



## 2 The Finnish Forest Industry

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### 2.1 Production and Exports in the Sawmilling and Plywood Industries

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*Demand for sawnwood and plywood in Western Europe, the United States and Japan has increased in 2004 as a result of economic growth and especially the revival of construction. However, the European sawnwood market has continued to suffer from over-supply and related price reductions. In addition, the competitiveness of Finnish producers has remained weak in relation to key competitors Sweden and Russia, due to the strong euro. Despite this, the first half of 2004 saw an increase in exports of pine sawnwood to the United Kingdom and a recovery in spruce sawnwood exports to the German market. Forecasts indicate that Finnish sawnwood exports in 2004 will be up by about 1% on the 2003 level, whereas export prices will be down by about 2%. Production and exports of plywood in 2004 will be up by about 4%, despite the weak price trend, although there were signs of a rise in plywood prices in early autumn, prompted mainly by the robust demand and high prices in North America.*

*According to Euroconstruct's June 2004 forecast, the revival in residential construction in Western Europe will be only a temporary phenomenon. The growth prospects for sawnwood and softwood plywood exports in 2005 will depend on growth in the housing renovation market. At the same time, the supply of sawnwood from Eastern Europe will continue to grow. With Europe's sawnwood markets*

*still troubled by overcapacity, Finnish export prices will probably fall a shade further. Production in the Finnish sawmilling industry in 2005 is forecast to be down slightly from the high level of 2004, because of the competition for market share in exports and the good level of residential construction on the home market. Finland's plywood exports are likely to contract slightly in 2005, due to continuing tough competition on the birch plywood market and the closure of two small Finnish mills. The average export price of plywood will rise a little.*

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The estimated consumption of sawn softwood in Western Europe in 2003 grew by about 5%, or approximately 3.7 mill. m<sup>3</sup>, and Finland had the largest estimated per-capita consumption. Sawn softwood consumption has also grown considerably in recent years in Estonia, Sweden and Denmark, which is partly explained by the greater supply of higher added-value products. Production of sawn softwood in the EU was up in 2003, but by less than the increase in consumption. Correspondingly, there was an increase in the EU's net imports of sawn softwood, particularly from Eastern Europe.

Euroconstruct's June forecast of total residential construction in Western Europe in 2004 indicates a growth of almost 4%, and a growth of 2% in housing renovations. In 2003, construction increased more than had been forecast, especially in Finland, Denmark, Ireland and, among the new EU members, the Czech Republic. The link between construction and

	Sawnwood	% of production	Plywood	% of production
Production	13 745	100	1 300	100
*Domestic use	5 576	41	130	10
Exports:	8 169	59	1 170	90
EU	5 174	38	965	74
Africa	1 156	8	2	0
Japan	1 024	7	11	1
Asia excl. Japan	641	5	42	3
North America	33	0	56	4
Russia	4	0	3	0
Other	137	1	93	7

The plywood figures comprise birch plywood, softwood plywood and laminated veneer lumber (LVL).

\* Estimated domestic use = production – exports

Sources: Statistics 2003 (Finnish Forest Industries Federation) and Finnish Forest Research Institute

sawnwood consumption is not straightforward, however, because sawnwood accounts for only a small proportion of the total costs of construction. In the United States, for example, the value of residential construction and housing renovations increased by 10% in 2003, whereas consumption of sawn softwood as a building material increased by only 1%.

Consumption of sawnwood in Japan was up in 2003 for the first time in nearly ten years. At the same time, the proportion of timber-framed houses among the total volume of new residential construction increased a fraction, reaching 45%. The number of building permits issued for timber-framed houses in Japan in January–July 2004 rose by 1% on the previous year's figure.

### **Sawnwood Production Remains High in 2004**

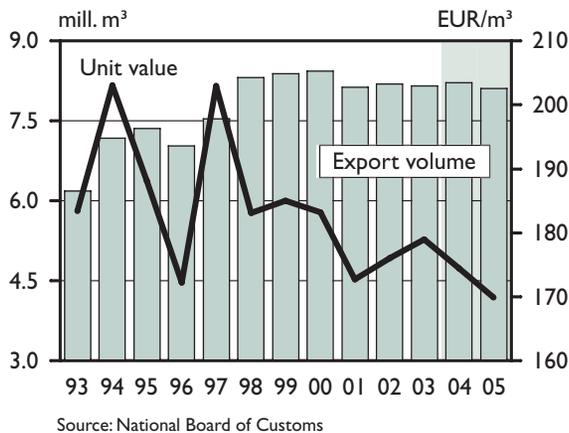
Demand from the domestic construction industry led to a growth of 3% in Finnish sawn softwood production in 2003, to a new production record of 13.65 mill. m<sup>3</sup>. An estimated 5.5 mill. m<sup>3</sup>, or about 40%, of this was consumed directly on the home market or used as a raw material for added-value

processing in Finland.

Sawnwood exports in 2003 remained at the previous year's level. Exports to Asia and North Africa increased, as construction growth in most of Finland's European export markets was again slow. Together, Asia and North Africa accounted for about one third of Finnish sawnwood exports in 2003, and exports to these regions have continued to grow in the first half of 2004, despite the euro sometimes being considerably stronger than the dollar.

The export value of prefabricated wooden houses, wooden furniture and other added-value processed wood products rose in 2003 to over EUR 600 mill., or almost one quarter of the total export value of the wood products industry, which is a clear indication of the increase in the degree of processing. The corresponding proportion in 1993, for example, was 11%.

The average euro rate against the Swedish krona has remained unchanged during 2004 in relation to its 2003 rate. The strong construction growth in Sweden has eased competition on the export market somewhat. Sweden's exports declined a little in 2003, but exports of Swedish sawnwood in the first half of 2004 were slightly improved, and production



*Volume and unit value of sawnwood exports, 1993–2005 at 2003 prices (wholesale price index)*

was also up.

Competition in Western Europe, the main export market for Finnish sawnwood, is intensifying as a result of the growing imports of sawnwood from Eastern Europe. This, in turn, is due to the new export-oriented sawmilling industry investments in the Baltic countries and Northwest Russia. The main export markets for sawnwood from the Baltic countries are the United Kingdom and Germany, whereas those for Russian sawnwood include not only the UK and Germany but also Egypt, Japan and China. Exports of Russian sawnwood grew by about one fifth in 2003, and growth in 2004 has been continuing at an annual rate of about 10%.

Despite the oversupply situation and weak price trends prevailing in Europe, production of Finnish sawnwood increased in January–August 2004 by almost 1% on the same period in 2003. The reason for this was the need to preserve market share in the face of tough competition. Efforts have also been made to improve the poor profitability of sawmills by keeping capacity utilisation rates high. Sawnwood exports in January–June 2004 were up by 3%, largely as a result of pine sawnwood exports growing by 7%, while exports of other grades fell or remained unchanged. However, there were differences between the various export markets. In terms of quantity, the biggest increases in sawn-

wood exports in January–June were to Japan, Germany, Belgium and Egypt. Japan is now Finland’s second-most important export destination for spruce sawnwood.

The market for pine sawnwood has deteriorated in the second half of 2004, while the proportion of spruce sawnwood in total exports has been rising in response to the better demand-supply balance in European markets. Despite the strong euro, European exports of sawnwood to the United States increased by almost 50% in the first half of 2004, which reduced the supply of spruce sawnwood left on the European market. Exports of Finnish sawn softwood in the second half of 2004 are forecast to remain at about the previous year’s level, bringing the export total to over 8.2 mill. m<sup>3</sup>.

Domestic consumption of sawnwood in the first half of 2004 was again high, continuing the trend of 2003. The Research Institute of the Finnish Economy forecasts that residential construction will be up by about 10% in 2004, much of this consisting of detached houses rather than apartment blocks, which is good news for the consumption of wood products. Estimated domestic consumption of sawnwood in 2004 will thus continue to be high, boosted by the slight increase expected in added-value processing of sawnwood in the wood products industry. Although the August 2004 business survey by the Confederation of Finnish Industry and Employers (TT) indicated that the wood products industry’s stocks of finished products are above normal, sawnwood production is expected to remain at approximately the 2003 level because of the slightly improved economic outlook for the second half of the year.

### **Further Decline in Europe’s Sawnwood Prices in 2004**

Oversupply on the European market caused a drop of 4–5% in pine and spruce sawnwood export prices in the first half of 2004, weakening the profitability of the sawmilling industry. The sawnwood price trend on other markets has been more favourable, however. In the United States, overheating in the building sup-

plies market has led to higher prices for wood-based panels and sawnwood, and has increased imports. A contributory factor has been the record level of construction activated by the low US interest rates: new housing starts were up by 8% in the first half of 2004 compared with the same period the previous year. In Japan, too, the price trend for spruce sawnwood has improved during the summer.

Sawnwood producers have sought to justify the need to raise prices in Europe on the grounds of the price trends in other parts of the world, but with no significant improvement in the demand-supply situation, price increases are unlikely in Europe. Sawnwood prices in the second half of 2004 are nevertheless expected to stop falling, which should mean that the average export price of Finnish sawnwood for the year will be down by about 2% on 2003.

### **No Growth Anticipated in Sawnwood Exports in 2005**

Europe's 2005 GDP growth is forecast to be unchanged from 2004, but interest rates are expected to rise. Euroconstruct's June 2004 forecast indicates that the recovery in residential construction in Western Europe will be short-lived, as the value of residential construction in 2005 is forecast to decrease by 0.5% on the 2004 level. Close to half of the value will be housing renovations, an area which is forecast to continue growing in 2005 – by almost 2%. Construction growth forecasts indicate that the best prospects for sawnwood demand are in Eastern Europe and the Nordic countries. Residential construction in Germany and the UK is likely to grow by only about 1%.

With only moderate growth expected in sawnwood consumption in 2005, the supply of sawnwood to Western European markets from Eastern European countries – with their lower production costs – will have a critical impact on Finnish sawnwood exports in 2005. Sawnwood capacity in Northwest Russia and the Baltic countries has increased by an estimated 1.4 mill. m<sup>3</sup> in 2004, and a similar increase

is also anticipated in 2005. Sawmilling investments in Eastern Europe by Finnish companies in 2005 will also have some effect on Finnish exports; although they will have a positive impact on corporate profitability and market shares, they will reduce the quantity of exports recorded from Finland because they will replace such exports. However, construction in Russia is growing at an annual rate of about 10%, and Russian Federation estimates indicate that domestic consumption of Russian sawnwood and wood-based panels in 2005 will increase more rapidly than exports. Should this be the case, it will ease the competitive situation for Nordic producers.

The demand-supply balance in Europe will also be affected by changes in the US market. In 2003, sawnwood exports from Europe to the United States totalled 2.7 mill. m<sup>3</sup>. With the enormous US construction boom expected to level off in 2005, forecasters (e.g. the Bank of Montreal) predict a significant drop in sawnwood prices on the US market in 2005. Canada's import duty on US products is also being cut by half from its present level of 18%. Therefore, although European exports to the United States have been increasing in recent years, further growth opportunities are no longer likely. Though difficult to forecast, the trend in the EUR/USD exchange rate will nevertheless be critical in determining the direction of the sawnwood trade between the two continents; another key factor will be the level of shipping costs as a result of increased international trade and higher oil prices.

The demand-supply balance in the European sawnwood market could be aided by China's strong demand growth and its increasing output of higher added-value wood products, which will draw off some of the sawnwood oversupply in Europe. However, with continuing oversupply on key export markets in Europe, the average export price of Finnish sawnwood in 2005 is forecast to be down by about 1% on the 2004 level, and export volumes to be down by 1% (to 8.1 mill. m<sup>3</sup>).

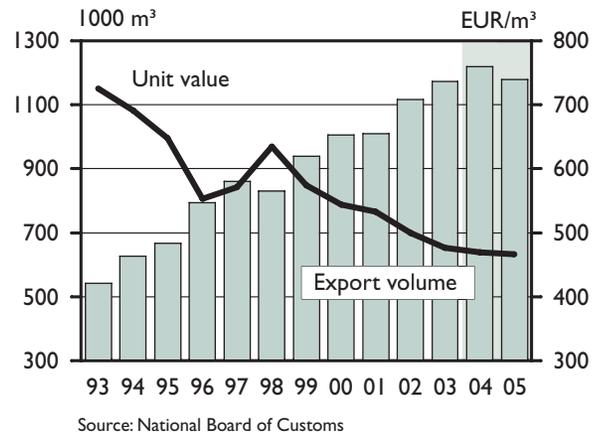
## Finnish Consumption of Sawnwood Will Remain High in 2005

The increase in GDP growth forecast for Finland in 2005 will stimulate mobility in the labour force, which, supported by low interest rates, will fuel construction of detached and other low-rise housing. According to the spring 2004 forecast of the Confederation of Finnish Construction Industries (RT), Finnish residential construction investment in 2005 will remain at the very high level seen in 2004. The Research Institute of the Finnish Economy also believes that the outlook for Finnish housing production is good, forecasting an increase of 3% in 2005. Finnish demand for sawnwood is therefore expected to remain strong.

Finnish sawnwood production in 2005 is forecast to be approximately 13.6 mill. m<sup>3</sup>, which will be just short of the high level of 2004. This slightly lower production figure, and the slight drop in exports too, will be due to the fewer number of working days in 2005 and the closure of some sawmills. The strong growth in supply from Eastern European countries, which operate with lower raw material and other costs, has weakened the trend in sawnwood prices and caused profitability problems for the Finnish sawmilling industry. One factor that could upset the production forecast for Finnish sawnwood is the possible reduction in supplies of wood raw material after the end of the forest taxation transition period, which could turn out to be more than a temporary reduction.

## Continued Growth in Production and Exports of Softwood Plywood

Plywood consumption in Western Europe in 2003 grew by 6%, or 350 000 m<sup>3</sup>, which was greater than the growth in production. In volume terms, the highest consumption growth was in Denmark. By contrast, there was a decrease in consumption in the United Kingdom, which is Europe's biggest user of plywood. Exports of Russian plywood were up by 10% and Finnish plywood by 5%.



*Volume and unit value of plywood exports, 1993–2005 at 2003 prices (wholesale price index)*

Finnish plywood production is already approaching 40% of all plywood production in Western Europe. However, the plywood industry constitutes only a small proportion of the European wood-based panels industry, which also includes chipboard, OSB board and MDF board.

Plywood demand in the United States has been at a record high on account of the boom in low-rise construction. Following a drop in the country's plywood production capacity due particularly to the forest protection measures for the Pacific Northwest, the US domestic market has been consuming South American and Asian plywood, some of which would otherwise have gone to the European market. In addition, European producers have increased their exports to North America, where prices have been very much on the rise.

With an increase in the capacity utilisation rate in softwood plywood production, Finnish plywood output was up by 5% in 2003, to a new record of 1.3 mill. m<sup>3</sup>. Softwood plywood already accounts for over 60% of Finnish plywood production.

Finnish plywood production in the first half of 2004 was up by 2% and exports by 5%. Exports of softwood plywood were up by 4%, although market share was lost in some markets. Competition on the German market in the first quarter of 2004 was especially tough, as the country's imports of plywood fell

Forecasts of production and exports in the sawmilling and plywood industries (1000 m<sup>3</sup>); percentage changes from previous year are shown below the respective volumes

	Production			Exports		
	2003	2004	2005	2003	2004	2005
Sawn softwood	13 645	13 700	13 600	8 153	8 210	8 110
	3	0	-1	0	1	-1
Plywood	1 300	1 350	1 310	1 172	1 220	1 180
	5	4	-3	5	4	-3

Forecasts of export prices for sawnwood and plywood (as percentage changes from previous year\*)

	2003	2004	2005
Sawnwood	2	-2	-1
Plywood	-5	-1	1

\* Export prices are nominal unit values

by 14%. Finland lost market share particularly to Germany's neighbours, Austria, the Czech Republic and Poland. Demand for softwood plywood began to improve in the second quarter, as construction picked up in Europe. This led to longer delivery times and pressure to raise prices. To avoid the previous oversupply, producers had been increasing their deliveries to markets outside Europe, and so the unexpected rise in demand in Europe was difficult to satisfy. This led Finnish producers in summer 2004 to announce modest price increases for September and October.

Exports of Finnish birch plywood rose in the first six months of 2004 by as much as 6%, despite the tougher competition on export markets from Russia and the Baltic countries. The price trend for birch plywood was fairly weak in the first half of the year, but the market has since improved and price increases of 3–5% were announced in September.

Delivery times for softwood plywood have lengthened because of the high level of orders in hand, and Finnish production capacity for softwood plywood could well be in full use in the second half of 2004. Finnish plywood exports in the last

six months of the year are expected to be as high as in 2003, and total exports are forecast to exceed the record of 1.2 mill. m<sup>3</sup>. Plywood production is forecast to be up by 4% in 2004, whereas the average export price will be slightly below the previous year's level, due to the weak price trend in the first six months of the year.

### Competition in Export Markets to Remain Tough in 2005

Russian exports of birch plywood are likely to increase further in 2005, even though the country's domestic consumption is rising; Russia's plywood consumption was up by one fifth in 2003. On the European market, competition will therefore continue to be tough. Finnish plywood production in 2005 is likely to remain at the high level of 2004, or may fall slightly because of a decrease in birch plywood production (UPM-Kymmene has announced that it is considering the closure of two of its smaller birch plywood mills).

If the trend in the softwood plywood market is to be favourable, it is essential that plywood consumption in the United States remains strong in 2005, ensuring that there is enough demand to meet the increasing supply from South American production and elsewhere. Although the export volume of Finnish plywood is forecast to be marginally down in 2005, a continuation of the rising price trend that began in the second half of 2004 should mean that the average export price of plywood in 2005 will be higher than its 2004 level.

## 2.2 Production and Exports in the Pulp and Paper Industry

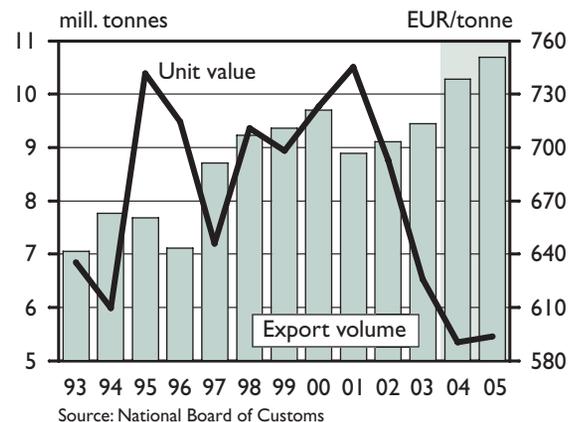
The consumption of printing and writing papers in Europe has increased significantly in 2004 as a result of GDP growth and a recovery in the advertising sector. This has contributed to an increase in production and exports of Finnish paper, which are forecast to be up by about 8% in 2004 compared with the previous year's figures. Paperboard production will also be up. Prices, however, have continued to fall in many areas, due to the price competition caused by overcapacity and because of the strong euro. Although producers have attempted to raise prices of a number of paper grades in the latter part of the year, the average 2004 export price of Finnish paper and paperboard will be 4–5% below its 2003 level. The softwood pulp price in 2004 will be significantly above the previous year's level, whereas the price of hardwood pulp has been affected by the increased supply of low-cost eucalyptus pulp on the world market. The average 2004 export price of pulp is likely to settle at a level slightly above that of 2003, and both production and exports will be up significantly.

GDP growth in the Finnish paper industry's main export markets in 2005 is expected to be at about the same level as in 2004, which will mean a further increase in the demand for paper. Production and exports of Finnish paper are consequently forecast to increase by about 4% in 2005. Although there will still be some overcapacity in Europe in paper grades of key importance to Finnish exports, the growth in consumption will permit an increase in paper prices. The average export prices of paper and paperboard will probably be slightly above the 2004 level. The demand for softwood pulp is likely to remain strong, raising Finnish pulp production by about 4% on the 2004 figure. This will bring the industry close to full utilisation of its production capacity. Pulp exports will increase by about 4% in 2005, and the average export price by about 2%.

## An End to Falling Paper Prices

Printing and writing paper prices have been falling in Europe for several years, but this appears finally to have come to an end in 2004. There are, in fact, already signs of a rise in prices. For example, producers have announced substantial price rises in printing papers on the spot and quarterly markets in Europe. This marks the beginning of an upturn for the paper market in Europe.

The gradual rekindling of GDP growth in Germany and in other key euro area economies has been accompanied by a growth in advertising in different media, including magazines and newspapers. The space given to job vacancy advertisements has also increased in 2004, as new jobs have been created. Retail advertising in Germany is estimated to have increased in the first quarter of 2004 by almost 10% on the same period the previous year. The extent to which printing paper producers benefit from the accelerating growth in Europe's advertising sector will also depend on the impact of the sector's structural changes on advertising volumes in the different media. The main question, especially in the longer run, is whether new advertising tools will replace printed advertising or whether printed advertising will be increasingly used to supplement the new media.



Volume and unit value of paper exports, 1993–2005 at 2003 prices (wholesale price index)

*The Finnish pulp and paper industry, 2003 (1000 tonnes)*

	Chemical pulp	%	Paper	%	Paperboard	%
	of production		of production		of production	
Production	7 350	100	10 353	100	2 706	100
Domestic use*	5 115	70	909	9	445	16
Exports:	2 235	30	9 444	91	2 262	84
EU	1 843	25	6 514	63	1 380	51
Asia	160	2	819	8	352	13
Africa	17	0	99	1	72	3
United States	129	2	951	9	136	5
Russia	26	0	203	2	86	3
Other	60	1	859	8	236	9

\* Estimated domestic use = production – exports

Sources: Statistics 2003 (Finnish Forest Industries Federation) and Finnish Forest Research Institute

The demand for printing papers has also been on the increase in North America in 2004, with the exception of newsprint. According to the Pulp and Paper Products Council (PPPC), which represents North American producers, demand in January–September 2004 was up by 4% on the previous year's figures. This has also been reflected in pulp prices, which have been running at historically very high levels in North America during 2004. The average capacity utilisation rate of North American printing paper mills in January–September 2004 (92%) was clearly up on the level of a year earlier, due to the growth in domestic demand and exports. The continent's producers have also been able to increase the prices of magazine and fine papers used in advertising. GDP growth in North America is forecast to remain strong, which will probably guarantee favourable demand and prices trends for the continent's producers in the second half of 2004 and in 2005.

The August 2004 business survey by the Confederation of Finnish Industry and Employers (TT) revealed that the economic expectations of Finnish paper industry representatives were not only positive but the best for over four years. According to the survey, almost half of the companies expected an

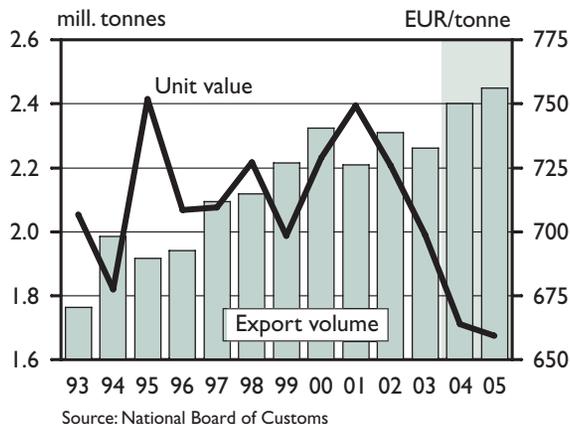
improvement in the economic outlook, and not one of the respondents foresaw a worsening situation.

### **Increased Production and Exports of Paper and Paperboard in 2004**

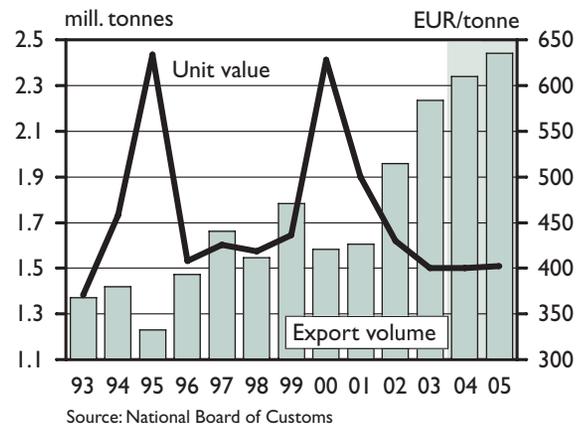
Production and exports in the Finnish paper industry in 2004 will be up significantly on the previous year's figures. The paper and paperboard capacity utilisation rate was about 92% in January–September 2004, which was three percentage points above the rate for the same period in 2003. Paper production and export volumes in January–September were more than 8% above the previous year's figures.

The growth in paper production is also expected to continue in the remaining months of 2004, bringing the forecast growth in production and export volumes for the full year to about 8%. In January–September, paperboard production was 95 000 tonnes higher than the previous year, and production is expected to be up in the last quarter of the year too.

In January–September 2004, paper export prices were an average of 6% below their level for the same period in 2003. This was attributable to the overcapacity and was exacerbated by the strength-



*Volume and unit value of paperboard exports, 1993–2005 at 2003 prices (wholesale price index)*



*Volume and unit value of pulp exports, 1993–2005 at 2003 prices (wholesale price index)*

ening of the euro against the dollar. Uncoated fine paper was the worst affected, with a drop of 9% in its export price compared with the previous year. Coated magazine paper prices were 4% below the previous year's level.

A considerable proportion of Finland's printing and writing paper exports are based on long-term (approx. 12 months) delivery contracts. Even if price increases are introduced for shorter contracts, it takes a while before these can be reflected in longer term contract prices and thus in average paper prices. Furthermore, the extent to which any price rises in magazine papers, such as LWC and SC grades, are transferred to prices agreed in long-term contracts is still unclear. It may be that, at this stage, paper producers are mainly trying to boost their financial and market position through short-term contracts, without adding significant pressures to long-term contract prices.

The average export price of Finnish paper and paperboard in 2004 will be 4–5% below the figure for 2003.

### Two Trends in 2004 Pulp Prices

The world market price of hardwood pulp has fallen due to the plentiful supply. The supply situation is attributable to the considerable increase of recent years in the production capacity for plantation eucalyptus pulp, which is produced at a low cost. The weak price trend in uncoated fine paper – an important end use – has also affected the price of hardwood pulp. The average export price of Finnish hardwood pulp fell by 10% in the first half of 2004 compared with the same period the previous year.

The price of softwood pulp, on the other hand, has improved as a result of the more favourable relation between demand and production capacity. The price of Finnish softwood pulp exports in the first six months of 2004 was 5% higher than the previous year. Softwood pulp is used especially in papers where an excellent print quality and strength are needed, such as magazine papers. Production of these papers was up substantially in the first half of 2004.

According to the Pulp and Paper Products Council (PPPC), the capacity utilisation rate of the world's market pulp producers in January–August 2004 was an average of 96%. At the same time, production was up by about 5% on the previous year. The capacity

Forecasts of production and exports in the pulp and paper industry (1000 tonnes); percentage changes from previous year are shown below the respective volumes

	2003	Production 2004	2005	2003	Exports 2004	2005
Chemical pulp	7 350	7 850	8 200	2 235	2 340	2 440
	3	7	4	14	5	4
Paper	10 353	11 200	11 600	9 444	10 280	10 690
	3	8	4	4	9	4
Paperboard	2 706	2 850	2 900	2 261	2 400	2 450
	-1	5	2	-2	6	2

utilisation rate in August was above average because producers were intentionally increasing pulp stocks, which grew to a level equivalent to an estimated 41 days' supply. Knowledge of the increase in stocks depressed prices in the early autumn. The PPPC statistics cover about 85% of the world's market pulp production capacity.

Finnish softwood sulphate pulp capacity was augmented in spring 2004, when UPM-Kymmene carried through its decision to modernise the Pietarsaari pulp mill, raising its annual capacity by 180 000 tonnes. The start up of the German Stendal market pulp mill in the autumn has also increased supply on the European softwood pulp market.

The 2004 export price of Finnish sulphate pulp is expected to be almost 2% above that for 2003. Production of this pulp in 2004 is likely to be up by about 7%, and exports by about 5%, on the 2003 level.

### Production and Exports of Paper Will Increase in 2005

With further increases in advertising and consumption in Europe in 2005, the demand for Finnish paper and paperboard will rise. The biggest increase is likely in Finnish exports of coated fine papers, whereas newsprint exports will probably remain at the 2004 level. Exports of magazine papers will also increase, although the growth in demand for coated

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

	2003	2004	2005
Chemical pulp	-7	1	2
Paper	-9	-5	2
Paperboard	-4	-4	1

\* Export prices are nominal unit values.

magazine papers will have to be considerable to completely eliminate Europe's overcapacity problem. The Association of European Publication Paper Producers (Cepiprint) estimated in May 2004 that about 9% (or about 0.9 mill. tonnes) of the production capacity for these grades will still be standing idle in Western Europe in 2005.

Economic growth in the new EU member states is high, which will undoubtedly lead to an increase in paper consumption in these countries. This will bring new market opportunities for Finnish papers, too. The impact of the EU enlargement on the paper industry market in 2005 will nevertheless be quite mild.

Pulp and paper demand is currently growing fastest in Asia, and especially in China, which in 2003 consumed roughly one in every seven tonnes of paper produced in the world. It is estimated that China's paper consumption will grow at an annual rate of well over 5% in the current decade. This

growing demand will be met not only by China's own expanding paper and paperboard production but also by imports. Although there are substantial forest planting programmes under way in China that will allow an increase in pulp production using domestic wood fibre in the second half of the decade, there will still be plenty of demand for imported pulp and recycled fibre. Net exports of paper and paperboard from the member countries of the Confederation of European Paper Industries (CEPI) to Asia in 2003 were up by 16%, those of waste paper by 5% and papermaking pulp by 13%.

The price level of European paper sales contracts agreed in autumn 2004 and spring 2005 will largely depend on whether or not the growth in the economy and in consumer demand continue at the level seen in the first part of 2004. The anticipated strengthening of demand will also have an impact on export prices, probably resulting in a higher average export price for paper in 2005. Any rising trend in prices will be kept in check not only by the paper producers' overcapacity but also the expected slight strengthening of the euro. A rapid rise in prices typical of previous upswings is therefore not anticipated. Paper and paperboard export prices are nevertheless forecast to rise in 2005 to a level of about 2% higher than the 2004 average.

The rise in prices will also lead to improved profitability for Finnish paper producers, which will be supported by a further rise in capacity utilisation rates. Production and exports of paper in 2005 are forecast to be up by about 4%, and paperboard by about 2%, on the 2004 level.

### **Pulp Capacity Will be Almost Fully Used in 2005**

Completion of the Veracel (an associated company of Stora Enso) eucalyptus pulp mill in Brazil will contribute to a further increase in the world's papermaking pulp production capacity in 2005. The Veracel mill's annual production capacity will be almost 1 mill. tonnes. However, the demand for pulp

is also on the increase to feed the growing demand for paper.

The export price of Finnish sulphate pulp in 2005 is forecast to be slightly above the 2004 level. The weakness of the US dollar against the euro will limit increases in the euro price of pulp on the European market. The volume of pulp production in Finland will be up by about 4%, bringing full capacity utilisation at some mills. The growth in pulp exports in 2005 is forecast to slow to about 4%, in part as a result of the capacity limit.

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

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*Cost trends in the Finnish forest industry in 2004 have been rather mixed. In comparison with 2003, labour, energy and transportation costs have risen, whereas the prices of roundwood, and especially pulpwood, have fallen. In the paper industry, the capacity utilisation rate has risen in 2004, but the drop in export prices is again affecting the industry's profitability. In the sawmilling industry, the capacity utilisation rate remains high, although the industry's profitability continues to be poor on account of the lower export prices, despite the modest rise in sales.*

*In 2005, both paper prices and capacity utilisation rates are expected to rise, which should see the paper industry's profitability starting to improve. In the sawmilling industry, competition in the export markets will continue to be tough in 2005. There will be no increase in sawnwood prices, and production volumes are forecast to remain at the 2004 level. Profitability in the sawmilling industry will be about the same as in 2004, because no major changes are anticipated in production costs.*

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## Paper Industry Profitability Weakened by Decline in Prices

In 2003, the Finnish forest industry's export income fell due to lower export prices, which affected profitability in both the paper and wood products industries. The 2003 combined turnover of the three largest Finnish forest industry corporations (Stora Enso, UPM-Kymmene and Metsäliitto Group) was EUR 30.5 billion, which was 5% down on the previous year. Their combined profit before extraordinary items in 2003 amounted to approximately EUR 0.8 billion, which was only half the previous year's figure; their return on capital invested was 4%, and the year-end debt ratio was at the previous year's level of 65%.

Total investment by all Finnish forest industry corporations in 2003 was about EUR 2.3 billion, representing 7% of turnover. Some 65% of this investment was made abroad. Investment in Finland was at about the same level as the previous year, while investment abroad was up by EUR 300 mill.

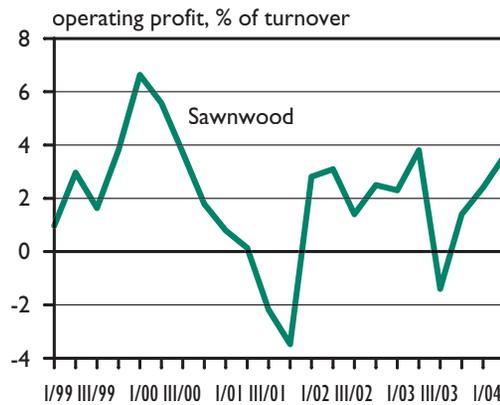
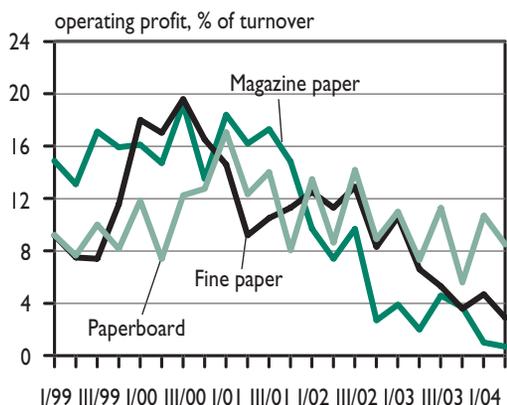
Despite the clear growth in production and exports, the combined turnover of Stora Enso, UPM-Kymmene and Metsäliitto Group grew by only 0.5% in the first half of 2004, because of the

low export prices. The profitability of these forest industry corporations continued to deteriorate, and their combined half-year profits before extraordinary items totalled approximately EUR 0.4 billion, compared with EUR 0.6 billion for the same period in 2003.

The profitability trend in the forest industry corporations' paper and sawmilling units worldwide is shown by product group in the accompanying diagrams. However, the assessments presented below concerning the production costs and profitability of the Finnish forest industry in 2004 and 2005 deal only with domestic production.

Production and export volumes in the Finnish pulp, paper and paperboard industries were up slightly in 2003, despite the poor price trend. The combined export income of these industries was EUR 8.9 billion, which was 5% below the previous year's figure because of the sharp decrease in export prices. No such drop was seen in costs, however, and so there was a significant drop in profitability in the paper and paperboard industries.

The paper industry's profitability weakened further in the first half of 2004, as paper prices fell, although there was an increase in production and export volumes and the capacity utilisation rate rose



Sources: Annual and interim reports of UPM-Kymmene, Stora Enso, M-real and Finnforest

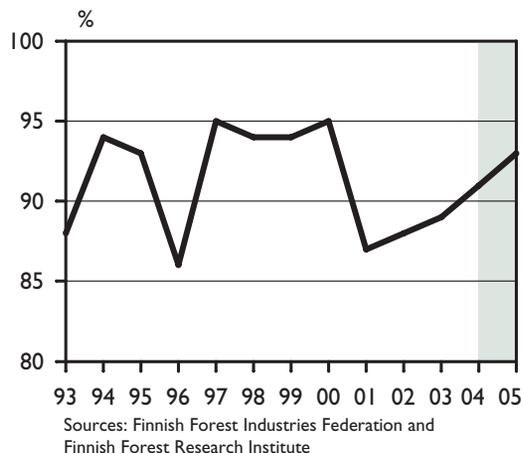
Forest industry operating profit by product group, Q1/1999–Q2/2004.

to 91%. The Finnish pulp, paper and paperboard industries' export income in the first six months of 2004 totalled EUR 4.5 billion, which was about the same as the previous year. The total export volume of the paper and paperboard industries in 2004 is expected to be up by 8% on the 2003 figure, but the average export price will probably be 4–5% down on the previous year's level. No improvement in the paper and paperboard industries' profitability is expected in 2004, however, because there are also upward pressures on the costs of production inputs such as oil-based raw materials, labour, roundwood harvesting and transportation.

Profitability in pulp production is expected to be up slightly in 2004 as a result not only of the rise in production volumes and the capacity utilisation rate but also a moderate increase in the average export price of pulp for the year. The price of softwood pulp has been significantly above the 2003 level, whereas the price of hardwood pulp has fallen.

### **Profitability in the Sawmilling Industry Continues to be Weak**

In 2003, falling export prices meant that the export income from sawnwood, plywood and other wood products was unchanged from the previous year, at EUR 2.6 billion. The sawmilling industry's profitability thus deteriorated, leading to a negative net profit for 2003. Although production and export volumes of Finnish sawnwood and plywood increased in the first six months of 2004, the drop in prices meant that the export income for the entire wood products industry was about the same as in the first half of 2003, at EUR 1.4 billion. With the export volume of sawnwood forecast to be up in 2004 by only 1% on the previous year's figure and sawnwood export prices expected to be down, the sawmilling industry's 2004 export income will not rise above the previous year's figure, and the industry's profitability will continue to be weak. A major factor in the poor profitability of the sawmilling industry is the high price of wood raw material in Finland.



*Paper and paperboard industry capacity utilisation rates, 1993–2005*

Production and export volumes in the Finnish plywood industry in 2004 are expected to be up by an average of 4%. The profitability of production should also improve, as softwood plywood production capacity is projected to be in full use in the latter half of 2004 and the trend in prices is expected to improve. The profitability of birch plywood production has been supported by the lower price of birch sawlogs compared with 2003.

### **2004 Roundwood Costs Reduced by Drop in Stumpage Prices**

Wood raw material comprises about one third of total manufacturing costs in the wood products industry, and about 13% in the pulp and paper industry. The figures cover all sections of these industries, including the manufacture of processed products. In some sections, wood raw material costs account for a considerably higher proportion of total manufacturing costs: in sawmilling, for instance, they account for over half of total costs. 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 about one quarter of total costs. By contrast, stumpage costs account for only 4–5% of total costs in the pulp and paper industry. Average stumpage prices are expected to be down in 2004, as pulpwood stumpage prices are projected to be around 3–9% (depending on species) below the average prices for 2003. The average price of birch sawlogs – a raw material for the plywood industry – is also expected to be down. Price movements for softwood sawlogs, on the other hand, are expected to remain relatively small, because high sawnwood production volumes have maintained the industry's brisk demand for sawlogs in 2004.

The costs of roundwood harvesting and transportation constitute about 7% of total costs in the wood products industry and about 3% in the pulp and paper industry. These costs have risen significantly since 2003. According to figures from Statistics Finland, forwarder and harvester costs rose by 3%, and transporter costs by 5%, between August 2003 and August 2004.

The combined effect on roundwood costs of the drop in stumpage prices and the rise in roundwood harvesting and transportation costs in 2004 is expected to be more or less unchanged in the sawmilling industry compared with 2003, while in the paper industry their combined effect should mean a minor reduction in costs.

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

Labour costs are equivalent to almost 15% of the pulp and paper industry's total output and some 17% of total output in the wood products industry. Under the pay settlements that apply up to March 2005, labour costs in the Finnish forest industry rose by 2.7–2.9% in 2003, and by a further 2.2% in March 2004. In practice, these contractual increments are supplemented by local site-specific increments. Following local increments of 1–1.5% in the different

forest industry sectors in recent years, labour costs in the forest industry in 2004 are expected to be up by about 4%.

Labour productivity increased by 4.6% in the pulp and paper industry and 2.7% in the wood products industry in 2003, according to figures from Statistics Finland. Labour productivity is expected to be up in 2004 by as much as 10% in the pulp and paper industry and by 3% in the wood products industry, due to the forecast production growth and labour force reductions. As a result of higher pay but fewer jobs, real labour costs in the pulp and paper industry are forecast to remain unchanged in 2004, and to rise by nearly 2% in the wood products industry.

### **Large Fluctuations in Energy Prices**

Energy costs account for about 8% of total production 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 2003, the forest industry consumed 26.2 billion kWh of electricity, of which 43% was produced by the industry itself. The high degree of self-sufficiency means that price fluctuations in market electricity have a relatively smaller effect on energy costs in the paper and sawmilling industries than would be expected.

The average price of market electricity in the first half of 2004 was EUR 29 per MWh, or almost 30% less than in the same period the previous year. The price of market electricity for the full year is expected to average about EUR 31, which is about 10% below the previous year's level.

Fuel totalling 270 000 TJ was used in the forest industry's own electricity and heat production in 2003, up by 7% on 2002. Wood accounted for 73% of this fuel input, natural gas for 16%, peat for 6% and heavy fuel oil for 5%. Compared with the previous year, the use of wood was higher but the use of fuel oil a little lower. The price of natural gas in the first quarter of 2004 was down by about 6% on the

same period in 2003. The price of peat has risen by a total of about 3% in two years.

### **Oil Prices Indirectly Reflected in Forest Industry Costs**

The price of crude oil has risen sharply in 2004, from USD 30 at the start of the year to over USD 50/barrel in October. Oil prices are forecast to remain high during the remainder of 2004. Both Nordea and the Research Institute of the Finnish Economy forecast that the average oil price for the full year will be USD 36–38/barrel, which is about 30% higher than in 2003.

The rise in crude oil prices mainly has an indirect effect on forest industry costs via its impact on freight and other transportation costs, the prices of chemicals and pigments, and harvesting costs. The rise in costs of imported inputs in 2004 has been eased by the strengthening of the euro against the US dollar.

The increase in sea freight charges that began in 2003 continued throughout the year. The Baltic Dry Index (BDI), measuring dry cargo spot prices, was about 80% higher at the end of August 2004 than one year earlier, and sea freight charges are expected to remain unchanged during the final months of 2004.

Oil price fluctuations are reflected in the prices of pigments and forest industry chemicals via their impact on manufacturing costs. The prices of basic chemicals did not rise during the first half of 2004 and are likely to remain at the level of 2003. Chemicals account for about 7%, and pigments 3%, of production costs in the pulp and paper industry.

### **Moderate Increase in Costs in 2005**

No significant upward pressure on the Finnish forest industry's production costs is anticipated in 2005. Neither are major changes expected in the euro exchange rate, which will help stabilise prices of imported goods. The rise in oil prices is expected to slow down, which will curb price increases in a number of production factors. Subdued GDP growth

in the euro area and the slight rise in interest rates will also keep inflation low.

The main item of rising costs for the Finnish forest industry is wages and salaries. Taking into account the contractual increments and wage adjustments, wages and salaries are forecast to be up by about 3% in 2005. In the pulp and paper industry, the increase in labour productivity of about 5% means that real labour costs will nevertheless remain unchanged, despite the rise in earnings. The increase in labour productivity will not be as high in the wood products industry, and so its real labour costs are forecast to increase by almost 2% in 2005.

Stumpage prices are expected to remain at more or less their 2004 level, and roundwood harvesting and transportation costs are also likely to remain unchanged. A slight 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 2005.

The average price of crude oil in 2005 is forecast to be only a little below the 2004 average. Most of the forecasting institutions expect the average oil price to settle at USD 35–40/barrel. This assumes stability in the markets and in production conditions. Chemical and pigment prices are not expected to rise until there is a clearer increase in the demand for them.

The price of market electricity will be heavily dependent on water reserves in the Nordic countries and on the level of power consumption in the coming winter. The price of market electricity in 2005 is forecast to be at the 2004 level.

A new addition to the forest industry's costs in the near future will be the costs of greenhouse gas emissions trading. The biggest costs involved will be the purchase of emission allowances and the rise in electricity prices. Greenhouse gas emissions trading is not expected to have any appreciable effect on electricity prices and forest industry costs in 2005.

## **Pulp and Paper Industry Profitability to Improve in 2005**

Profitability in the Finnish forest industry is affected most of all by the prices of end products. With demand growing on the export markets, export prices of Finnish pulp and paper industry products are forecast to rise in 2005 by an average of 2%. Similarly, paper and paperboard production and export volumes are expected to rise, as are capacity utilisation rates. Pulp production volumes are also expected to increase in 2005, bringing pulp production capacity into full use. With no significant increase in production costs expected in 2005,

profitability in the Finnish pulp and paper industry is forecast to improve, along with corporate profits.

Production and exports in the sawmilling industry in 2005 are expected to be almost at the high level of 2004. Sawnwood export prices are forecast to drop slightly and export income to fall a little as a consequence. No major changes are expected in sawmilling costs, and so the industry's profitability will again be weak in 2005. Profitability in the plywood industry is forecast to remain at the 2004 level. Plywood production and export volumes are expected to fall a little, but the export prices of softwood plywood and birch plywood are forecast to remain at about the level of 2004.