOTAL	116	61	99	66	156	74

Source: Korea Customs Service (KCS)

PSD Table
Country: Korea, Republic of
Commodity: Hardwood Veneer

		1997		1998		1999

	Old	New	Old	New	Old	New
Market Year Begin		01/1997		01/1998		01/1999
Production	0	0	0	0	0	0
Imports	102	407	0	500	0	550
TOTAL SUPPLY	102	407	0	500	0	550
Exports	0	0	0	0	0	0
Domestic Consumption	102	407	0	500	0	550
TOTAL DISTRIBUTION	102	407	0	500	0	550

Export Trade Matrix
Country: Korea, Republic of **Units: 1000 CUM**
Commodity: Hardwood Veneer
Time period:

Exports for	1996		1997
U.S.		U.S.	
Others		Others	
Total for Others	0		0
Others not listed			
Grand Total	0		0

Import Trade Matrix **Country: Korea, Republic of** **Units: 1000 CUM** **Commodity: Hardwood Veneer** **Time period:**			
Imports for	1996		1997
U.S.	6	U.S.	6
Others		Others	
Malaysia	48	Malaysia	301
Brazil	21	Brazil	70
Chile	17	Chile	18
China	6	China	6
Indonesia	1	Indonesia	1
Total for Others	93		396
Others not listed	3		4
Grand Total	102		406

Korea: Total Veneer Imports By Origin 1/
(1,000 CUM, $ Million)

	1995		1996		1997	
Countries	Volume	Value	Volume	Value	Volume	Value
United States	9	19	6	14	6	14
Malaysia	31	9	48	17	301	44
Chile	8	3	17	6	18	6
Brazil	7	3	21	9	70	29
China	2	1	6	4	6	5
Indonesia	1	1	1	1	1	1
PNG	-	-	-	-	-	-
Other	2	12	3	14	4	14
Total	61	50	102	64	407	112

1/ Included softwood veneer
Source: Korea Plywood Industry Association (KPIA)

Korea: 1997 Veneer Imports Per Species
(CUM and $ 1,000)

Species	From World Volume	From World Value	From the U.S. Volume	From the U.S. Value
Softwood Veneer:	60,157	24,067	887	2,810
Cedar	15,069	7,488	796	2,409
Oregon Pine	0	0	0	0
White Wood/Fir	-	4	0	0
Larch	40	39	0	0
Spruce	89	548	37	194
Radiata Pine	7,946	2,787	0	0
Others	37,012	13,201	54	207
Hardwood Veneer:	346,408	87,478	4,961	10,757
Meranti	2,563	1,429	0	0
Mahogany	12	17	0	0
Teak	68	316	0	0
Others	62,914	23,124	0	0
Rosewood	11	90	0	0
Ebonywood	11	61	0	0
Ash	46	562	11	55
Walnut	484	2,158	499	2,156
Others	1,058	3,992	405	616
Ligum Viate	0	0	0	0
Poplar	9	12	0	0
Maple	1,899	4,331	1,726	3,533
Elm	2	33	0	0
Birch	1,129	583	18	49
Basswood	12	68	5	66
Paulownia	485	359	0	0
Tropical woods	197,328	13,847	60	87
Others	78,378	36,496	2,236	4,190
Total	406,565	111,545	5,848	13,567

PSD Table
Country: Korea, Republic of
Commodity: Softwood Plywood

		1997		1998		1999
	Old	New	Old	New	Old	New
Market Year Begin		01/1997		01/1998		01/1999
Production	400	608	0	300	0	400
Imports	30	27	0	15	0	20
TOTAL SUPPLY	430	635	0	315	0	420
Exports	0	32	0	15	0	20
Domestic Consumption	430	603	0	300	0	400
TOTAL DISTRIBUTION	430	635	0	315	0	420

Export Trade Matrix
Country: Korea, Republic of **Units: 1000 CUM**
Commodity: Softwood Plywood
Time period:

Exports for	1996		1997
U.S.	0	U.S.	0
Others		Others	
		China	25
		E.U.	7
Total for Others	0		32
Others not listed	0		0
Grand Total	0		32

PSD Table **Country: Korea, Republic of** **Commodity: Hardwood Plywood**						
		1997		1998		1999
	Old	New	Old	New	Old	New
Market Year Begin		01/1997		01/1998		01/1999
Production	450	406	0	200	0	300
Imports	1000	922	0	500	0	600
TOTAL SUPPLY	1450	1328	0	700	0	900
Exports	30	22	0	10	0	20
Domestic Consumption	1420	1306	0	690	0	880
TOTAL DISTRIBUTION	1450	1328	0	700	0	900

Export Trade Matrix **Country: Korea, Republic of** **Units: 1000 CUM** **Commodity: Hardwood Plywood** **Time period:**			
Exports for	1996		1997
U.S.	0	U.S.	0
Others		Others	
China	27	China	17
Netherlands	11	Netherlands	5
Total for Others	38		22
Others not listed	4		0
Grand Total	42		22

Import Trade Matrix **Country: Korea, Republic of** **Commodity: Hardwood Plywood** **Time period:**			**Units: 1000 CUM**
Imports for	1996		1997
U.S.	0	U.S.	0
Others		Others	
Indonesia	673	Indonesia	487
Malaysia	312	Malaysia	310
China	29	China	92
Singapore	8	Singapore	9
Total for Others	1022		898
Others not listed	14		24
Grand Total	1036		922

Korea: Logs Imports For Plywood Processing Purpose
(Unit: 1,000 CUM)

Year	Hardwood	Softwood	Total
1992	1,897	0	1,897
1993	1,194	171	1,365
1994	1,101	350	1,451
1995	829	654	1,483
1996	675	732	1,407
1997	567	858	1,425

Source: AgAff's estimates based on the data of Korea Plywood Industries Association.

Production

Forest Situation

Korea is a small, mountainous country approximately the size of Indiana. Total forested area is about 6.45 million hectares (ha.), approximately 65 percent of the total land area. Korea's forests are located predominantly in the cool-temperate zone. A small section of Korea's forest is located in the warm-temperate zone along the southern coast.

Most stands were destroyed during the Korean War and have been transformed into pine forests under a massive government reforestation program. The reforestation program has been carried out over the past three decades through a series of 10-year forest development plans. The objective of the current plan--which expires next year--is to harmonize the twin goals of sustainable development and improved public access. Forest access is difficult due to topographical barriers. The Korean government is also seeking to ensure sustainable lumber supplies by supporting the local industry's efforts to participate in development and reforestation efforts overseas.

Solid Wood Products Overview

The 1997 Roundwood harvest was 1,062,000 CUM, down 11 percent from the 1,915,000 CUM of 1996 with softwood accounting for 80 percent and temperate hardwood for 20 percent. Red pine is by far the major species harvested in Korea. Because of low quality, domestic Roundwood is mainly utilized for chopsticks, crates, match wood, pitprops, woodchips for pulp and lumber. The self-sufficiency rate of roundwood in 1997 was approximately 11 percent of total roundwood consumption.

The domestic wood products industry used to be one of Korea's largest export-oriented industries. This was especially true in the primary processing industries of lumber and plywood. However, rising labor costs and sharply higher import prices for logs are beginning to force an increasing number of manufacturers to Southeast Asia and China. In contrast, the production of fiberboard and particle board continues to grow rapidly. This is due in large part to the continued growth of related Korean industries--such as automobiles and electronics--and the manufacture of furniture and musical instruments.

Tables of Production Section

Korea: 1997 Growing Stocks By Age Of Trees
('000 CUM, Beginning of Year)

	11-20	21-30	31-40	41-50	51+	Total
Conifers	58,634	59,010	20,572	4,659	1,968	144,843
Non-Conifers	15,551	37,660	20,205	12,568	4,224	90,208
Mixed	31,805	34,475	12,526	6,960	2,964	88,730
Total	105,990	131,145	53,303	24,187	9,156	323,781

Source: Korea Forestry Administration (KFA)

Korea: Supply of Domestic Timber
(1,000 CUM)

Year	Pit props	Pulp	Lumber and others	Total
1992	343	378	402	1,123
1993	227	340	611	1,184
1994	176	385	612	1,173
1995	139	405	512	1,055
1996	109	392	694	1,195
1997	104	367	591	1,062

Source: Korea Forestry Administration

Korea: Wood Products Production ('000 CUM)

	1993	1994	1995	1996	1997
Softwood Lumber	4,219	4,460	4,972	4,660	4,460
Trop. Hdwd. Lumber	572	365	158	193	364
Temp. Hdwd. Lumber	25	18	23	86	68
(Total)	(4,816)	(4,789)	(5,153)	(4,939)	(4,892)
Plywood	795	799	861	896	1,014
Fiberboard	407	505	614	744	750
Particle Board	435	524	548	659	720

Source: Agaff estimates, Korea Plywood Industry Association (KPIA)

Korea: Supply and Demand of Wood Products
(Unit: 1,000 CUM, Roundwood Basis)

	1996	1997	1998
Supply	27040	26452	24405
Domestic	1195	1062	1532
Import	26209	25390	22873
Demand	27404	26452	24405
Pit Props	109	104	-
Plywood/Veneer	3428	4209	-
Board	1883	1602	-
Pulp	9586	8320	-
Lumber/Others	12398	12217	-

Source: Korea Forestry Administration