The demand for sawnwood in Europe in 2005 has been less active than elsewhere in the world, and the sawnwood market has suffered from oversupply and its effect on prices. Finnish exports to most of the traditional markets in Europe have fallen, while growth has occurred mainly in exports to certain African countries. In Finland, housing construction has maintained the high level of sawnwood consumption on the domestic market. The drop in sawmilling production caused by the shutdowns in the paper industry has also contributed to the reduced level of sawnwood exports in 2005, which are expected to be about 6% below the previous year’s total. The average export price will be down by about 2% on the 2004 figure. Demand on Europe’s plywood market has been better than anticipated, and this has raised the price of plywood. The slight fall in production in the first half of the year means that production and exports of Finnish plywood in 2005 will fall short of the total recorded in recent years.

Growth in Finnish sawnwood and plywood exports in 2006 will be dependent on growth in the housing renovation market. With Russia’s sawnwood supply continuing to grow and capacity increasing in Central Europe, the overcapacity problem in Europe will remain. As a result, Finnish export prices are expected to fall slightly once again. A modest increase in domestic consumption will raise production in the sawmilling industry in 2006 by just a little, although the total will fall short of the 2004 production level. On the plywood export market, the prices of both birch plywood and softwood plywood are expected to pick up slightly, contributing to the forecast increase of about 3% in the average export price and export volume of Finnish plywood in 2006.

Sawmilling Capacity on the Increase in Eastern and Central Europe

The oversupply situation prevailing on Europe’s sawnwood market is largely the result of the new export-oriented sawmilling investments in the Baltic countries and Northwest Russia and the increased production in Europe’s traditional producer countries, namely Germany, Sweden, Finland and Austria. New investments in sawmilling capacity in Eastern Europe and Russia during 2002–2004 amounted to an estimated 5 mill. m³, and further new investment in production capacity planned for 2005–2006 totals about 2 mill. m³. The gradual rise in stumpage prices in Eastern Europe and Russia towards international levels is likely to slow down export-oriented investments to a certain extent in future years.

In Central Europe, the rate of investment is gathering pace. In Germany, forest inventory data published in late 2004 indicates the potential for a considerable expansion in sawmilling production capacity, and the scope for increasing the use of
softwood sawlogs is greatest in the case of spruce. Planned increases in raw material inputs for Germany’s sawmilling production amount to about 8.5 mill. m³ of wood in the period 2005–2006, which is calculated as being equivalent to an increase of about 4 mill. m³ in Germany’s sawmilling capacity.

Decrease in Finland’s Sawnwood Production and Exports

In the last 15 years, Finnish sawnwood production has risen to record levels due to demand in Europe and export growth to markets outside Europe. Domestic construction has also increased, and sawlog availability has been good due to the increase in removals and imports. The situation is changing, however. In recent years the trend in raw material prices in relation to sawnwood export prices has become increasingly disadvantageous to producers, and profitability in the sector has, on average, weakened. Sawnwood prices have been falling in Europe because supply has been growing at a faster rate than demand. This, and the fact that it is no longer easy to achieve a significant increase in productivity, means that raw material prices will be critical in maintaining the present extent of production. Raw material costs constitute well over half of turnover in the sawmilling industry. Oversupply on Finland’s main export markets is unlikely to diminish in the near future, however, as sawmilling capacity is continuing to increase in Eastern and Central Europe.

The drop in Finnish sawnwood production in comparison with the 2004 figures was already visible in the statistics in March, and the spring and summer shutdowns in the paper industry led to a further decrease in sawnwood production. In the period January–July 2005, production fell by 14% on the same period the previous year; the drop in production of pine sawnwood was 16%, and spruce sawnwood 12%. Following the shutdowns, production in the second half of 2005 can be expected to return close to the level seen in the last six months of 2004, as stocks of finished products in the wood products industry are below their normal level according to the August 2005 Business Tendency Survey of the Confederation of Finnish Industries. Total sawnwood production in 2005 is expected to be about 12.5 mill. m³.

Total sawnwood exports in January–March 2005 fell short of the figure for the same period in 2004, and the January–June figures also revealed a similar picture, with spruce and pine sawnwood export volumes down by 8%. Exports to most of the biggest traditional markets in Europe were down, and the total volume of Finnish sawnwood exports to Europe was down by about 12% (January–June). In the United Kingdom, for example, Finland lost some of its market share to Russia and Germany. In the first half of 2005, total exports of Finnish sawnwood increased only to a number of African countries. While there was a significant increase in planed sawnwood exports to North America, the amounts exported were small. If the spring and early summer production shutdowns are included, total sawnwood exports for 2005 are expected to be down by about 6% in annual terms.

### Sawnwood and Plywood Production, 2004

<table>
<thead>
<tr>
<th></th>
<th>Sawnwood</th>
<th></th>
<th>Plywood</th>
<th></th>
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<td>1 350</td>
<td>100</td>
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<tr>
<td>Exports:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
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<td>1 234</td>
<td>91</td>
</tr>
<tr>
<td>Africa</td>
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<tr>
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<td>Asia excl. Japan</td>
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<tr>
<td>Other</td>
<td>1 139</td>
<td>1</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

*Estimated domestic use = production – exports
Sources: Statistics 2004 (Finnish Forest Industries Federation) and Finnish Forest Research Institute
Sawnwood Prices Falling

The export price of Finnish pine sawnwood was down by 6%, and spruce sawnwood by 2%, in January–June 2005 in comparison with the same period a year earlier. The pine sawnwood market was particularly affected by oversupply, caused in part by the growth in exports from Russia. Growth in sawnwood consumption in 2005 has also been affected by the lower average growth in new housing starts in Western Europe than in 2004 (according to Euroconstruct’s June 2005 report). Sawnwood prices in the United States were falling in the first six months of 2005, due to there being an increase in domestic production and imports at the same time as signs of a slowdown in housing construction in response to rising interest rates. The demand for building supplies has risen slightly following the damage caused by Hurricane Katrina, and this has led to a peak in sawnwood prices. This is expected to be only a temporary phenomenon, which is also the hope of the US federal government in its aim to ensure that reconstruction can progress without difficulty.

There was also significant storm damage to forests in the Baltic Sea region in early 2005, in which about 75 mill. m³ of timber was felled in Southern Sweden, for example. This has had relatively little impact on the demand-supply balance in the European market, however, because most of the increased sawnwood production was exported to the United States in the first half of the year. Sawnwood produced from storm-damaged trees will also enter the market in 2006, as such wood can be kept in water storage basins for a long period.

European sawnwood producers have expressed their concern over the disproportionate price trends in sawnwood and sawlogs. They justify the need to raise sawnwood prices on the basis of the rise in roundwood prices and transportation costs. The Confederation of Finnish Industries’ Business Tendency Survey indicates that price rises can be expected in the Finnish wood products industry in the second half of 2005. However, without a clear increase in demand, prices cannot be raised by any significant amount. The average export price of Finnish sawnwood for 2005 as a whole is expected to be about 2% lower than in 2004.

Sawnwood Exports in 2006 Will Not Reach Peak Levels

A modest increase is forecast in Europe’s GDP growth in 2006, and interest rates are expected to be more or less unchanged. New housing construction is declining, however, and is forecast to be about 1% lower by value than in 2005. New housing starts will be down in Germany, France and the United Kingdom, for example, which are all traditional export markets for Finnish sawnwood. Sawnwood consumption in Western Europe in 2006 will be very much reliant on the housing renovation market, which is forecast to grow by about 2%. Renovations will account for about half of all residential construction activity.

The increase in sawnwood production in Eastern and especially Central Europe in 2006 will have an impact on Finnish sawnwood exports because growth in Europe’s sawnwood consumption will be quite low. The situation in markets outside Europe, in particular the North American and Japanese markets, will be important in determining the price trend.
Europe’s sawnwood exports to the United States continued to grow in the first half of 2005, reducing the volume of sawnwood available on the European market. However, the situation may change in 2006, as North America will also experience oversupply on account of increasing US imports and higher sawnwood production in both the United States and Canada.

According to the National Association of Home Builders, housing construction in the United States in 2006 will be about 6% down on the record level of 2005, due to rising interest rates. Even though damage repair following Hurricane Katrina will increase construction activity somewhat, it will not have that great an impact on the demand for sawnwood. Assessments suggest that reconstruction will not begin in earnest for some months and is likely to proceed slowly over a number of years. Reconstruction in the damaged area is estimated to consume annually only less than 2% of the entire US annual sawnwood consumption of 105 mill. m³. The hurricane also caused damage to the area’s forests, and provisional estimates indicate that the volume of hardwood and softwood affected was considerably greater than the early 2005 storm damage in Sweden. No detailed estimates are yet available on the volume of sawmill-fit timber felled by Hurricane Katrina.

About one third of US sawnwood consumption is met by imports from Canada, where production is on the increase. One reason for the expansion in Canada’s production capacity is the need to process the considerable volume of trees being felled in British Columbia due to mountain pine beetle damage. The planned reduction in felling volumes in Eastern Canada in 2006 will not be sufficient to provide much relief for the oversupply situation in North America.

The pressure to reduce sawnwood prices in the United States in 2006, in combination with rising transportation costs, will probably limit the growth in US imports from Europe. Growth in Europe’s exports to Japan may also be less than in 2005, because forecasts indicate a slowdown in residential construction growth in Japan to less than 1%. With oversupply continuing in Europe, the average price of Finnish exports is forecast to fall by about 2% in 2006, and no growth is anticipated in sawnwood exports.

China’s growing demand may benefit the European sawnwood market in a number of ways, for instance by drawing in more sawnwood imports to meet the increase in value-added processing of wood products in China. Among Finland’s competitor countries, Russia and Canada are the biggest suppliers of sawn softwood to China, where about one fifth, or 2 mill. m³, of total sawnwood imports consists of sawn softwood. The NAFTA decision on the sawnwood import duty dispute between Canada and the United States was published in August 2005, declaring that Canadian exports to the US do not weaken the sawmilling industry’s position in the United States. This, at least in theory, should mean that the duty will be removed. However, the immediate reaction from the US was to maintain the duty. The continued imposition of the duty will support imports from Europe.

**Finnish Consumption and Production of Sawnwood in 2006**

Housing production is still relatively high in Finland due to migration patterns within the country and an accumulation of housing demand. However, following growth in housing production of over 7% in 2004, the Research Institute of the Finnish Economy forecasts that the figure for 2005 will be only about 2%; the forecast for 2006 is 3.5%. Supported by low interest rates, detached and other low-rise housing will account for a higher proportion of all housing starts in 2005 than the previous year, and this will again be the case in 2006, according to the assessment of the Confederation of Finnish Construction Industries (RT). Domestic consumption of sawnwood in 2005 will therefore remain high.

In 2006, sawnwood consumption in Europe is scarcely expected to grow at all, and continued oversupply is likely to create downward pressure on prices. In this situation, no increase can be expected...
in Finnish production, even for the purpose of protecting market shares, which has been the case in recent years. The likelihood is that the least profitable production units will be discontinued in the future, and efforts focused instead on more highly processed products. There are already signs of a decrease in production, mainly in pine sawnwood, where the drop in export prices has been sharper than for spruce sawnwood. UPM Wood Products closed its Aureskoski sawmill in 2004 and has reduced production at the Alholma and Kajaani sawmills, and Stora Enso Timber closed its Veitsiluoto sawmill ‘temporarily’ in summer 2005. Other announcements have also been made about intended production cuts, indicating a reduction of 0.9–1.0 mill. m³ in Finnish sawnwood production by the end of 2006.

With no increase in sawnwood exports expected, and with only a small rise in sawnwood use on the domestic market, total Finnish sawnwood production in 2006 is forecast to be approximately 12.6 mill. m³, which will be less than the 2004 total. The figure could be lower than this if profitability in the sawmilling industry deteriorates further. A critical factor is the relationship between the price of sawlogs and sawnwood.

**Plywood Prices Rising**

In 2004, Europe’s plywood consumption grew at a faster rate than production, drawing in more deliveries not only from Finland but also from, for example, Russia and China. In the same year, North America increased its imports of plywood by 44% as a result of the busy construction market and the full utilisation of domestic production capacity.

Finland’s plywood exports to Europe in 2004 were up by 7%, mainly concerning exports to the key markets of Germany and the United Kingdom. The increase in plywood prices in Europe was also reflected in the average export price of Finnish plywood, which began to rise steadily at the beginning of 2004. The high demand from North America led to an increase of about 5% in Finnish exports there, whereas exports to Asia fell slightly. Softwood plywood accounts for more than half of Finland’s plywood production and exports.

Competition began to intensify in the first half of 2005, especially in the bulk plywood market. As economic growth and construction slowed in Europe, the export volume of Finnish softwood plywood fell by 5%, and hardwood plywood by 6%, in January–June 2005. UK demand fell in the first part of the year, and in Germany the growth in imports of hardwood plywood was down from the previous year’s peak. There was also a drop in exports of Finnish birch plywood to Germany in the first six months of 2005, which mainly concerned exports of lower quality plywood. By contrast, Russian, Italian and Romanian plywood accounted for an increasing proportion of German imports. As with birch plywood, Finnish softwood plywood exports to Germany also fell by almost 20%, due to the substantially higher proportion of Brazilian plywood in German imports. In percentage terms, the growth in the supply of Chinese hardwood and softwood plywood has been especially great, although the actual volumes are still relatively small. China is becoming a significant competitor on the European plywood market as a whole, and in its trade with North America it has rapidly turned from being a net importer to a net exporter of plywood.

Finnish plywood production in January–June 2005 was 3.6% lower than for the same period the previous year. The principal reason was the closure of UPM’s Kuopio and Viiala mills, which were both fairly small producers of mainly birch plywood. Birch plywood production declined by 4%, and softwood plywood by 2%, in the first half of the year.

The export price of plywood continued to rise in January–June 2005. The average export price of softwood plywood rose by 11% and birch plywood by 6%. Prices are expected to rise at a lower rate in the second half of the year, and so the increase in the average export price of plywood for the year as a whole will be about 8%. Production and exports of plywood are expected to rise slightly in the second half of 2005, but the volumes for the full year will be about 2% below the 2004 levels.
Forecasts of production and exports in the sawmilling and plywood industries, 1000 m³ (percentage changes from previous year are shown below the respective volumes).

<table>
<thead>
<tr>
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<td>13 544</td>
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<td>12 600</td>
<td>8 226</td>
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<td>1 240</td>
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Forecasts of export prices for sawnwood and plywood (as percentage changes from previous year*).

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<th>2004</th>
<th>2005</th>
<th>2006</th>
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<tr>
<td>Sawnwood</td>
<td>-3 (-173€/m³)</td>
<td>-2</td>
<td>-2</td>
</tr>
<tr>
<td>Plywood</td>
<td>0 (475€/m³)</td>
<td>8</td>
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</table>

* Export prices are nominal unit values

Tougher Competition on the Plywood Market in 2006

As a result of the decrease in construction activity in Europe, the growth in demand for Finnish plywood is expected to slow down a little in 2006, and price increases will be more moderate. There are many different plywood grades, and the market trend varies according to the grade in question. The demand for high-quality birch plywood is expected to remain good, which is also the case for plywood demand in the packaging and transportation industries.

The active construction market in North America has ensured record demand for plywood and pushed up prices. Following the reduction in US plywood production capacity, imports have increased from South America, Asia and Europe, leading to a reduction in the volumes that would otherwise have been offered to the European market. As a result of Hurricane Katrina, the price of plywood in the United States has risen further. The plywood market does not suffer from the oversupply situation seen on the sawnwood market, and so prices can be expected to remain high in 2006 as well. It is estimated that about 2% of the total US consumption of structural panels will be needed annually to repair the damage from Hurricane Katrina. The reconstruction is therefore unlikely to have a very great impact on the demand for plywood. In 2006, US plywood demand is expected to be about the same as in 2005.

With the completion of investments by Finnforest and UPM, production and export volumes of Finnish plywood in 2006 are forecast to return to their 2004 levels. The rise in birch plywood prices will slow down, as supply from Russia and elsewhere continues to grow, and the increase in the export price of softwood plywood will level off due to the reduction in housing construction in Europe. The average export price of Finnish plywood in 2006 is expected to rise by about 3% from the 2005 figure.

2.2 Exports and Production in the Pulp and Paper Industry

Paper consumption has remained high on Finland’s main export markets in Western Europe during 2005. However, owing to a labour market dispute in the Finnish paper industry, the country’s paper, paperboard and pulp production for 2005 will be down by more than 10% on the previous year’s total. With Finnish mills laying idle in May–June, supply was reduced and producers and customers had to use up stocks. This brought the opportunity to increase paper prices, and so, in contrast with the declining price trend in 2004, the average 2005 export prices of paper, pulp and paperboard will be unchanged or slightly up on the previous year.

In 2006, the minor increase expected in private consumption in Western Europe will raise the demand for advertising and thus for paper to a certain extent. However, the paper industry’s capacity will also be expanded somewhat in 2006, and so the oversupply situation on the European market will be almost unchanged, and efforts to reduce it will probably continue by increasing deliveries to markets outside Europe. The increase in costs will lead to pressure on prices and may keep them from returning to a downward path. The Finnish pulp and paper industry’s production and exports will be up considerably in 2006 compared with the 2005 figures, which were exceptionally low. Comparing the figures with 2004, paper and paperboard production in 2006 is expected to be up by about 3%. The percentage growth in pulp exports will be even higher on account of the increased capacity. As Europe’s oversupply situation continues, prices are forecast to remain at around the 2005 level.

Modest Growth in Paper Consumption, and Price Trend Stronger in North America than in Europe

The consumption of paper and paperboard in the Finnish paper industry’s main markets in Western Europe was up only slightly in 2004, according to figures from the UN’s Food and Agricultural Organisation (FAO), but nevertheless exceeded for the first time the record level seen in 2000. Western Europe’s production was up more markedly, however, as producers increased their deliveries to markets outside Europe. Prices of printing and writing papers continued the downward slide that began in mid-2001.

In the first half of 2005, European demand for printing and writing papers was at about the level of 2004 in the case of newsprint, coated magazine and fine papers, or slightly below that level in the case of uncoated magazine and fine papers. The lack of demand growth was visible in the export prices of Finnish paper. Despite the price rise intentions expressed by producers at the end of 2004 and the supply uncertainty brought by the dispute over employment conditions, export prices in May 2005 were still fairly close to the 2004 year-end level, and the average export price of paper had only risen by just under 1%.

The demand for printing papers is affected not only by consumers’ disposable income and how much they read, but also by printed advertising, which is strongly linked to economic growth. GDP growth in the key German export market has continued to be weak in 2005. According to the German magazine publishers’ umbrella organisation, Verband Deutscher Zeitschriftenverleger, German magazines featured more than 5% less advertising in January–September than in the same period of 2004, and, moreover, the outlook for magazine advertising appeared uncertain for the remainder of 2005. Germany accounts for about one third of Western Europe’s magazine paper consumption.
**The Finnish pulp and paper industry, 2004, 1000 tonnes.**

<table>
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<tr>
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<th>Chemical pulp of production</th>
<th>Paper of production</th>
<th>Paperboard of production</th>
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<tr>
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<tr>
<td><strong>Russia</strong></td>
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<tr>
<td><strong>Other</strong></td>
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<td>324</td>
<td>18</td>
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</table>

*Estimated domestic use = production – exports
Sources: Statistics 2004 (Finnish Forest Industries Federation) and Finnish Forest Research Institute

advertising was also down in France and the United Kingdom in the first half of 2005.

In North America, the strong growth trend in the demand for printing and writing papers is already a thing of the past, and newsprint consumption is now declining. The demand for magazine papers in January–August 2005 was about 1% higher than in the same period in 2004, according to the American Pulp and Paper Product Council, and the demand for fine papers was down by 4%. Despite the slack trend in demand, magazine paper prices were about 15% higher in the first half of 2005 than in the same period the previous year, according to producers. The newsprint PIX price at the start of October 2005 was 8% higher than at the start of the year, which is explained by the reduction in supply. Producers have gradually closed down their older machines, which has improved the balance in the market.

The demand for consumer packaging board in 2005 has been reasonably good, and paperboard manufacture in Finland has been more profitable than paper production. By contrast, the container-board market (liner and fluting) has suffered the effects of global oversupply, and product prices have been falling. Whereas the Finnish producers in the sector are only small, the large producers in Europe are under pressure to close their least profitable machines. Liner and fluting constitute almost one quarter of Finnish paperboard production, but only one tenth of the value of paperboard exports.

**Finnish Paper Production Collapsed in First Six Months of 2005 due to Labour Dispute, but Rest of Year Looks Busy**

As a result of strikes and a prolonged lockout in connection with a collective agreement dispute, Finnish pulp and paper production was down by almost one quarter in the first half of 2005 in comparison with the same period in 2004. Nevertheless, the second half of the year is turning into a busy period for the paper mills, not only because of stronger seasonal demand but also because both producers and buyers need to replenish stocks diminished during the paper industry lockout. The new collective agreement for the sector will allow paper production to continue during the Christmas holidays.

Without the reduction in paper supply due to the labour market dispute, the only factor in Europe creating upward pressure on paper prices would have been the general increase in production costs. Labour costs are rising steadily, and the costs of materials and transportation have risen too, as they include the effects of the oil price increases. Pulp
prices have also risen during 2005. The PIX euro price of long-fibre pulp in mid-November 2005 was about 13% higher, and that of short-fibre pulp 30% higher, than at the start of the year.

Although hardwood pulp production capacity has expanded, the increased demand for hardwood pulp has prevented oversupply and enabled prices to be raised. Various other factors have also affected the supply and price of pulp. In Sweden, production of softwood pulp has increased, replacing some hardwood pulp production, in order to utilise the trees that had fallen in the winter storms. In Germany, the introduction of Zellsföll Stendal’s new pulp mill has increased production and reduced imports of softwood pulp.

Total Finnish production of paper, paperboard and pulp in 2005 is expected to be about 11%, and export volumes about 8–9%, below the previous year’s level. The average export price in all the main product groups is expected to be at about the 2004 level, or slightly higher.

**South American Pulp Mills and Chinese Paper Mills**

The main focus in new investment within the pulp and paper industry is currently on South America and China, while in North America and Europe investment is mainly in modernising existing machines. In South America, pulp production costs are relatively low on account of the fast-growing planted forests. Paper production and paper demand in South America are growing only slowly in tonnage terms, and so the pulp produced in the new mills is shipped to Asia, Europe and North America.

In China, the demand for paper, paperboard and the pulp needed in their production is growing at a brisk rate, driven by the strong growth in the economy. In addition, environmental considerations are leading to the replacement of the straw pulp widely used in the region with wood pulp. Despite the forest planting undertaken, the existence of major forest conservation programmes to protect forest resources means that the region’s own pulpwood resources are as yet insufficient to meet production demand. China is in fact the world’s largest pulp importer. According to statistics from the UN’s Food and Agricultural Organisation (FAO), China’s imports of wood pulp have increased during the past five years by more than half a million tonnes annually, and its waste paper imports have grown even more. China’s own pulp production is increasing at the same rate as the growth in its planted forests, and a recent example of this was the spring 2005 opening of Asia Pulp
Forecasts of production and exports in the pulp and paper industry (1000 tonnes); percentage changes from previous year are shown below the respective volumes

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<td></td>
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<td>11 500</td>
<td>10 218</td>
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<td>-11%</td>
<td>16%</td>
<td>8%</td>
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</tr>
<tr>
<td><strong>Paperboard</strong></td>
<td>2 858</td>
<td>2 550</td>
<td>2 900</td>
<td>2 461</td>
<td>2 230</td>
<td>2 460</td>
</tr>
<tr>
<td></td>
<td>6%</td>
<td>-11%</td>
<td>14%</td>
<td>9%</td>
<td>-9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Forecasts of export prices for the pulp and paper industry (as percentage changes from previous year*)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical pulp</strong></td>
<td>0 (402 €/tonne)</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Paper</strong></td>
<td>-5 (594 €/tonne)</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Paperboard</strong></td>
<td>-5 (666 €/tonne)</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

* Export prices are nominal unit values.

& Paper’s new million-tonne eucalyptus pulp mill in Hainan. Environmental organisations have questioned the adequacy of plantation wood resources for the mill.

Finnish companies have also been actively involved in investments in Asia and South America. The new Veracel eucalyptus pulp mill opened in Brazil in May 2005 is co-owned by Stora Enso, and in Uruguay a pulp mill is being built by Metsä-Botnia. In China, UPM began production with its latest fine paper machine in spring 2005. Finnish companies also have other Chinese and South American investments planned or in progress, for instance for the production of self-adhesive laminates, liquid packaging board and pulp.

In Europe, three new paper machines will be introduced in the near future for production of uncoated SC magazine paper. Stora Enso will launch its new machine in Sweden at the end of 2005, and both UPM and Myllykoski have reported that they will build a new SC paper machine in Central Europe within the next few years. To avoid oversupply, the companies intend to close older machines. Europe’s newsprint production capacity will be reduced slightly in 2005, when Norske Skog closes one of its machines, but capacity will be expanded in 2006 with Holmen Paper’s new machine in Spain.

Paper Oversupply in Europe Slow to Decrease

The Association of European Publication Paper Producers (Cepiprint) reports that the oversupply of mechanical printing papers (newsprint and magazine papers) in Western Europe fell slightly in 2004, when the ratio of deliveries to capacity rose to 92%. The capacity utilisation rate in coated magazine papers was lower than in other grades. The slow demand growth in Western Europe has increased deliveries by European producers to Asia and North America, despite the strong euro. The fine paper market in Europe is also troubled by oversupply, which will be exacerbated further by the considerable increase in capacity in Asia in both 2005 and 2006.

The forecast GDP growth in Europe for 2006 is unlikely to mean any significant increase in consumer demand and advertising, and so the growth in Europe’s demand for paper will remain modest again in 2006. The forecasts indicate that growth in the German economy, in particular, will still be weak.
Oversupply will continue and announcements of the closure of some of the least profitable production units can be expected in Europe in 2006. The rise in production costs will lead to pressure to adjust paper prices, but any significant increase would require a clear revival in economic growth and paper demand in Western Europe.

Growth in the US economy is expected to remain fairly strong in 2006, which should ensure stability in paper consumption on the US market. No new production capacity is due in 2006, but there will be a considerable reduction in the amount of newsprint production capacity. In Asia, the continuing rapid growth in China’s economy will ensure further strong growth in pulp and paper consumption. The region’s high rate of investment has, however, brought with it a clear risk of oversupply, which, should it materialise, will also be reflected in the European and North American paper and paperboard markets in 2006.

**Finnish Paper Production Up in 2006, but Sluggish Trend in Export Prices**

In 2006, Finnish paper and paperboard exports will increase and capacity utilisation rates will rise. In comparison with the exceptionally low production in 2005, the percentage growth will be substantial. A better reference year is therefore 2004, against which production and exports of paper in 2006 are forecast to be up by about 3%. Paperboard production will also be up slightly on the 2004 level.

Export prices of Finnish paper and paperboard in 2006 are forecast to be about the same as, or just a little above, the 2005 figures, as the growth in demand will be small and the market will still be troubled by oversupply. The average export price of pulp is forecast to rise by 1–2%, although the trends in hardwood pulp and softwood pulp may once again differ from each other, for instance due to the substitution possibilities between different pulp grades. In 2006, the latest eucalyptus pulp mills in China and Brazil will be up and running, with a capacity of almost 2 mill. tonnes, which will keep hardwood pulp price rises in check. The supply of softwood pulp in 2006 will be up in comparison with 2005 because the Finnish pulp mills should be fully operational throughout the year. Price forecasts are based on the assumption that there will be no notable changes in euro exchange rates against the US dollar and other key currencies important for exports.

### 2.3 Costs and Profitability in the Finnish Forest Industry

A collective agreement dispute in the Finnish paper industry brought pulp and paper production to a standstill in May–June 2005 and reduced forest industry profits in the second quarter of the year. Forest industry profitability in 2005 has also been affected by the fact that the prices of nearly all production inputs have increased while at the same time end-product prices are either virtually unchanged (paper industry) or have fallen slightly (sawmilling industry) in annual terms. Although capacity utili-
sation rates and turnover will increase in the paper industry in the latter part of 2005, the industry’s profitability will be weaker for the full year than it was in 2004. The capacity utilisation rate in the sawmilling industry will be down and profitability will remain weak, due to a drop in sales volumes and lower export prices.

In 2006, paper production and export volumes are forecast to rise to new record levels. Higher capacity utilisation rates will improve profitability in the pulp and paper industry considerably, although paper prices are not expected to increase very much. In the sawmilling industry, competition on the export markets will continue to be tough in 2006. Production and export volumes will be up, but will fall short of the 2004 levels. Forecasts indicate a further slight fall in sawnwood prices, and so profitability in the sawmilling industry will remain weak in 2006.

Paper Industry Profitability Hit by Production Shutdowns

In 2004, the Finnish forest industry’s exports increased by an average of 7% in volume terms on the previous year’s figures. However, export prices were down by an average of more than 4%, and so the forest industry’s export income grew by only 2.5% and its profitability improved by a small amount. The combined turnover of the five largest Finnish forest industry corporations (Stora Enso, UPM, Metsäliitto Group, Ahlström and Myllykoski) in 2004 was EUR 34 billion, which was 1.5% up on the previous year. The Finnish production units of these corporations accounted for about half of this turnover. Their combined profit before extraordinary items amounted to approximately EUR 1.1 billion, compared with EUR 0.8 billion in 2003.

Total investment by all Finnish forest industry corporations in 2004 was about the same as in 2003, totalling approximately EUR 2.3 billion and representing about 7% of turnover. Some 65% of this investment was made abroad, as in the previous year.

In the first six months of 2005, the forest industry’s production shrank by an average of 20% in comparison with the same period in 2004. This was due to a collective agreement dispute in the Finnish paper industry. However, the combined turnover of Stora Enso, UPM and Metsäliitto Group fell by only 1.5% in the same period, because Finnish production accounts for only a proportion of their total turnover. Their combined half-year profits before extraordinary items were down to approximately EUR 0.3 billion, compared with EUR 0.4 billion for the same period in 2004.

The profitability trend in the paper and sawmilling industries is shown by product group in the accompanying diagrams. While the diagrams represent the entire worldwide production of the Finnish forest industry corporations, the assessments presented below concerning the production costs and profitability of the Finnish forest industry in 2005 and 2006 deal only with domestic production.

Export volumes in the Finnish pulp, paper and paperboard industries were up by almost 9% in 2004. The combined export income of these industries was EUR 9.2 billion, which was only 3% up on the previous year’s figure because of the 5% drop in paper and paperboard export prices. With costs increasing as well, profitability in the paper and paperboard industry remained weak.

The production shutdowns in the pulp and paper industry led to a 23% drop in paper and paperboard production in the first half of 2005, and a drop of 20% in export income, to EUR 3.6 billion, in comparison with the same period in 2004. Cost did not fall in this way, however, and so profitability deteriorated. Pulp and paper industry profitability for 2005 as a whole will also be down on the previous year’s figure because the growth in production and exports in the second half of the year will be insufficient to make good the losses of the first six months. Profitability will be further reduced because the costs of all production inputs have risen and the average export price of paper will be unchanged from 2004.
Sawmilling Industry Profitability Continues to be Weak

Export income from sawnwood, plywood and other wood products in 2004 was about the same as the previous year, totalling EUR 2.6 billion. Export volumes of sawnwood were up by about 2%, but export prices were down by 3%. Profitability in the sawmilling industry remained weak, leading to a negative net profit for 2004.

Finnish sawnwood production in the first six months of 2005 was 14% below the figure for the same period a year earlier, due to the production shutdowns in the sawmilling industry as a result of the paper industry dispute over employment conditions. Sawnwood export volumes for 2005 as a whole are expected to be only about 6% below the previous year’s level, however. Nevertheless, the sawmilling industry’s export income and its profitability will be below their 2004 levels because the average export price of sawnwood is expected to fall by 2% for the year as a whole. The principal reason for the weak profitability is the high price of sawlogs in relation to sawnwood export prices.

Production and export volumes in the Finnish plywood industry in 2005 are expected to be about 2% lower than in 2004. Prices of both birch and softwood plywood have risen significantly in the first six months of 2005, and the average plywood price for the full year is expected to be up by 8%. This favourable price trend will improve the profitability of plywood production.

Roundwood Costs Up in 2005

Wood raw material costs comprise about one third of total costs in the wood products industry, and about 14% in the pulp and paper industry. The figures cover all sections of these industries, including the manufacture of processed products. The Finnish forest industry’s roundwood costs are made up of the stumpage, harvesting, transportation and procurement costs of domestic roundwood, plus the costs of foreign imported roundwood.

For the wood products industry, stumpage costs are the most important individual cost element, accounting for almost one quarter of total costs. By contrast, stumpage costs account for only 4% of total costs in the pulp and paper industry. Stumpage prices are expected to be up only very slightly in 2005. Stumpage prices for spruce and pine pulpwood are projected to be up by 1%, and for spruce and birch...
sawlogs by 3%. The price of birch pulpwood will be unchanged, but that of pine sawlogs will be down by 4% on the 2004 level.

The costs of roundwood harvesting and transportation constitute 6.5% of total costs in the wood products industry and 3.5% in the pulp and paper industry. These costs have risen significantly since 2004. According to figures from Statistics Finland, forwarder and harvester costs rose by about 6%, and transporter costs by about 8%, between July 2004 and July 2005.

Taking all the cost items into account, total roundwood costs in both the paper industry and the sawmilling industry in 2005 are expected to be slightly higher than in 2004, though the difference will be smaller in the sawmilling industry.

**Forest Industry Pay Settlement Will Raise Pay at the Same Rate as in Recent Years**

Labour costs are equivalent to about 16% of the pulp and paper industry’s total costs and 15% of the wood products industry’s total costs. Under the collective agreement between the Finnish Forest Industries Federation and the Finnish Paper Workers’ Union, pay will be increased in 2005 by 2.5% and in 2006 by a further 2.1%.

Labour productivity increased by 11.9% in the pulp and paper industry, and by 0.1% in the wood products industry, in 2004, according to figures from Statistics Finland. Labour productivity in the pulp and paper industry will be down in 2005, due to the interruptions in production, and will also be down in the wood products industry, where production has decreased in 2005.

**Energy Costs Rising**

Energy costs account for about 8.5% of total costs in the Finnish pulp and paper industry, and 2.5% in the wood products industry. The majority of the energy costs are from electricity consumption, though the high degree of self-sufficiency in energy production has a stabilising effect on energy costs. In 2004, the forest industry consumed 27.5 mill. MWh of electricity, of which 43% was produced by the industry itself.

The average price of market electricity in the first half of 2005 was EUR 27.6 per MWh, or 5% less than in the same period the previous year. However, the price in the second quarter was 13% higher than in the first quarter, largely because of the rise in the market price of carbon dioxide emission allowances from EUR 7 to about EUR 25 per tonne of CO₂. Following this rise, futures trading quoted on the Nordic power exchange, Nord Pool, anticipated an increase in the price of electricity to EUR 32–35 per MWh in the latter half of the year.

Fuel totalling 280 000 TJ was used in the forest industry’s own electricity and heat production in 2004, up by 4% on 2003. Wood accounted for 75% of this fuel input, natural gas for 15%, peat for 6% and heavy fuel oil for 4%. Compared with the previous year, the use of wood was higher but the use of natural gas and fuel oil a little lower. The price of natural gas in the first quarter of 2005 was up by about 7% on the same period in 2004. The price of peat in the first quarter of 2005 was about 4% higher than in the same quarter of 2004.
Rise in Oil Prices Reflected Indirectly in Forest Industry Costs

The price of crude oil has risen sharply in 2005 since its level of USD 40/barrel at the start of the year. The year-end crude oil price forecast by the Research Institute of the Finnish Economy is USD 62/barrel, which would mean an increase of about 55% during 2005. Rises in the crude oil price mainly have an indirect effect on forest industry costs via their impact on freight and other transportation costs, the prices of chemicals and pigments, and harvesting costs.

The sharp increase in sea freight charges that began in summer 2004 continued throughout the rest of the year, due to the strong growth in demand on world markets. However, by the end of August 2005, the Baltic Dry Index (BDI), measuring dry cargo spot prices, had fallen to one third of its level at the start of the year. Sea freight charges have not been lower than their present level for the past two years, although they have fluctuated from one extreme to the other during that period. They are not, however, expected to rise to their late 2004 peak during the final months of 2005. In addition, the forest industry’s contract carriage arrangements are based on long-term transportation contracts and are therefore subject to more moderate changes than spot prices for sea freight. Transportation and storage accounts for about 8–9% of total costs in both the pulp and paper industry and the wood products industry.

Oil price fluctuations are reflected in the prices of pigments and forest industry chemicals via their impact on the costs of manufacturing these pigments and chemicals. During the first half of 2005 these prices were 3.5% higher than in the same period in 2004. Chemicals account for about 8%, and pigments 3%, of production costs in the pulp and paper industry.

Moderate Increase in Costs in 2006

No significant upward pressure on the Finnish forest industry’s production costs is anticipated in 2006. Neither are significant changes expected in the euro exchange rate, which will help stabilise prices of imported goods. Oil prices are not expected to rise any further beyond their current high, which will temper price increases in many of the production factors. Subdued GDP growth in the euro area and the slight rise in interest rates will also keep inflation low.

Wages and salaries are a major cost item for the forest industry in Finland. Taking into account the contractual increments and wage adjustments, wages and salaries are forecast to be up by about 3% in 2006. Labour productivity is expected to rise in the pulp and paper industry, and to some extent also in the wood products industry.

Stumpage prices are expected to remain at more or less their 2005 level, and roundwood harvesting and transportation costs are also likely to remain unchanged, as energy costs are not expected to rise any further and low interest rates will ensure that capital costs remain stable. Even a small rise in labour productivity in forestry will also help reduce the effect of the pay increments on labour costs. Mill prices of roundwood are therefore not expected to rise in 2006.

The price of crude oil is forecast to be a little below the 2005 level. The Research Institute of the Finnish Economy forecasts that the oil price will be USD 58/barrel at the end of 2006. With oil production capacity being fully utilised in the short term, even a small increase in demand or an interruption in production could cause considerable price fluctuations. Chemical and pigment prices are expected to rise more moderately than in recent years.

The price of market electricity will be heavily dependent on water reserves in the Nordic countries, on the level of power consumption in the coming winter and on the price of CO\textsubscript{2} emission allowances. The market price of CO\textsubscript{2} emission allowances in 2006 is expected to be at about the autumn 2005 level, while the price of market electricity is forecast to be about the same as year-end 2005.
Pulp and Paper Industry Profitability to Improve in 2006

Profitability in the Finnish forest industry is affected most of all by the prices of end products. With only modest demand growth on the export markets, export prices of Finnish pulp and paper industry products are forecast to rise in 2006 by only a small amount on their 2005 levels. However, production and exports of paper and paperboard are forecast to rise to a new record level, following the exceptional production shutdowns in 2005, and capacity utilisation rates will rise too. Pulp production volumes are forecast to grow substantially in 2006. With no significant increase in production costs expected, profitability in the Finnish pulp and paper industry is forecast to improve considerably, along with corporate profits.

Export volumes in the sawmilling industry are forecast to be about 1% higher than in 2005, but the average export price will fall by about the same percentage. No changes are expected in sawmilling costs, and so the industry’s profitability will again be weak in 2006. Profitability in the plywood industry is forecast to improve slightly, provided that the forecast growth in export volumes and the 3% rise in export prices are a reality.