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Forests critical to global warming

The Global Warming summit held in Buenos Aires during mid November reemphasised the critical importance of nations working together to tackle increasing carbon dioxide emissions. The implications of these discussions for the world's forests and timber industry are profound. New computer models suggest that global warming represents a significant threat to the future of forests in all areas of the world. At the same time, the development of new systems for the trading of carbon credits may provide a major new source of finance for plantation establishment, particularly in the tropics. And increased use of wood, with its inherent environmental benefits of high insulation capacity and low embodied energy, could play a leading role in reducing future greenhouse gas emissions.

The question of countries making binding commitments to reduce greenhouse gas emissions remains hotly debated. This debate came into sharp focus during November as delegates from 160 countries gathered in Buenos Aires for the UN Climate Change Summit. In an effort to force the pace of the international policy debate, environmentalists issued a number of dire warnings about the potential impact of global warming. WWF concentrated on the future of forests, claiming that at least one third of the world's forests are under threat from global warming. They claimed that most at risk are the boreal forests of North America, Europe and Siberia which could lose as much as 40% of their area if world temperatures rise as high as some scientists believe. Boreal forests would be replaced at their southern edge by northern deciduous forests, or agriculture, or in the drier areas by grassland or steppe vegetation. In the tropics, mangrove forests would be drowned by rapidly rising sea levels. Higher temperatures would increase the risk from fire and pests. Some national governments were equally keen to push the case for more rapid international action. The UK's Environment Minister, Michael Meacher, arrived at the Conference armed with the most recent output from a com-

puter model of natural vegetation cover run by the UK's Institute of Terrestrial Ecology. The model predicts that within 50 years Brazil's Amazonian region could be experiencing temperatures up to seven degrees higher than today and decreased rainfall of up to 50 centimeters a year. Under these conditions much of the Amazon forest would turn into grassland or even desert. Conditions would rapidly deteriorate as vegetation dieback in the region set up a positive feedback loop. Forest loss would lead to further releases of carbon dioxide into the atmosphere reinforcing the greenhouse effect. Scientists added to the clamour for greater urgency suggesting that global warming is already impacting on the world's forests. A particularly disturbing report came from the Instituto de Pesquisa Ambiental da Amazonia (IPAM), a non governmental research institute based in Belem, Brazil, and the US based Wood Hole Research Centre. In May of this year the two organisations predicted that around 400,000 km² of forest would become vulnerable to fire during the 1998 dry season. However, in September, after unusually low levels of rain, they were forced to increase their estimate of fire vulnerable forest to more than one million square kilometres, about one third of Amazonia's forest area.

International response

The international response to the threat posed by global warming is embodied in the Kyoto Protocol agreed in Japan last December by 38 industrialised nations. The protocol requires signatory nations to reduce greenhouse gas emissions, mostly carbon dioxide from the burning of fossil fuels, to 5% below 1990 levels by a target date of 2012.

Despite the Protocol, numerous issues remain unresolved. Only developed countries have agreed to binding targets for emissions reduction. Poor countries like China and India, have insisted, with some justification, that today's problem is largely due to the excesses of the rich world. The US alone is responsible for around a quarter of the world's carbon dioxide emissions. They also suggest that cutting emis-

Continued top of page 2 - column 1

Japanese recovery plan

When looking at global hardwood markets, its hard to ignore the fact that long term recovery is heavily dependent on events in Japan. ITTO data indicates that in 1997 Japan was responsible for around 40% (by value) of tropical primary wood product imports. In 1997, Japan was also the second largest importer of US hardwood lumber, after Canada. US hardwood exports to Japan amounted to US\$138 million, around 10% of total US exports. As the world's second largest economy, and SE Asia's largest investor and import market, events in Japan have an overriding impact on economies throughout the region.

Japan's latest move to dig itself out of its deepening recession was to announce in mid November a huge Yen 24 trillion (US\$198 billion) emergency economic package. The main elements are spending on infrastructure; tax cuts; and subsidies for credit crunched companies. Despite sending out a strong signal that Japan recognises the scale of the problems faced within

Continued page 2 - column 3

STATISTICS IN THIS ISSUE

U.K. IMPORTS

logs, sawn, plywood, veneers
sleepers, blockboard

Outside E.C.

July & August 1998

Intra E.C.

June & July 1998

JAPAN IMPORTS

Southsea logs, N. American logs & lumber
Russian logs

January to July 1998

UN/ECE TIMBER COMMITTEE

FORECASTS: EUROPE & N. AMERICA

Hardwood Logs, Sawn, Panel Products

Years 1997, 1998 and 1999

SABAH EXPORTS

Logs by main species and destinations

January to September

- Tropical Timbers, editor: Rupert Oliver
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Global climate change - Continued from page 1

sions would come at the price of economic growth, adding to the problems of the developing world.

Amongst industrialised nations there remain major differences over the means of achieving their goal. At the Summit, the United States argued for unfettered trading of carbon credits with countries that have more than met their pollution targets. This they believe would be the cheapest and most efficient method of reducing emissions. The European Union on the other hand argued for limits on trading, emphasising that priority should be actual emissions reductions at home. Many EU countries favour national policy changes such as carbon taxes.

The Summit failed to make substantive progress in resolving these issues. However, delegates managed to agree on the "Buenos Aires Action Plan", a timetable of discussions on the issues that need to be settled, programmed for completion by the year 2000.

New forestry investment

The world's forests are key players in the debate over climate change because of their ability to lock up immense quantities of carbon dioxide. Many countries, notably the US, are arguing that they should be allowed to offset their industrial carbon dioxide emissions by planting more trees. Just prior to the UN Summit, the United States stance received a boost with the publication in *Science* (vol 282 p442) of a report by a team of American researchers, the Carbon Modelling Consortium, which suggests that US forests are absorbing a large proportion of the nation's 1.6 billion tonnes of CO₂ emissions. The researchers believe that much of this carbon dioxide is being absorbed by trees in areas of southern USA cleared during the 19th century and since reforested.

There are many uncertainties associated with calculations of carbon dioxide sequestration by forests, a fact which is freely admitted by the American researchers. Numerous variables affect the rate at which trees absorb carbon dioxide. Different species grow at different rates in different climates. Carbon assimilation is high when trees are young, but will progressively slow as trees mature. Most of the carbon will be released in weeks, or even days, if the forest is burned.

The extent of the uncertainty is illustrated by European Union's calculations for carbon sequestration. After three years of examining satellite images and measuring the flow of carbon dioxide above 17 European forests, the EU's best guess is somewhere between 120 and 280 million tonnes a year.

This uncertainty creates technical challenges for the development of a carbon credit system, the chosen method for bringing carbon sequestration into international policy arrangements. Yet there is little doubt that new forests have tremendous potential as carbon sinks. Due to their rapid growth rates, tropical plantations seem to offer particular hope. In optimal conditions these plantations can absorb up to 100 tonnes or more of CO₂ per hectare in 50 years. In 1995 the UN's

scientific think tank, the Intergovernmental Panel on climate change, estimated that global reforestation plans could cover 350 million hectares, an area slightly greater than the EC. If this target is achieved, it would lead to the sequestration of up to 35 billion tonnes of carbon in 50 years, equivalent to soaking up around 6% of projected CO₂ emissions between now and 2050.

This potential is already encouraging countries to experiment with carbon credit trading systems for tree planting. In Costa Rica, American and Norwegian businesses are paying farmers \$10 for every tonne of carbon that their trees absorb from the atmosphere. In return the companies are issued with certificates declaring that they have paid for CO₂ to be removed from the atmosphere. The companies, which include Norway's industrial giant ABB and the Chicago based Environmental Financial Products, think they are at the start of a new multibillion dollar business. Costa Rica has so far sold credits for more than 200,000 tonnes of carbon. Some analysts believe that once an international system of carbon trading is up and running, carbon credits bought at \$10 a tonne now could change hands for up to \$100 a tonne.

Timber's environmental potential

The development and implementation of such a system could alter the economics of tropical plantation forestry. Carbon credits could add substantially to the economic returns derived from plantations grown for tropical wood, ensuring higher profits than cash crops such as rubber, cocoa and palm oil. Plantations grown for tropical timber would have particular advantages when it comes to carbon sequestration. Tropical hardwood timbers, renowned for their long term durability, will tend to have a long life in use. Carbon removed from the atmosphere in a tropical plantation grown for timber, rather than pulp for example, is more likely to be locked away in solid form for many years as a door, window frame or furniture component.

Critics of carbon trading systems have expressed concern that their use may distract industrial countries from the more pressing need to cut down on carbon dioxide emissions at home. The beauty of carbon credits for timber production, is that increased consumption of the final product should also contribute to a reduction in carbon dioxide emissions in consumer countries. Timber is naturally low in thermal conductivity and a far better insulator than any of its competitors. And much less energy is required to convert timber into a usable building material than steel, concrete or aluminium. Timber is almost certainly the only major building material for which a strong environmental case can be made for *increased* consumption. As government's seek to meet their Kyoto targets, it will become increasingly difficult for them to ignore these facts. The problem of global warming may well be a threat to the world's forests. But it's solutions provide the timber industry with a major opportunity.

Japan - Continued from page 1

its national economy, the package received a cool response from international financial markets. The *Economist* suggests that the package "is not only unconvincing but may also do real damage". A particular concern is that the package will be used to keep alive firms that are in deep trouble, and thereby delay corporate adjustment and recovery, rather than encourage it.

Other analysts are more forgiving. The Chief Economist for the Organisation of Economic Co-operation and Development (OECD) notes that the stimulus package was larger than expected and, if it is successful in restoring confidence, Japan could achieve growth of 0.5% next year. However, OECD note this will only be achieved if Japan's government goes further to reform the country's banking system. Recent IMF forecasts are for a 2.5% contraction in GDP during 1999, followed by a recovery of 0.5% in 2000.

Japan's timber industry is in a state of severe stagnation. Log prices remain weak due to the depressed plywood market. Housing starts are running about 14% lower than a year ago and are likely to total little more than 1.2 million for 1998, the lowest level since 1984. South Sea log imports in August were down 47.5% from the same month in 1997 and consumption and inventory both decreased. In the first eight months of 1998, sawnwood imports were down 43.9% from North America and 44.8% overall. Plywood production during August was 244,000 m³, about 26% less than 1997 figures and only half production levels reached during the early

JAPAN IMPORTS: LOGS AND SAWN					
JAN-JULY 1998 000s m ³					
Source	Total		Total		%
	Volume	Chng	Consumption	Chng	
N.American Logs	2,557	-29.0	2,872	-20.0	
N. American Lumber	2,186	-50.6	2,421	-43.6	
Russian Logs	2,623	-33.9	2,846	-15.0	
Southsea Logs	1,929	-40.6	2,293	-28.2	

Pacific Rim Wood Market Report

1990s. It now seems possible that production could be below 3 million m³ during 1998.

Despite the gloomy outlook, recent events haven't all been bad news for the timber trade. One encouraging sign was the strengthening yen-dollar exchange rate during October. This had the effect of pushing export dollar prices higher in various parts of the world. One beneficiary has been Indonesian plywood. Prices fell to as low as US\$230/m³ C&F into Japan when the yen exchange rate was 135 to the dollar, but recovered to around US\$250-60 following revaluation of the yen to current levels of around 120 to the dollar. There also hopes that the government's commitment to invest in public sector infrastructure projects will stimulate growing demand for timber in the country's depressed construction sector. Inventory levels in Japan are now at very low levels, so any upturn in demand would lead rapidly to shortages. The hopes of many tropical timber traders hinge on the success of Japan's recovery programme.

INDICATIVE PRICES

Latest indicative prices available at time when preparing this report. Prices are subject to continuous variation and may vary in relation to volumes purchased, specification, port of shipment and quality of a particular shippers production. Specifications are given as a guide - in practice the details vary.

Logs

	Sept	Oct	Nov
Ex Cameroon Fr.F/m3 FOB Douala LM			
N°GOLLON			
70cm+20% 60/69	1350	1350	1350
BOSSE 60cm+	1550	1550	1550
AYOUS 70cm+	1000	1000	1000
BIBOLO 60cm+	1375	1375	1375
SAPELE			
80cm+20% 70/79	1650	1650	1650
SIPO			
80cm+20% 70/79	1900	1900	1900
IROKO			
80cm+20% 70/79	1650	1650	1650
Ex Cote d'Ivoire Fr.F/m3			
Fr.F/£	9.60	9.28	9.50
FOB Abidjan FAS			
6"+ avg 9"-10"			
6"+ avg 10"-11"			
1"-2"			
IROKO	3375	3350	3300
SIPO	3400	3500	3500
MAHOGANY	2800	2800	2750
FRAMIRE	2000	2000	2000
SAMBA No.1 C&S	1575	1550	1550
AZOBE dim. stock	2000/	2100/	2100/
	2600	2700	2700
OPEPE dim. stock	1850/	1850/	1850/
	2450	2450	2450

	Sept	Oct	Nov
Ex Gabon Fr.F/m3 FOB Owendo LM			
ACAJOU			
70cm+20% 60/69	1175	1175	1175
DIBETOU 60cm+	1175	1175	1175
DOUKA			
70cm+15% 60/69	1150	1150	1150
SIPO			
70-79cm 10%/60/69	1700	1700	1700
80-99cm	1900	1900	1900

Sawn Timber

	Sept	Oct	Nov
Ex Ghana DM/m3 FOB Takoradi			
FAS (includes notional agent's commission of 5%)			
6"+ avg 9" C/£	3968	3935	
6"+ avg 9" DM/£	2.86	2.77	
A.MAHOGANY AD	995	995	995
A.MAHOGANY KD	1135	1135	1135
EMERI AD	760	760	760
UTILE KD	1365	1365	1365
ODUM AD	1030	1030	1030
ODUM KD	1240	1240	1240
SAPELE KD	1155	1155	1155
EDINAM AD	860	860	860
EDINAM KD	1020	1020	1020
WALNUT AD	705	705	705
NIANGON AD	895	895	895
DANTA AD	680	680	680
DANTA KD	945	945	945
WAWA AD	505	505	490
WAWA KD	565	565	550
MAKORE AD	790	790	790
MAKORE KD	1100	1100	1100

	Sept	Oct	Nov
Ex Cameroon Fr.F/m3 FOB			
FAS width 6"+, length 6'+			
SAPELE	3050	3050	2950
SIPO	3500	3550	3500
BIBILO	2800	2850	2850
N°GOLLON	3200	3200	3200
AFRORMOSIA	3550	3550	3550
IROKO	3400	3400	3400

	Sept	Oct	Nov
Ex Gabon FR.F/m3 FOB			
FAS width 6"+, length 6'+			
OKOUME AD	2000	2000	2000

	Sept	Oct	Nov
Ex Zaire Fr.F/m3 FOB			
FAS width 6"+, length 6'+			
SAPELE	na	na	2850
SIPO	na	na	3400
MAHOGANY	na	na	2950
AFRORMOSIA	na	na	3500
IROKO	na	na	3300

	Sept	Oct	Nov
Ex Malaysia US\$/ton, C&F UK port			
MS/£	6.48	6.43	6.31
US/£	1.71	1.69	1.66
MS/US\$	3.80	3.80	3.80

	Sept	Oct	Nov
DARK RED SERAYA/MERANTI			
Select & better GMS			
width 6"+ avg 7"/8"			
length 8'+ avg 12'/14'			
1-2" KD	720	730	735
2.5" KD	745	755	760
3" KD	765	770	775

	Sept	Oct	Nov
KERUING			
Standard & Better GMS			
1"-3"			
width: random or fixed			
length 16'+	460	460	460
KAPUR			
Standard & Better GMS			
1"-3" plnd			
width 6"+ avg 7"-8"			
length 16'+	475	475	475

	Sept	Oct	Nov
TEAK (Official price list basis)			
FEQ/equivalent			
Boards: 6"+ avg 8", 6'+ avg 8'			
Shorts: 6"+, 3'/5.5' avg 4'			
Ex. Burma US\$ per ton of 50cu.ft.			
FOB Yangon (Rangoon)			
Boards 1" 8"x 8'	3890	3890	3890
Boards 1" 8"x 8'	2670	2670	2670
Teak from Singapore and Hong Kong nearer	S\$3500		
for 1" Boards, 1.5" US\$3550, 2" 3750, and US\$3850			
for 2.5"			

	Sept	Oct	Nov
Ex Brazil US\$/m3 C&F			
FAS US\$/£	1.71	1.69	1.66
6"+ avg 9-10"			
6"+ avg 10-11"			
MAHOGANY (Swietenia)			
1"-2" AD	1100	1100	1100
2.5"-3" AD	1120	1120	1120
1"-2" KD	1190	1190	1190
2.5"-3" KD	1210	1210	1210

	Sept	Oct	Nov
VIROLA			
1" KD No.1 C&B			
boards	400	400	400
strips	370	370	370
CEDRO			
1"-1.5" KD	730	700	720
2" KD	760	700	720
2.5"-3" KD	790	750	750

Hardwood Markets

The world tropical timber trade is characterised by continuing weak demand coupled with relatively tight supply in many areas. In the Far East, supply is constrained by heavy rains, the continuing inability of mills to off load lower grades, reduced harvesting in the face of weak prices, and the on-going financial problems of Asian mills. This has led to firming prices for Asian timbers. Meanwhile prices for African species have weakened in the face of slow demand.

On the market side, China and the USA are two bright spots in a picture of otherwise weak global demand. China continues to buy as the state authorities, having cut back on domestic logging, have also introduced various policies to stimulate increased investment in infrastructure. The US economy remains buoyant, despite fears of a downturn in the wake of weaknesses elsewhere in the global economy. But supplies of many US species are plentiful, resulting in intense price competition amongst US hardwood exporters to Europe and prices for most species are either stable or weakening.

Overall European demand has not picked up in the Autumn to the extent that many shippers had hoped. European importers remain uncertain about the continuing strength of national economies as export markets have weakened, and many sectors are affected by weak prices and intense competition from Asian suppliers. On a brighter note, interest rates in many European countries have been reduced in an effort to stimulate business.

Reports from UK sources are mixed for the month of November. Many report limited demand and poor sales. However others, particularly those capable of satisfying demands for just-in-time purchases, report a more active month. While gaps may be appearing in the stocks of importers that have been buying short for some time, there is evidently nervousness about buying ahead. Intense competition is tending to force prices down.

The hardwood trade in other European countries has been affected by the Russian economic crises. Many manufacturers, particularly in Spain, Italy and Scandinavia, have suddenly lost a lucrative and previously growing Russian demand for hardwood products such as doors, joinery components and furniture. The introduction of the Euro in eleven member states of the EU from 1 January 1999, adds another element of uncertainty.

Christmas and the year end are now looming on the horizon. Importers will be reluctant to build up stock only to be held over the new year. Those whose financial year ends on 31 December may also hold off buying to improve their balance sheets.

Asian Hardwoods

Prices for Asian DRM/Seraya are on a firming trend as supplies have tightened in the Far East. Heavy rain in many areas has served to slow down log production. This has further constrained supply which was already tightening

as sawmillers scaled down or temporarily suspended operations in the face of weak demand. While there is some demand for high grade lumber from both European and Japanese buyers, many European buyers are being more selective in terms of species and sizes required. Markets and demand from Korea and other markets for lower grade material remain weak, further constraining overall production. Some mills are burdened with high inventories of lower grades for which no market can be found. Price levels for DRM/Sereya remain sufficiently low that increases of around 5% over the last 2 months will have little affected the species market position in relation to other redwoods. Some contacts are reporting a reasonably active market for the species in the UK, although many buyers are nervous about buying ahead and instead rely on Just-In-Time purchases. Agents are finding that the main problem is finding supplies at short notice. European buyers remain nervous about the apparent volatility of markets and prices in the Far East. Further increases in freight rates are anticipated in the new year due to the continuing trade imbalance in the Far East reducing availability of containers for export.

The move by Indonesia to export logs may have an impact on the overall structure of the trade in the Far East. Logs are reportedly being bought by India, Thailand, Japan, China and Korea. Demand from China and India seems to reflect restrictions on logging recently imposed in these countries. Increased demand for logs throughout the Far East also reflects extremely low levels of stocks as importers have held off buying for many months; coupled with strengthening currencies; moves to boost growth in various countries through increased government spending on infrastructure; and rebuilding work in various areas following recent severe flooding. On 22 October the first shipment of Indonesian logs for almost 14 years was discharged in Tokyo. The vessel was carrying around 7,500 m³ of logs, mostly meranti. There are reports that Sabah and Sarawak are following in Indonesia's footsteps. Producers are finding it more profitable to sell logs on the international market than to supply domestic sawmills and plywood mills which are currently unable to match prices paid by overseas manufacturers.

Increased log exports are having a direct impact on Indonesia's glulam business, a significant supplier to Germany's window manufacturers. By increasing domestic log prices, Indonesian government moves to allow log exports are adding to the existing financial difficulties of manufacturers. Indonesia's glulam manufacturers recently announced price increases in an effort to offset rising raw material costs and the strengthening value of the rupiah on international markets.

Local press reports suggest that Indonesia is currently experiencing a severe log shortage - of the country's 36.2 million m³/annum requirement, only 26 million m³ is expected to be available this year. An indication of the scale of the problem is provided by news that Indonesia, with vast plantations of its own, is currently

importing teak from Papua New Guinea.

African Hardwoods

Prices for Sapele have weakened in the face of continuing low demand and intense price competition from Asian species. Despite rising prices for DRM, the price differential between Sapele and the Asian redwood remains considerable. West Africa has reached the end of the wet season and conditions are now hot and dry, firming up roads and drying out the bush. Cameroon's transport strike has also come to an end. Supplies are expected to return to normal after the new year.

Cameroon shippers are concerned about the potential impact of a log export ban due to be imposed in three months time. At present domestic processing capacity and timber markets are relatively undeveloped. According to ITTO Market News Service, industry contacts in Cameroon are concerned about lack of investment funding for the further development of processing capacity in the country. The prospect of increased volumes of sapele sawnwood coming onto the international market at a time of weak demand is also of concern.

Supplies of iroko are now easier to obtain, although agents note it can be difficult to buy without also taking random lengths. Randoms are typically sold to the Far East and North Africa, but are difficult to off-load under present market conditions. Strong demand for Iroko in Ireland continues to shore up prices.

Few Ghanaian shippers are offering redwoods, preferring to hold onto these until prices show signs of strengthening. Wawa, which is relatively easy to obtain, cut and kiln, is being offered to maintain cash flow. The result is that there is now too much wawa on the market chasing too few buyers and prices have weakened. Weak demand for wawa in South Africa has contributed to lower prices. Some wawa is being exported into the Far East where it is converted into mouldings, but volumes are relatively small. Recent figures released by Ghana's Forest Products Inspection Bureau indicate that during the first seven months of 1998, Ghana's timber exports fell by about 2000 m³ compared with 1998. However export earnings increased by around 8%.

The problems within Gabon's forestry sector continue. SNBG is effectively bankrupt and unable to pay the forestry operators. Many are now refusing to supply timber to SNBG. Exports of okoume and ozigbo logs, over which SNBG has a monopoly, have been effected and this is creating difficulties for French plywood manufacturers. Exports are currently focusing on Asian destinations and species other than okoume and ozigbo not covered by SNBG. There is talk of increased private sector involvement in SNBG and of liberalising the trade.

South American Hardwoods

Brazil's timber industry is facing difficult times ahead, despite the recent announcement of an IMF support package of around US\$41 billion over the next 12 months designed to stave off

USA TEMPERATE HARDWOODS INDICATIVE PRICES (North Appalachian) US\$ CIF UK MBM KD square edged net measure after kilning			
	Sept	Oct	Nov
\$/£	1.71	1.69	1.66
RED OAK			
1"	1850	1850	1850
1.25"	1950	1950	1950
1.5"	2030	2030	2030
2"	2280	2280	2280
WHITE OAK			
1"	1675	1675	1675
1.25"	1730	1730	1730
1.5"	2100	2100	2100
2"	2670	2670	2670
ASH			
1"	1230	1215	1215
2"	1560	1545	1545
TULIPWOOD			
1"	1080	1080	1080
1.25"	1100	1100	1100
1.5"	1160	1160	1160
2"	1250	1250	1250
CHERRY			
1"	3350	3350	3350
1.25"	3350	3350	3350
1.5"	3400	3400	3400
2"	3550	3550	3550
HARD MAPLE			
1"	1975	2020	2020
1.25"	2170	2265	2265
1.5"	2275	2275	2275
2"	2390	2420	2420

economic collapse. Brazil is struggling to contain a huge budget deficit, estimated at about US\$60 billion, and to prevent its debt burden becoming so large as to raise fears of default. Cardoso's newly elected government has announced, with enthusiastic IMF support, an austerity programme to cut spending and raise taxes. In the interests of economic stability, Cardoso is committed to maintaining the country's exchange rate regime and firm monetary policy. If the government implements this policy, it will tend to lead in the short term to less favourable trading conditions for hardwood producers. Domestic markets will be dampened by the austerity measures and Brazil's exporters will have difficulty competing with Asian producers benefitting from devalued currencies. Interest rates will remain high and credit difficult to obtain from Brazilian banks.

Brazil's hardwood export trade is very quiet. There are stocks of mahogany in Belem, but little is being shipped as export quotas have already expired. New quotas will be issued in January. IBAMA has also imposed a total ban on logging, processing and trading mahogany in South Para State. The ban is designed to allow IBAMA time to reassess management plans in Brazil. Coming towards the end of the logging season, the ban is unlikely to have a significant impact on the mahogany trade. Prices for mahogany have remained flat over the last month, although there are some reports of slight price weakening for mahogany imported into the United States.

Brazil's cedar trade is effectively on hold. Cutting of the species has been limited in the face of low prices and weak market demand. Some agents are speculating that if supply constraints become more significant in the Far East, interest in the species may increase.

North American Hardwoods

Stocks of US hardwood landed in Europe are not regarded as high, but are sufficient given the current level of demand and speed at which exporters can ship. Export markets for US producers are sluggish. US exporters have been disappointed by slow European markets during the Autumn.

Shipments of white oak, the main US export species to Europe, are reported to have been slow during November. However, a report in *Hardwood Review Export* suggests that several exporters returned from trips to Europe at the end of the month with good orders for the species. Inquiries for white oak from Asia are also improving but pricing is very competitive.

There are signs that demand for hard maple is strengthening. There seems to be particularly strong demand for the species in thicker sizes from Germany. Problems of supply in these sizes have emerged due to the logistics of milling hard maple in the US. In the face of weak demand for lower grade 1" hard maple, mills have cut back on production in the smaller size. However, because 2" hard maple is generally cut alongside 1", production in the larger size has also been reduced.

There are reports that hard maple is again being bought in the Far East, albeit in relatively small quantities. However, US exporters into the region are not looking for substantial improvements in these markets until late 1999 or early 2000. US domestic demand for hard maple has continued to show improvement.

While the heat appears to have been taken out of the cherry market in Europe, demand and prices for the species remain firm. Widespread use of cherry by furniture manufacturers exhibiting at the Furniture Show in Valencia in Spain demonstrated the current popularity of this species. Elsewhere in Europe, the Danes also report firm demand for cherry. Cherry sales are also strong in US domestic markets. On the supply side, a reduction in harvests in the Allegheny National Forest following protests from environmentalists has led to a more chaotic market for cherry logs in the region, which has had a domino effect elsewhere.

Ash prices remain weak and there appears to be limited interest in the species in many key European markets, including the UK.

The tulipwood market remains weak. AHEC are aiming to raise the profile of this species through a new promotional project (called the Koomen project) launched in November at ASFI, the UK's furniture show in Birmingham.

German demand for oak and maple remains firm, while there is little interest in ash or tulipwood. The Italian market is becoming more interested in dimension products.

Mixed signals in euroland

Recent forecasts of GDP growth throughout Europe reveal the level of uncertainty over current performance and future prospects for the continent's economy.

The *Economist's* monthly poll of forecasters reveals that while many analysts believe that the European economy has grown more strongly than expected during 1998, predictions for 1999 are becoming gloomier. Evidence of fairly strong growth during the first half of 1998, has meant that this year's forecasts for Britain, France, Germany and the Netherlands have been raised. However, the forecasters are predicting much slower growth than expected throughout Europe during 1999 as fears have risen over the global economy. European economies are beginning to feel the cold from the Asian and Russian crises. Exports are being hit hard, commodity prices have fallen, and European manufacturers are having to compete with the flood of cheap Asian products entering European markets.

In an effort to raise the competitiveness of European manufacturing industries, and in preparation for the launch of the euro from 1 January 1999, European interest rates are being lowered across the board. From January rates throughout the Euro-11 countries will be set from Frankfurt by the European Central Bank, with the needs of Germany and France mainly in mind. Because the core of euroland is growing sluggishly these rates will be low, likely to be set around Germany's 3.3%. While rates of GDP growth will slow throughout Europe, it is notable that, amongst European economies, only the UK is forecast as heading for growth rates of less than 1%.

In its twice yearly report, OECD predicts that the UK economy will grow by 0.8% next year and by 1.5% in 2000. OECD's prediction of relatively weak growth is based on the assumption that short term interest rates will drop from their current 6.75% to below 6% late next year and to 5% in 2000. However, the UK Treasury remains concerned that cuts this big would push inflation above government targets. OECD emphasises that it is difficult to predict the SCALE of the economic slowdown in Britain, because of the uncertain world outlook.

OECD's predictions are closely in line with those of the Confederation of British Industry, who recently reduced their forecast for GDP growth from 1.2% to 0.7%. CBI's move followed publication of a survey that indicated UK

business confidence is now lower than at any time since 1980. CBI are calling for further cuts in interest rates.

Despite the evidence of declining business confidence, not all indicators point to recession in the UK next year. Consumer spending, which accounts for 60% of GDP, ought on current evidence to be fairly buoyant next year. In contrast to the run up to recession in the early 1990's, when consumer spending fell, Britons have not overstretched their finances in the housing market. Nor are they facing interest rates of 15%. Some analysts suggest that consumers' spending power in 1999 should be double what it was

FORECASTS OF GDP GROWTH - NOVEMBER AVERAGES (previous month's, if changed)

	1998	1999
Austria	2.7 (2.8)	2.4 (2.7)
Belgium	2.8	2.2 (2.4)
Britain	2.6 (2.3)	0.7 (0.8)
Denmark	2.7	2.0 (2.2)
France	3.0 (2.9)	2.3 (2.4)
Germany	2.7 (2.6)	2.0 (2.2)
Italy	1.7 (1.8)	2.1 (2.3)
Netherlands	3.7 (3.6)	2.7 (2.9)
Spain	3.8	3.4 (3.5)
Euro-11	2.8	2.3 (2.6)

The Economist - Poll of Forecasters

in 1990, and slightly up on this year.

There are fears that Ireland's economy is overheating, a situation which is intensifying as interest rates are lowered in preparation for the country's adoption of the euro. GDP growth in Ireland is set to top 9% this year, and analysts believe such fast growth cannot be sustained for long without running into inflationary pressures. Signs of inflation are already emerging. Dublin house prices have risen 40% this year and consumer borrowing is up over 20%. However, the downturn in the global economy could yet cool things down, particularly as Ireland's exports account for nearly 90% of GDP.

France's economy grew at a slower pace in the third quarter of 1998 than previously. GDP was up 0.5% against a gain of 0.8% in the second quarter. France's official index of business confidence declined significantly in November.

However growth in the Netherlands remains strong. GDP was up 3.4% in the third quarter on the same period last year, against a gain of 4.3% in the first 6 months. Consumer spending in the third quarter was up 4.8%, the biggest gain since 1990.

New guide to American hardwoods

AHEC have produced a Guide to American Hardwoods providing information on the properties, durability, availability, uses, and geographical provenance of the principle American species. The purpose of the publication is to provide designers, architects, specifiers and users with the generic species information needed for a range of applications in furni-

ture, joinery, flooring, doors and interiors. The publication includes colour plates of each species and of the hardwoods in use. It also provides brief guidelines on structural applications and strength properties of American hardwoods, and on pre-treatment properties and exterior applications. Further details AHEC - Tel (44) 171 6264111, Fax 44 171 626 4222

UK Imports

Statistics are based on official figures of HM Customs and Excise. We try to amend anomalies, but it is not always possible to identify them. The imports of tropical wood apparently coming from continental Europe may include goods transhipped through a continental port. Boules and forms of square edged stock may be included under 'logs'. Where species are shown as coming from a source where it is known they do not occur, then it is assumed that the wood is wrongly identified and it is classified under "others" for that country. Major inconsistencies between volumes, weights and values are reconciled by estimates based on previous performance and marked 'E'.

From countries outside the E.C.

UK IMPORTS SAWN TROPICAL

Classifications: 440724.90.0, 440725.60.0, 440725.80.0, 440726.70.0, 440726.80.0, 440729.61.0, 440729.69.0, 440729.99.0, 440799.98.0

<u>m3</u>	<u>July</u> <u>1998</u>	<u>Aug</u> <u>1998</u>	<u>Cum.</u> <u>1998</u>
BOLIVIA		35	482
BRAZIL	861	578	8951
BURMA		70	147
CAMEROON	1972	2678	13718
CONGO	139		139
COSTA RICA			13
ECUADOR	11		18
GABON			128
GHANA	3063	1968	18161
GUYANA		20	4913
HONDURAS			28
INDIA	7		41
INDONESIA	398	521	2505
IVORY COAST	1706	1174	10972
MALAYSIA	4734	6412	38915
MEXICO		22	33
NIGERIA	94	40	282
PAPUA N.G.	25	31	221
PERU	27	35	84
PHILIPPINES	23	46	440
SINGAPORE	442	226	1526
SOL. ISLANDS			16
TANZANIA			148
THAILAND		30	218
TRIN. & TOB.			30
ZAIRE	46		322
TOTAL	13548	13886	102451

UK IMPORTS SLEEPERS

Treated & Untreated

Classifications: 440610.00.0, 440690.00.0

<u>m3</u>	<u>July</u> <u>1998</u>	<u>Aug</u> <u>1998</u>	<u>Cum.</u> <u>1998</u>
AUSTRALIA	620	390	4847
CZECH REP.			33
POLAND			18
RUSSIA			50
SLOVAKIA			4
TOTAL	620	390	4952

UK IMPORTS LOGS TROPICAL

Classifications: 440341.00.0, 440349.10.0, 440349.20.0, 440349.30.0, 440349.40.0, 440349.50.0, 440349.60.0, 440349.70.0, 440349.90.0, 440399.99.0

<u>m3</u>	<u>July</u> <u>1998</u>	<u>Aug</u> <u>1998</u>	<u>Cum.</u> <u>1998</u>
BURMA			30
CAMEROON	2275	3028	23586
CONGO			239
ECUADOR			27
EQ. GUINEA			157
GABON	445	215	3557
INDONESIA	38	29	157
IVORY COAST	99		99
LIBERIA		105	345
MALAYSIA	189	247	1867
MOZAMBIQUE			24
NIGERIA	184	32	625
PAPUA N.G.			87
SINGAPORE			130
TANZANIA			10
TOTAL	3230	3656	30940

UK IMPORTS LOGS

TEMPERATE HARDWOOD

Classifications: 440391.00.0, 440392.00.0, 440399.10.0, 440399.20.0, 440399.30.0, 440399.50.0, 440399.99.0

<u>m3</u>	<u>July</u> <u>1998</u>	<u>Aug</u> <u>1998</u>	<u>Cum.</u> <u>1998</u>
BEECH			
CANADA			7
ROMANIA	27	133	433
SERB. & MONT.			30
BIRCH			
CANADA			324
ESTONIA	415	307	9250
LATVIA	211	349	1893
LITHUANIA			34
POLAND	73	72	526
RUSSIA		44	480
OAK			
CZECH REP.			1
RUSSIA			103
POPLAR			
CZECH REP.	19		19
USA			39
OTHER			
AUSTRALIA	33	4	84
CANADA	166	350	1486
CZECH REP.			14
ESTONIA*	2270	2172	22217
LATVIA*	6080	2734	39579
LITHUANIA			173
NORWAY			172
POLAND	53	12	305
RUSSIA	63		1224
S. AFRICA	25		99
USA	1418	1211	9757
TOTAL	10853	7388	88249

*May contain softwood

UK IMPORTS SAWN TEMPERATE

Classifications: 440791.90.0, 440792.90.0, 440799.91.0, 440799.93.0, 440799.98.0

<u>m3</u>	<u>July</u> <u>1998</u>	<u>Aug</u> <u>1998</u>	<u>Cum.</u> <u>1998</u>
BEECH			
CANADA	21	12	131
JAPAN	11		11
POLAND			37
ROMANIA	28	75	545
RUSSIA			55
SERB. & MONT.	15		95
SLOVAKIA		26	71
USA		57	164
OAK			
CANADA	574	360	3917
CZECH REP.			8
ESTONIA	141	533	1051
HONDURAS			28
LATVIA		86	86
LITHUANIA	56		196
RUSSIA		65	216
SERB. & MONT.			22
SLOVAKIA	39		255
UKRAINE	78		256
USA	4188	4274	40935
POPLAR			
CANADA	143	29	302
LATVIA	363	367	929
LITHUANIA	39		39
RUSSIA			56
USA	939	751	5740
WALNUT			
CANADA	31	55	406
USA	74	67	839
OTHER			
AUSTRALIA		25	325
CANADA	1333	1332	9462
CHILE			167
CHINA			75
ESTONIA*	869	672	9023
LATVIA*	6245	5288	52721
LITHUANIA			168
NORWAY			674
POLAND		49	98
RUSSIA	301	154	1423
S. AFRICA	21	59	331
USA	2810	3545	30852
TOTAL	18319	17881	161709

* May contain softwood

UK IMPORTS BLOCKBOARD, LAMINBOARD, BATTENBOARD

Classifications: 441222.91.0, 441229.20.0, 441292.91.0, 441299.20.0

<u>m3</u>	<u>July</u> <u>1998</u>	<u>Aug</u> <u>1998</u>	<u>Cum.</u> <u>1998</u>
BRAZIL	141	438	1724
CHINA	2	11	123
CZECH REP.			40
INDONESIA	2439	975	12132
LATVIA		38	76
LITHUANIA			129
MALAYSIA	108	156	557
NORWAY		18	110
POLAND	42	2	165
SINGAPORE	2		2
SWITZERLAND	4		16
USA			351
TOTAL	2738	1638	15425

UK IMPORTS PLYWOOD & OTHER LAMINATED BOARD			
Classifications: 441213.11.0, 441213.19.0, 441213.90.0, 441214.00.0, 441219.00.0, 441222.99.0, 441229.80.0, 441292.99.0, 441299.80.0			
m3	July 1998	Aug 1998	Cum. 1998
ARGENTINA			8
BELARUS			329
BRAZIL	15356	13867	89679
CANADA	4602	1436	43812
CHILE	2256	1283	5137
CHINA	732	479	3446
ESTONIA	214	345	3956
GHANA		28	280
GUYANA			3298
HONG KONG			1
INDIA			3
INDONESIA	26940	15886	114451
ISRAEL	158	73	1078
JAPAN		7	56
LATVIA	2586	3073	23159
LITHUANIA	808	757	8440
MALAYSIA	15389	16706	94547
MOROCCO	77	64	662
NORWAY	242	318	2021
PHILIPPINES			155
POLAND	120	194	1553
ROMANIA			11
RUSSIA	11961	6975	67706
SINGAPORE	133	42	266
SLOVENIA	68	25	327
SOUTH KOREA	38	3152	7056
SPAIN			65
SWITZERLAND			398
TAIWAN			7
THAILAND	83		114
USA	6051	5065	197775
TOTAL	87814	69775	669788

UK IMPORTS VENEERS			
Classifications: 440831.11.0, 440831.21.0, 440831.25.0, 440831.30.0, 440839.11.0, 440839.21.0, 440839.25.0, 440839.31.0, 440839.35.0, 440839.51.0, 440839.61.0, 440839.65.0, 440839.81.0, 440839.89.0, 440839.91.0, 440839.99.0, 440889.81.0, 440890.89.0			
m3	July 1998	Aug 1998	Cum. 1998
AUSTRALIA			2
BRAZIL	10		43
CAMEROON	31		79
CANADA	91	9	543
CHINA			28
CONGO			141
ESTONIA		30	60
GHANA	379	230	2218
HUNGARY			65
INDONESIA			213
IVORY COAST		42	168
LATVIA	132	216	926
MALAYSIA		21	114
RUSSIA		63	380
S. AFRICA	108	220	1435
SINGAPORE			32
SLOVENIA	62		277
SWITZERLAND	51	2	341
THAILAND	33	19	290
USA	865	549	7518
ZAIRE	105	126	1133
TOTAL	1867	1527	16006

Based on Abacus Data Services

UK imports from within the E.C.

HM Customs & Excise data for trade within the E.U is subject to delay. Because of new methods of statistical collection returns remain incomplete. Statistics are recorded as received and may be corrected subsequently (C).

INTRA E.C. UK IMPORTS HARDWOOD LOGS			
Classifications: 440341.00.0, 440349.10.0, 440349.20.0, 440349.30.0, 440349.40.0, 440349.50.0, 440349.60.0, 440349.70.0, 440349.90.0, 440399.99.0			
m3	June 1998	July 1998	Cum. 1998
BEECH			
DENMARK		106	264
FRANCE	63	56	222
GERMANY			20
SWEDEN			21
FINLAND	26		40
OAK			
GERMANY	6		6
BELGIUM		230	230
DENMARK		7	7
OTHER			
BELGIUM		25	69
FINLAND	1197		3637
FRANCE	80	27	C602
GERMANY	180	205	C1172
IRELAND	12		54
NETHERLANDS	87		121
SPAIN			1
SWEDEN	2416		7351
TOTAL	4067	656	C13817

INTRA E.C. UK IMPORTS PLYWOOD			
Classifications: 441213.11.0, 441213.19.0, 441213.90.0, 441214.00.0, 441219.00.0, 441222.99.0, 441229.80.0, 441292.99.0, 441299.80.0			
m3	June 1998	July 1998	Cum. 1998
AUSTRIA			29
BELGIUM	1667	499	C5587
DENMARK	84	78	662
FINLAND	7235	8804	C40481
FRANCE	1596	832	C15464
GERMANY	675	459	5524
IRELAND	312	96	C1765
ITALY	527	923	5606
NETHERLANDS	9	172	813
SPAIN	223	1016	3009
SWEDEN	373	348	C3673
TOTAL	12701	13227	C82613

INTRA E.C. UK IMPORTS BLOCKBOARD, LAMINBOARD, BATTENBOARD			
Classifications: 441222.91.0, 441229.20.0, 441292.91.0, 441299.20.0			
m3	June 1998	July 1998	Cum. 1998
BELGIUM			C69
DENMARK			233
FINLAND	1059	251	C3233
FRANCE	36		36
GERMANY	337	159	496
IRELAND	2		17
ITALY	86	1	305
NETHERLANDS	536		C1139
SWEDEN	164		373
TOTAL	2220	411	C5901

INTRA E.C. UK IMPORTS SAWN HARDWOOD			
Classifications: 440724.90.0, 440725.60.0, 440725.80.0, 440726.70.0, 440726.80.0, 440729.61.0, 440729.69.0, 440729.99.0, 440799.98.0			
m3	June 1998	July 1998	Cum. 1998
BEECH			
BELGIUM	96		355
DENMARK	334	85	1228
FINLAND			66
FRANCE	171	46	634
GERMANY	2572	2244	16581
ITALY	6		43
NETHERLANDS		59	105
SWEDEN			35
OAK			
FINLAND			97
FRANCE	759	597	3867
GERMANY	215	73	789
IRELAND			1
NETHERLANDS	24	18	305
WALNUT			
FRANCE			2
IRELAND	1		1
OTHER			
BELGIUM	336	343	C3272
DENMARK			C421
FINLAND	833	253	2663
FRANCE	208	203	C2835
GERMANY	463	330	C6265
IRELAND	76	56	C644
NETHERLANDS	1034	1052	C7323
SPAIN	127	218	C1365
SWEDEN	2249	2651	C16310
TOTAL	9504	8228	C65207

INTRA E.C. UK IMPORTS VENEERS			
Classifications: 440831.11.0, 440831.21.0, 440831.25.0, 440831.30.0, 440839.11.0, 440839.21.0, 440839.25.0, 440839.31.0, 440839.35.0, 440839.51.0, 440839.61.0, 440839.65.0, 440839.81.0, 440839.89.0, 440839.91.0, 440839.99.0, 440889.81.0, 440890.89.0			
m3	June 1998	July 1998	Cum. 1998
BELGIUM	222	144	1243
DENMARK	27	19	386
FINLAND	23	15	171
FRANCE	80	219	C1197
GERMANY	298	252	C2280
IRELAND	41		351
ITALY	94	6	208
NETHERLANDS	18	31	175
PORTUGAL	20		24
SPAIN			C48
SWEDEN	98		121
TOTAL	921	686	C6204

INTRA E.C. UK IMPORTS SLEEPERS TREATED & UNTREATED			
Classifications: 440610.00.0, 440690.00.0			
m3	June 1998	July 1998	Cum. 1998
BELGIUM	70		70
DENMARK	6		6
FRANCE	367	883	C3834
GERMANY	3	1696	2959
IRELAND		40	120
ITALY	1		1
NETHERLANDS	6	626	743
SPAIN			C692
SWEDEN	18		70
TOTAL	471	3245	C8495

Plywood prices bounce back

Tightening log supply, increased demand and currency fluctuations in the Far East have conspired to produce rapid increases in plywood prices during November. Prices which were standing at around INDO96 less 25/27 at the end October, have now reached INDO96 less 15/16.

Log prices in the Far East have been rising as supplies have been constrained due to the unusually heavy rains throughout the Far East. Moves by the Indonesian authorities to allow the export of around 500,000 m³ of logs may also have had the effect of forcing up log prices for supply to domestic plywood mills. Local press reports in Indonesia indicate a severe log shortage throughout the country.

China's decision to cut back on logging has also served to substantially increase the country's demand for imported logs and forest products. China's efforts to protect its natural forests have materialised just at a time when the nation's government is seeking to force the pace of growth. China's government has introduced policies designed to ensure the country reaches its target rate of growth of 8% for 1998. Measures have included reduced interest rates and increased investment in infrastructure. Demand for panel products for home repair and agricultural irrigation works in flood affected areas is also on the rise. Recent data suggests China's rate of growth grew 7.6% in the third quarter of 1998, up from 7% in the second quarter.

Exchange rate changes have added to the momentum. The yen-dollar exchange rate increased rapidly during the early weeks of October from 115 to 135, before settling at around 120 at the end of October. This rate has been sustained throughout November. The strengthening yen encouraged Japanese importers to buy and pushed up dollar prices for Indonesian plywood. Meanwhile Indonesia's rupiah-dollar exchange rate has continued to strengthen during November and now stands at around 7650. Indonesian producers have been keen to push US\$ prices upwards to maintain levels of rupiah income.

Korean importers, whose stocks of both logs and plywood are extremely low, have become con-

cerned about supply problems and rising prices. As a result they too have started to place orders for logs in expectation of growing demand. Heavy flooding has meant that market demand for plywood in the country has also increased. ITTO's Market News Service reports that Indonesian plywood production for the remaining period of this year has been fully taken up. Plywood production for the year is estimated to reach 8.8 million m³, around 60% of installed capacity. Following the price rises, the Indonesian government is hoping that total plywood exports will reach targets of US\$2.5 billion.

While Brazilian exporters still haven't entered the market, rising Asian prices and strengthening Asian currencies are beginning to work in their favour. Brazilian exporters are desperately in need of growth in export markets as Brazil's severe recession, high interest rates and IMF backed austerity programme have led to stagnation in domestic markets.

UK importers are holding off purchasing until a clearer picture emerges of the supply and demand situation. Most still appear to be unwilling to pay the new prices. The UK market is fairly well stocked and demand sluggish. Importers unable to off-load stock bought earlier at lower prices are unenthusiastic about paying higher prices now. However the condition of the UK market is confused by the continuing unreliability of shipments from the Far East.

At time of writing, a number of contacts were confident that prices would stabilise at around INDO96 less 15. This forecast is based on the assumption that log shortages in the Far East are likely to be protracted and that a return to oversupply is unlikely. Conversely price levels are unlikely to rise much further due to continuing underlying weaknesses in Far Eastern markets and the unwillingness of Chinese buyers to pay higher prices. However long term predictions of future developments in the plywood sector can only be regarded as tentative given the volatility of exchange rates, the signs of political instability in Indonesia, and uncertainty over the future of Japan's economy.

Ghana export figures

Figures released by Ghana's Forest Product Inspection Bureau indicate that during the first seven months of 1998, 135 Ghanaian shippers exported 237,000 m³ of forest products valued at US\$97m. The major export item was sawn timber comprising 77,000 m³ of kiln dried and 65,500 m³ air dried. Other exported commodities included 25,000 m³ of peeled veneers, 19,000 m³ of sliced veneers, 21,000 m³ of logs. Finished and semi finished products including furniture components and mouldings accounted for an increased export share. The major export species was wawa including 60,000 m³ of kiln dried and 14,000 m³ of air dried. Iroko was the second most exported species accounting for around 21,000 m³.

China's import demands

By 2000, China's annual domestic timber supply is expected to be around 63 million m³, while demand will have expanded to 119 million m³. Increased consumption is expected to result from development in the real estate market, rising levels of disposable income, and growing levels of sophistication in interior design and furnishing.

China have launched a crackdown on rampant illegal logging which has contributed to the loss of some 440,000 hectares of forest each year. Government departments and the police will work to stamp out persistent unauthorised logging. According to government reports, some 600,000 cases of illegal logging were reported last year.

Borneo fires damage 8 million hectares

New estimates of areas affected by fires in Borneo over the last two years suggest the damage was greater than expected. It now seems that more than 3 million hectares of forest land in East Kalimantan, Sabah and Sarawak were affected by fire this year. The total area affected by fire over the last two years is estimated to amount to 8 million has. The new estimates have been issued by the University of Singapore's Centre for Remote Imaging, Sensing, and Processing (CRISP). Earlier estimates had suggested that only 518,000 hectares had been damaged in the first half of this year. Of Malaysian states, fire damage was more pronounced in Sabah than in Sarawak. CRISP note that the fire situation is now under control.

Gabon's SNBG bust

A report from Reuters has highlighted the continuing difficulties of Gabon's forest sector. SNBG, the state controlled agency that monopolises trade in okoume and ozigbo logs, is effectively bankrupt. Debts owed by SNBG to forestry operators have piled up and SNBG's financial losses are said to have reached around 20 billion CFA (US\$36 million). Many forestry operators have refused to supply SNBG as they no longer believe they will be paid. They have demanded that the Ministry of water and forests provide them with a letter of guarantee, certifying that they will be paid for their deliveries within a 60 day period. The foresters refusal to supply SNBG is jeopardising a plan devised to help SNBG pay its suppliers. The SNBG had agreed with its creditors to buy 20,000 m³ of logs in September, 45,000 in October, and 50,000 in November and December. However, foresters only sold around 11,000 m³ to SNBG in September and continue to defy the government's pleas to supply them with wood. Many larger forestry firms are keen to see the end of SNBG, although smaller firms want it to stay to provide a price guarantee role.

Already there is talk of increasing private sector involvement in SNBG and of liberalising Gabon's export trade. SNBG is 51% owned by the government, and the remaining 49% shared by forestry operators. Plans have been mooted to sell off part of the government's stake. In September, the government authorised the private sector to export a small amount to countries other than SNBG's "traditional markets" which include Europe, Turkey, Morocco and Israel.

IMF support to Cambodia suspended

The IMF and World Bank have indefinitely suspended support programmes to Cambodia, citing the country's inability to meet their economic criteria, including their failure to account properly for forest revenues. IMF report that Cambodia's Government has lost revenue of over US\$100 million due to illegal logging. In May 1994, IMF had approved a US\$120 million 3 year loan to Cambodia, only about half of which has so far been disbursed.

European hardwood consumption ends long term decline

The UN/ECE Timber Committee released its annual market statement at the beginning of October. The report suggests that both European production and consumption of sawn hardwood may have ended a long term decline.

The Committee forecast slight rises in consumption during 1998 and 1999 to reach 16.9 million m³. The movements however are not universal: France the largest consumer, with a forecast increase of 4.1% to 2.9 million m³ in 1998, contrasts with Italy, the second largest consumer, with a forecast decrease of 4.3% to 2.4 million m³.

Net European imports of sawn hardwood, of which approximately one third are tropical, have remained consistently around 6.5 million m³. The decline in tropical sawnwood imports appears to have ceased; they are expected to remain at a level of 2 million m³ to 1999.

In contrast to Europe, N. American long term hardwood production and consumption trends have been climbing. This trend is set to continue. Consumption and production are forecast to increase by an average of around 7% in 1999, to record levels of 29.3 million m³ and 33.0 million m³ respectively.

Spain saw a 75% increase in sawn hardwood imports between 1996 and 1997, becoming the second largest importer after Italy.

US sawn hardwood exports to both European and Asian destinations were at record levels in 1997, and a further increase is forecast for

1998, to reach 4.8 million m³. With the exception of those to China, most exports formerly intended for Asian markets were forecast to be absorbed by alternative markets, including Europe. However, the apparent weakness of European markets in late 1998, suggests that this forecast may be overly ambitious. The most recent forecasts of US hardwood exports are showing sharp declines in 1999.

Light coloured species, especially beech, are in demand. White oak has declined in furniture markets, but picked up in joinery and barrel manufacturing. Hardwood flooring consumption for new houses in North America and renovations in Europe has tripled over the last decade. The report comes to the predictable conclusion that tropical forest production is in complete chaos due to the Asian crises. Production and export volumes have fallen by as much as 25%, despite a drop in prices by up to 50%.

In Europe, hardwood log consumption was forecast to rise in line with sawnwood production requirements. With slight rises in 1998 and 1999, tropical log imports are also forecast to end their steady decline.

Slight increases in European plywood consumption and imports are also forecast. Tropical imports from SE Asia are expected to increase in 1999 due to favourable exchange rates. Few changes are forecast for European plywood production, as Finland has completed its capacity expansion during the last few years.

Wood based panel consumption is expected to continue to increase by 3% in 1998, and 2% in 1999 to a record level of 46.3 million m³. Im-

portant production increases in Europe are forecast for the same period due to new installed capacity for MDF, particle board and OSB. There appears to be a growing danger of over supply in Europe for these 3 commodities. European exporters had been developing markets for these products in the Far East, but these are now stagnant. The industry is looking for new outlets in Eastern Europe and the US. The Committee's discussion highlighted the dramatic growth and prospects for engineered wood products in both North America and Europe. Glulam, I joists and LVL are increasingly acting as substitutes for sawnwood and partly use lower quality raw material for similar or superior strength characteristics.

In western Europe, GDP growth averaged 2.7% in 1997 and no less than 3.8% in North America. Initial forecasts were for equivalent levels of growth in 1998 - although these estimates have been revised downwards due to the Asian crises. Many Eastern European countries saw relatively high growth rates in 1997 - the average rate of growth for the European transition economies and CIS being positive for the first time since 1989. Initial expectations were for a continuation of this growth in 1998 and 1999 - but the financial crises in Russia has cast doubts on these forecasts.

The process of concentration in the forest products sector through mergers and acquisitions continues. The average size of production units, even in hitherto smaller scale sectors, such as sawmilling, is increasing.

UN/ECE TIMBER COMMITTEE HARDWOOD AND PANEL PRODUCTS FORECASTS FOR 1998 AND 1999

	Consumption			Production			Imports			Exports		
	1997	1998	1999	1997	1998	1999	1997	1998	1999	1997	1998	1999
Europe												
Sawn hardwood	16.54	16.98	17.12	12.75	13.14	13.37	6.39	6.55	6.5	2.6	2.7	2.74
temperate	14.17	14.53	14.7	12.25	12.65	12.91	4.39	4.46	4.42	2.48	2.58	2.63
tropical	2.37	2.45	2.42	0.49	0.48	0.46	2	2.09	2.08	0.13	0.12	0.12
Hardwood logs	34.83	35.56	35.55	30.31	31.11	31.24	7.8	7.98	2.83	3.28	3.53	3.53
temperate							5.74	5.78	5.6	3.23	3.47	3.47
tropical							2.06	2.2	2.24	0.05	0.06	0.05
Plywood	5.9	5.93	6	3.56	3.54	3.58	4.48	4.59	4.63	2.14	2.21	2.21
Particle board	30.71	31.83	32.29	32.44	34.13	35.03	7.34	7.01	6.9	9.07	9.3	9.64
MDF	4.29	4.52	4.98	4.71	5.14	6.29	1.75	1.73	1.29	2.17	2.35	2.59
North America												
Sawn hardwood	26.94	27.28	29.34	30.49	31.02	33.05	2.2	2.15	2.21	5.75	5.89	5.92
Hardwood logs							1.74	1.4	1.51	1.69	1.84	1.97
Plywood	17.6	16.81	16.38	17.73	16.93	16.57	2.05	1.88	1.9	2.18	2	2.1
Particle board	25.8	25.3	25.69	25.29	26.04	26.59	6.21	6.17	6.22	6.43	6.91	7.12
MDF	2.11	2.22	2.31	2.4	2.51	2.6	0.13	0.13	0.12	0.42	0.42	0.41

Bright prospect for dimension markets

A presentation by Steven Lawser, Director of the US Wood Component Manufacturers to the IWF 98 Fair, highlights the growing market for hardwood dimension and component products. Many US sawmills are now producing cut-to-size dimension products, while producers of rough dimension are moving into the production of semi and fully machined component parts. Rising production costs and increased global competition have caused finished wood product manufacturers to re-evaluate the need to produce everything in house. Purchasing components from outside sources allows a manufacturer to more accurately determine and con-

trol production costs, making it easier to calculate profitable selling prices. This has created a trend amongst woodworkers to produce more value added products as a way to diversify.

US hardwood dimension and component shipments are expected to reach US\$325 million in 1998, an increase of 7.7% over the previous year. The largest market for dimension and component parts are furniture, cabinetry, and building products including mouldings and flooring. Red oak is the dominant species, followed by hard maple, then poplar, white oak, cherr and soft maple. There is also a growing use of engineered wood to produce component products.

Indonesia hits targets

A report from the Indonesian Forestry Society suggests that Indonesia is likely to meet its target of exporting US\$8.3 billion in forestry products during 1998. The expected breakdown of export earnings is as follows: US\$2.5 billion of plywood; US\$3.5 billion of paper and pulp; US\$1 billion of sawn timber; US\$500 million of furniture; and US\$300 million of logs. Despite the severe economic problems, the report makes the remarkable claim that there have been no layoffs at the country's 155 plywood mills, 800 sawmills, and 450 companies with forest concessions.

Value added *Continued from back page*

perience shows that these bans can be damaging if introduced without adequate consideration of other factors, including availability of expertise and capital for investment in processing capacity, and effective coordination of the forestry and processing sectors. Without planning, moves to stimulate value-added processing may be undertaken at excessive economic cost. Indonesia provides an illustration. While Indonesia's moves to restrict log exports in the early 1990s were successful in the sense that they led to the rapid emergence of the country's plywood and furniture manufacturing industries, other impacts have been damaging. For example, the ban led to a reduction in the value of logs on the domestic market, tending to encourage wasteful and inefficient logging and processing practices. Furthermore, lack of coordination between the investment coordinating board and the forestry and plantation and ministry led rapidly to overcapacity in the industry. Moves by the Cameroon to introduce a log export ban in 3 months time raise similar concerns. Without coordination, the move could lead to oversupply in the tropical sawn market, pushing prices down and helping no-one. Exporters within the country are already questioning whether sufficient capital is available for the development of processing industries.

Comparative advantage

Economists would also argue that, whereas tropical developing countries have a "comparative advantage" when it comes to the exploitation of primary forest products, this advantage tends to diminish with further processing. The bulky nature and low value of wood raw material means that it is efficient to site primary processing activities (sawmilling, plywood and veneer manufacture) close to the forest of origin. However, semi finished products such as rough sawn lumber, veneer or standard plywood, can be efficiently transported over long distances and further processed practically anywhere. There are in fact certain inherent advantages to locating secondary processing plants closer to markets, including closer contact with end-users and reduced risk of damage to valuable manufactured products during transportation. This means that, while tropical timber producing countries can claim some competitive advantages in value added processing due to low cost local inputs (notably wood and labour), their competitiveness will also depend heavily on high total productivity, quality of products, and marketing ability. To become competitive in these areas requires an experienced and trained workforce, large capital outlays, and extensive knowledge of consumer demands.

Encouraging inward investment

While many Asian producers have demonstrated their ability to compete at least on equal terms in global markets, other developing countries have further to go. For many countries, developing capacity in these areas may only be an option if tropical countries are successful in attracting foreign investment and through joint ventures with experienced overseas firms. The issue of inward investment raises a whole

new set of concerns. Much will depend on the stability of the political and economic environment in a particular country, and on the quality of forest sector policy. A paper by Dani Saucier of US based International Paper, a company with considerable experience of foreign investment, identifies the following factors as significant in motivating foreign companies to invest in the forest sector.

- there should be an assurance of a reliable, quality, and competitively priced source of raw material. The decision to invest anywhere in the world hinges on the availability of a source of fibre derived from forests that are in good health, logistically accessible, and sustainably managed for the long term.
- there should be a reliable and sound industrially oriented forest industry within the country. Whether a paper mill, sawmill or panel industry, they are dependent on the existence and quality of smaller businesses around them. The essential fabric includes: well established economically sound forest landowners; professional wood harvesters; transportation organisations; and political administrations that support the existence and growth of the industry.
- the existence of a viable and growth potential market for the industrialists products. The market has to be ready to accept the quality of the finished product and its cost, or it will seek an alternative product.
- there should be a socio-economic environment conducive to the presence of the forest industry and the foreign investor. Legislation needs to be responsive to rapid changes within the industry. Legislation providing property and investment tax incentives, employment and training measures that do not penalise employers are vital. Land ownership patterns can be an impediment to the forest industry's development, but these can be overcome through effective legislation. Examples include Mexico and Chile, both of which enacted legislation which subsequently allowed forest industries to thrive.

ITTO's Contribution

ITTO views the development of value added industries in tropical countries as a central theme of Objective 2000. In view of the complexities and challenges of the issue, ITTO is providing guidance to policy makers, industrialists and investors on the development of "sustainable" timber industries in the tropics. It has prepared a report setting out general principles for the effective development of these industries. The principles provide guidance to producer countries on investment climate, wood supply and utilisation, the development of trade, environmental and social aspects, and productivity. They also provide guidance to consumer countries on market access and trade development, investment and finance, research and development, and technology transfer. The report also sets out 70 action proposals, which are designed to be considered at national level. The report is entitled "Policies and measures toward the development of domestic further processing of tropical timber" (code - PPR 49/98) by Dr Marku Simula. Copies are available from the ITTO Secretariat.

Sabah restructures

In an interview reported in Innoprise Market News Scan, Datuk Andrew Tham, President of the Timber Association of Sabah, outlined issues currently affecting the timber industry in Sabah.

Today Sabah's timber industry is characterised by overcapacity of around 100% in the downstream processing sector, with installed capacity of 12 million m³ and annual timber supply of only around 6 million m³. Processing capacity in Sabah mushroomed following government moves in 1993 to constrain log exports and as Asian wood demand expanded between 1993 and 1997. With the onset of the Asian crises, there have been numerous mill closures and logging has been drastically reduced as markets have collapsed in South Korea and Japan.

During 1998, most producers in Sabah have relied heavily on China for the disposal of their products. Sabah's plywood producers are hoping that the Chinese Authority's recent decision to suspend logging in the upper reaches of the Yang Tze river will boost sales into the Chinese market. A particular stimulus should come from China's massive reconstruction effort following the recent severe flooding.

Recent export data suggests there has been a significant upturn in demand for Sabah's logs. The State's export volume of logs between 1 August and 12 September was 69,670m³, only 5000m³ less than the total export volume of 74,492 m³ recorded over the previous seven months (January-July) and far surpassing the volume for the corresponding period last year. Average prices for logs exported in August were around 15% higher than prices quoted during July. Demand has apparently come from China, Japan, South Korea and Taiwan.

Short term log supplies are tight due to heavy rains associated with the La Nina weather phenomenon. Under current market conditions, producers are endeavouring to keep a tight rein on supply and to push up prices to maximise profit. In the longer term, the introduction of sustainable management systems will lead to progressive cut backs in log supply. These cuts will be matched by downsizing and a continuing move towards added value processing within Sabah's timber sector.

Sabah's timber industry is setting up a development fund to organise marketing and promotional missions and ensure the provision of the latest market information.

SABAH LOG IMPORTS: JAN-SEP 1998					
000s m ³	Red Seraya	Keruing	White Sereya	Others	Total
China	13.6	1.0	6.9	44.0	65.5
Japan	14.2	10.4	10.7	12.8	48.1
Korea	1.1	30.0	-	1.0	32.0
Taiwan	2.2	-	0.4	6.7	9.3
India	-	1.1	-	5.0	6.1
Vietnam	-	-	-	1.6	1.6
P. Malaysia	1.3	-	0.6	1.1	3.0
Total	32.4	42.5	18.6	72.2	165.7

Innoprise Market News Scan

Inward investment in processing main priority for Guyana

A paper by Toni Williams of Guyana's Forest Products Association presented to a ACP-EU Trade Development held in June of this year highlights some of the major marketing issues and technical issues facing the country's timber industry.

Guyana's forests are notable for their diversity of timber species. They are characterised by over 1200 tree species with an average diameter of 16", only 90 of which are logged. As a result they do not provide the concentrations of commercial timber species enjoyed by the Meranti's of the Far East. One species, Greenheart, has dominated production since commercial logging began over 150 years ago and has played a vital role in the development of the industry. It currently accounts for over 50% of log production. The species has superb mechanical properties, and because of the presence of the toxic alkaloid biberine, it is highly resistant to marine borers. Export volumes of Greenheart from Guyana have risen slowly from 12,500 m3 in 1987 to 15,500m3 in 1997, while value has increased more rapidly from US\$2.5 million to US\$6.2 million. Total exports of timber products in 1997 amounted to US\$17.8 million, Greenheart contributing 35%.

The Guyanese Government, aware of the risks associated with reliance on a single species, has been promoting utilisation of a wider range of species. The problem is that many of the abundant species (e.g. Dakama and Parakusan) are not readily accepted by the market, while many of the acceptable species (e.g. Tatabu and Simarupa) are not abundant. It is generally accepted that to gain market share, the species

should have a logging potential of at least 3000 m3 a year. Baromalli represents a successful attempt to achieve greater utilisation of LKS - hardly used 5 years ago, Guyana's plywood industry utilises around 300,000 m3 a year. Considering technical characteristics, availability and market demand, Guyana's forests could support a sustained trade in the following: Wallaba, Mora, Greenheart, Morabukea, Kakaralli, Baromalli, Wamara, Kabukalli, Crabwood, Purpleheart, Locust, and Shibadan. Guyana faces major challenges in developing its timber industry. The domestic market is shifting to concrete in the face of economic pressure. In export markets, Guyana is not well adapted to compete with large volume, low priced, high quality products. Guyanese lumber processing is currently characterised by inadequate and outdated equipment. Relative lack of investment in new sawing equipment has led to poor sawing accuracy, creating waste and making it difficult for Guyanese producers to meet buyers specifications. Average recovery rates for logs during conversion to solid lumber is only around 35%-40%, reducing the economic viability of the industry. Producers are too often inclined to push converted material onto the market at low prices. The overwhelming "marketing" aim has been to obtain quick sales with little attempt to add value through improved quality or presentation.

Some gains in quality and efficiency could be achieved with relatively little inward investment - for example through improved log storage, waxing log ends to seal in moisture and reduce splitting, and the development of new product lines such as parquet flooring to increase use of smaller sizes. However, considerable investment needs to be made in re-tooling, upgrading

sawmilling equipment, and to rebuild the credibility of Guyanese wood products in international markets. In the absence of this investment, producers have been forced to look seriously at log sales as their only survival strategy. The Guyanese government needs to develop incentives for inward investment in the processing sector as a matter of priority.

On the forest management side, considerable efforts are being made by the Guyanese government, in association with the UK's Department for International Development (DFID), to implement sustainable practices. In 1997, Guyana drafted a New Forest Policy Statement, revised legislation and prepared a draft Code of Practice for Forest Management. Guidelines are now being drawn up for the preparation of Forest Management Plans.

Certification is regarded as of little relevance to the development of sustainable practices in the country, or indeed elsewhere in the tropics. The paper questions "the relevance of an instrument that bears an accessory character to promote sustainable forestry management, while other elements necessary to such management, such as adequate forest legislation and the effective mechanisms of land use planning, are often absent or largely insufficient". Furthermore, it is argued that "the processes for establishing criteria for certification take years, and it is unrealistic to believe certification can happen overnight". The costs of developing certification are "certainly beyond the pockets of Guyanese producers". The development of Guyana's forest sector has more pressing priorities including measures to promote the full utilisation of log production, down stream processing, marketing, quality control, research, forestry education and training.

Korean economic reform gives hope to the timber sector

South Korea's Government, having made some progress in bringing about much needed economic reform, still faces the major task of restructuring the country's giant conglomerates. Timber markets remain weak, but there are signs of imports beginning to pick up.

Once heralded as the engines of South Korea's remarkable economic growth, the country's giant conglomerates, the Chaebol, are now seen by many as the main obstacle to the country's recovery. They are accused of recklessly loading up with debt and expanding into a huge range of unrelated businesses. The close links between the Chaebol's bosses and South Korea's politicians is believed to have fostered corruption. As the Chaebol have become bigger, they have become more difficult to challenge. The five biggest conglomerates account for one third of the country's sales and nearly 50% of exports. Korea's government has been unable, or unwilling, to tackle the Chaebol head on. Companies like Hyundai, Daewoo and Samsung are simply too big to fail. With unemployment at 10%, politicians have been keen to avoid factory closures.

Banks worry that if they stop bailing out their largest creditors, they too will collapse. As a result, while South Korea remains deep in recession, most of the pain of restructuring is falling on the small and medium sized firms, tens of thousands of which have gone bust.

President Kim's government has gone some way to reform the Chaebol. They have been forced to extricate themselves from certain businesses and limit expansion overseas. But so far these measures have failed - the Chaebol continue to grow. In the long run, it is other less direct elements of President Kim's reforming policy, that may ultimately bring about the major changes to South Korea's economy. Mr Kim has been intent on removing barriers to foreign investment. Foreigners may prove to be the best allies for small South Korean firms to struggle out of the shadow of the larger conglomerates. The tightly controlled real estate market, long designed to keep foreigners out, is also a target for deregulation to encourage investment.

President Kim's reforming zeal holds out some hope for the country's timber sector. After a long period of stagnation since November 1997, the first evidence of increased imports emerged during September. Korean importers were encouraged to buy as stocks were scraping the bottom

of the barrel and supply problems were anticipated following intense rains in the Far East and China's decision to reduce logging. Further encouragement came from apparent strengthening in Far Eastern currencies which contributed to higher prices US\$ prices for logs. There was also growing demand for panel products following the heavy flooding during the summer.

Since August, many mills have returned to 5 or 6 days production a week after slowing to 3 days before the summer. Production of Korean plywood amounted to 58,345 m3 during September, 21% higher than August. Domestic sales rose 58% between August and September to 70,583 m3 - the first monthly upturn in sales since the crash in November 1997.

These are positive signs, but doubt remains over the extent to which increased market demand will be sustained. Certainly, a recovery in the construction sector still appears a distant dream. Housing starts remain sluggish, declining from 1.46 million m2 in July to 1.24 million m2 in August, 32% lower than equivalent figures last year. Starts in the non housing sector are also falling, at 1.7 million m2 in August, only 41% of the same period last year. The IMF has predicted a 6% drop in GDP this year with zero growth next year and only 3% growth in 2000.

The promise and challenge of value added

The development of value added processing in tropical countries is increasingly seen as a major part of the solution to many tropical forestry problems. While offering many potential benefits, the development of secondary processing industries is challenging and not without risk.

The advantages of developing countries establishing value added processing facilities are well understood. Such industries contribute to the retention of increased income and employment in developing countries and reduce the economic risks inherent to overreliance on volatile commodity markets.

The development of secondary processing industries in tropical countries is already leading to major adjustments in the size and direction of the hardwood trade. For example, OECD data indicates that EU imports of wooden furniture and builders woodwork from the developing world increased from US\$1.3 billion in 1992 to US\$1.9 billion in 1996. In terms of value, the gap between tropical primary and processed wood products imports appears to be closing fast. The total value of primary imports into the EU in 1996 was US\$2.7 billion. The development of these industries is serving to offset the long term decline in tropical primary wood products imports into Europe - UCBD figures indicate that EU imports of tropical logs, lumber, plywood and veneers fell from 11.88 million m³ (roundwood equivalent) to 7.78 million between 1990 and 1996.

The advantages of value added processing have become more obvious with the onset of the Asian crises. The enormous disruption to log dependent timber industries in Gabon, Papua New Guinea and the Solomon Islands, may be contrasted with the continuing success of the furniture sector in Malaysia and Thailand. Despite the economic turmoil, Malaysia's exports of furniture for the first 6 months of 1998 were 36% greater than the same period of 1997, rising from M\$1.44 billion to around M\$1.97 billion. Thailand's furniture industry is forecast to grow at a rate of 3% to 5% during 1998, less than last year's 7-10% but still significant.

Challenges

Although the advantages may great, moves to develop value added processing in tropical countries are challenging and not without risks. Many tropical countries have sought to stimulate developments in value added processing through the implementation of log export bans. But ex-

SHARE PRICES FOR SOME U.K. COMPANIES

	52 Week High	52 Week Low	30 July	21 Aug	25 Sept	26 Oct	26 Nov
J. Latham	203.5	143.5	171.5	161.5	151.5	146.5	143.5
Meyer International	445.5	244	299.5	274	255.5	313	349.5
Travis Perkins	628.5	379	468.5	444	412.5	435	437.5
Barratt Devs.	341	155.5	237	208.5	169.5	210	223.5
John Laing	397.5	287.0	383.5	358.5	361.5	339	287.0
Alfred McAlpine	181.5	106.5	133.5	123.5	111	143	131.5
J. Mowlem	150	77.5	140.5	114	107.5	93.5	97.5
George Wimpey	143.5	91.5	103	109	92	111.5	116.5
Cornwell Parker	182.5	78.5	120	113.5	103.5	97.5	78.5

EXCHANGE RATES FOR ONE POUND STERLING

		14 August	29 Sept	26 Oct	24 Nov
Australia	Aus.\$	2.7300	2.8561	2.7279	2.5850
Bangladesh	Taka	76.4363	80.3763	82.0936	80.5828
Belgium	Belgian Fr.	60.1429	59.0791	57.1219	58.4184
Belize	B\$	3.2457	3.4130	3.3853	3.3230
Bolivia	Boliviano	9.0068	9.5052	9.4958	9.3543
Botswana	Pula	7.5492	7.5854	7.3828	7.3196
Brazil	Real	1.9010	2.0215	2.0154	1.9893
Fr. Africa*	CFA Fr.	977.360	960.180	928.250	949.670
Chile	Peso	764.362	795.826	783.612	773.844
China	Yuan	13.4371	14.1268	14.0114	13.7536
Denmark	Danish Krone	11.1033	10.8884	10.5205	10.7676
France	Franc	9.7736	9.6018	9.2825	9.4967
Germany	D-mark	2.9161	2.8635	2.7679	2.8320
Ghana	Cedi	3813.71	3967.62	3935.42	3906.19
Guyana	Guyanese \$	247.160	251.3673	252.713	249.225
Hong Kong	HK\$	12.5768	13.2220	13.1175	12.8667
India	Rupee	69.9530	72.4921	71.5822	70.4850
Indonesia	Rupiah	20894.3	18344.9	13795.2	12710.49
Irish Republic	Punt	1.1625	1.1440	1.1104	1.1392
Italy	Lira	2876.42	2831.55	2738.50	2803.86
Japan	Yen	236.206	228.688	200.054	200.460
Kenya	K. Shilling	97.0465	102.4754	101.221	98.926
Korea South	Won	2149.47	2340.47	2227.95	2082.69
Malaysia	Ringgit	6.8083	6.4847	6.4321	6.3137
Myanmar	Kyat	10.1456	10.6685	10.5819	10.3872
Netherlands	Guilder	3.2883	3.2290	3.1218	3.1932
Nigeria	Naira	140.620	147.442	146.753	142.723
Philippines	Peso	70.1072	74.8301	71.1422	65.712
Portugal	Escudo	298.353	293.663	283.697	290.671
Singapore	Singapore \$	2.8360	2.8588	2.7459	2.7194
South Africa	Rand	10.2321	9.9451	9.6883	9.4336
Spain	Peseta	247.387	243.244	235.126	240.876
Taiwan	\$	56.3226	58.8530	55.6941	53.9905
Tanzania	Shilling	1067.84	1127.31	1118.93	1107.56
Thailand	Baht	67.7946	66.5109	63.5167	60.1962
Uganda	New Shilling	1983.12	2192.8515	2225.83	2271.27
U.S.A	US \$	1.6229	1.7065	1.6927	1.6615
Venezuela	Bolivar	926.242	980.8112	965.276	947.471
Vietnam	Dong	22568.2	23727.2	23538.0	23073.2
Zimbabwe	\$	35.2972	56.8267	60.0892	62.0571

*Cameroon, CAR, Congo, Gabon & Cote d'Ivoire

Continued on page 10 - column 1

SUBSCRIPTIONS

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