



# Finnish Forest Sector Economic Outlook 2012–2013

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## Summary

*The gloomy economic conditions prevailing in the euro area will be reflected in the 2012 and 2013 figures for the Finnish forest industry's production and exports. In the wood products industry, production and exports of sawnwood and plywood will be down in 2012 due to the impact of reduced construction activity on product demand in Europe and on the domestic market. The economic outlook in Africa and Asia is rather better than in Europe, however, and Finnish exports to these regions have been growing. Export unit prices of sawnwood and plywood will be down in 2012, due to the weaker demand in Europe.*

*The fall in demand on Europe's paper market means that production and exports of Finnish paper will be down for 2012 as a whole, although export unit prices for paper will be up. This rise in paper prices has been attributable to Europe's production capacity cuts of recent years and to the 2012 decrease in production volumes. Production, exports and export unit prices of paperboard will all be down slightly, while pulp production and exports will be up a little as a result of demand in China.*

*In 2013, the economy and construction activity are expected to improve in key export markets for the Finnish forest industry, and a modest recovery in demand is expected towards the end of 2013, on the domestic market as well. Production and exports of Finnish sawnwood and plywood are forecast to grow by about 2%, and export unit prices are expected to be up slightly in annual terms. The fall in demand on the paper market is expected to see a turnaround during 2013, but for the full year it will be unchanged from the 2012 level, and no change is foreseen in paper, paperboard and pulp production and*

*export volumes. It is anticipated that export unit prices will be at the 2012 level.*

*The weak state of Finnish forest industry exports is also affecting the roundwood market, where commercial fellings will be down in 2012, to 51 mill. m<sup>3</sup>. The decrease in commercial fellings will continue in 2013, when roundwood imports will rise to a little over 11 mill. m<sup>3</sup> as a result of Russia's WTO membership. Sawlog stumpage prices for the full year 2012 will be down by 5–6% from the 2011 figures, as the faltering sawnwood market in turn affects the roundwood market. Stumpage prices of pine and birch pulpwood will be down by 3–4%. Despite the fall in stumpage prices, profitability in both the wood products industry and the pulp and paper industry will be down slightly for 2012 as a whole. In 2013, the fall in profitability will be brought to a halt as export prices rise slightly and stumpage prices remain close to their 2012 levels. In non-industrial private forestry, the fall in stumpage prices will mean reduced profitability, with the operating profit from timber production falling to less than EUR 80/ha for both 2012 and 2013.*

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### Euro Area Problems Act as Brake on World Economy

The outlook for the world economy in the second half of 2012 is not very encouraging. Growth in the world economy weighted according to the distribution of Finnish forest industry exports will slow to about 1% for the full year 2012, and

will be only about 1.5% in 2013. On the Finnish forest industry's key markets in the euro area no quick solution to the sovereign debt crisis is in view, and great uncertainty abounds as Spain slides into ever deeper difficulty, with the prospect that it may be joined by Italy too. Consumer and business confidence in the economy has weakened since the spring, and orders in hand are at a low level. The euro area is experiencing a downturn in the second half of 2012, and the contraction in the euro area economy for the full year is expected to be 0.5%. In 2013, led by Germany the euro area economy is forecast to grow by 0.5%, with this growth concentrated in the latter half of the year. The growth figures for the United Kingdom will largely follow the euro area trend. In Sweden, GDP growth will show a decline onto a growth track of just below 2% for both 2012 and 2013.

In the United States, the economy will see growth of about 2% for the full year 2012, and this will be repeated in 2013. As the US housing market recovers slowly and employment improves, and with the Federal Reserve's relaxation of monetary policies, private consumption and investment have been picking up from the deep downswing of the recession. Growth in 2013 will nevertheless be overshadowed by uncertainty due to the cessation of the fiscal policy stimulus measures at the end of 2012 and the question mark over further stimulus programmes. If no new fiscal policy solutions are formulated, there is a risk that the US economy will again enter a downturn. In Russia, the high world market price of oil will ensure that growth remains at the rate of recent years. In China, GDP growth has fallen as a result of faltering demand on export markets, but the country's economic policy measures are sustaining growth at an annual rate of about 8%. The economies of Japan, the Middle East and North Africa – key export destinations for Finnish sawnwood – are all continuing to grow.

### Demand for Wood Products Slackens Again

The decrease in residential construction in many European countries in the first half of

2012 affected the demand for sawnwood and plywood. Export volumes to Europe in the first half of 2012 were lower than in the same period a year earlier. Demand in the second half-year is expected to decrease further as construction in Europe remains slack. Although exports are slightly up to markets outside Europe, specifically Africa and Asia, production and exports of wood products are expected to show an overall decrease of 4–6% for the full year 2012, varying according to products in question. The prices of both sawnwood and plywood are expected to fall a little in comparison with the 2011 figures.

The demand for wood products in 2013 is expected to improve slightly towards the end of the year. New housing construction will begin to pick up gradually in Europe, and wood product exports to Asia and Africa will increase, while in Finland the growth in the building renovation sector will continue. Although no real recovery in construction activity in Europe is anticipated before 2014, production and exports of Finnish sawnwood and plywood are expected to be up slightly in 2013 compared with 2012. Growth in demand is expected to push up export unit prices of sawnwood and plywood by about 2%. Any more significant rise in prices would require a distinctly faster recovery in construction in Europe and the United States than that which has been forecast.

### Paper Demand Declines Further, Prices Up Slightly

On the main markets in Europe, 2011 saw a decrease in the demand for paper and paperboard products and in the consumption and production of these products, due to the prevailing economic problems. This trend continued in the first half of 2012, which saw a substantial decline in Finnish paper and paperboard export volumes. As demand is forecast to remain slack in the second half of 2012, production and exports of Finnish paper are forecast to be down by 8–9% for the full year, and paperboard production and exports will also be down slightly. Pulp production and exports are forecast to be up by 1–2%, due to a growth in exports to China. Despite

the lower paper demand in Europe, export unit prices of paper and paperboard products were up in 2011. This was partially attributable to Europe's production capacity closures of recent years. The unit prices of paper exports also rose in the first six months of 2012, due to the production limits set. The average price of paper exports for 2012 as a whole is forecast to be up by 4%, whereas the average paperboard export price will be down a little in comparison with 2011. Pulp prices are forecast to be down by 7% year-on-year.

No improvement is expected in paper and paperboard demand in 2013, but a turnaround is expected to occur in 2014. Production, exports and average export prices of Finnish paper, paperboard and pulp in 2013 are expected to be at about the level of 2012.

### Forest Industry Profitability Down Slightly in 2012

Profitability in both the wood products industry and the pulp and paper industry was down slightly in 2011 compared with the previous year. In 2012, economic conditions in the key export markets have remained difficult, and the outlook for the second half-year is characterised by uncertainty and weak demand, which means that production volumes in both the wood products industry and the pulp and paper industry will be down year-on-year. Declining demand is accompanied by falling stumping prices, however, and this is keeping in check the rise in production and transportation costs. A moderate year-on-year decrease in profitability is thus expected for 2012 in both the wood products industry and the pulp and paper industry. Despite the challenging economy and the planned production limits, companies have been investing or have announced investments in production development in the wood products and pulp and paper industries, in Finland too.

In 2013, the export outlook for Finnish forest industry products is expected to improve gradually towards the end of the year. The trend in export prices in the wood products industry is expected to be marginally positive. Export prices of pulp and paper industry products are

expected to be at about the same level as in 2012. There will be no significant upward pressures on production costs, and stumpage prices in 2013 are expected to remain at about their 2012 level. Profitability in the Finnish forest industry in 2013 is expected to be at about the 2012 level.

### Stumpage Prices Down on Roundwood Market

The further deterioration in the world demand outlook for forest industry products is also being felt on Finland's roundwood market. Although roundwood sales in the early part of 2012 were brisk, the worsening economic conditions on both the sawnwood and paper markets are curtailing roundwood sales during the second half of the year. Softwood sawlog stumpage prices for the full year 2012 are forecast to be down by 5–6%, and by 8% for spruce pulpwood, year-on-year. Due to the more favourable demand situation for pulp, the prices of pine and birch pulpwood fell by a lesser amount, 3–4%. Commercial fellings are forecast to reach 51 mill. m<sup>3</sup> for 2012, which is 3% less than in 2011. Roundwood imports will also be down year-on-year.

On the end-product markets the economy is not forecast to improve until the second half of 2013, and roundwood sales in the first six months will show a year-on-year decrease. In the second six months of 2013 sales will pick up a little as sawnwood demand improves. Average prices for the full year will be more or less unchanged from 2012. However, commercial fellings will be down by 2%, to 50 mill. m<sup>3</sup>, as imports of roundwood will be up significantly on account of the reduced price of imported Russian roundwood following the country's WTO membership. Demand for forest chips used for energy purposes is continuing to grow, reaching 7.8 mill. m<sup>3</sup> in 2012 and 8.3 mill. m<sup>3</sup> in 2013. The energy plant gate price of forest chips in 2012 will remain unchanged from 2011, while in 2013 it will increase slightly.

## Drop in Forestry Operating Profit

The reduction in domestic commercial fellings and the drop in stumpage prices will mean that gross stumpage earnings in non-industrial private forestry in Finland will fall to EUR 1.3 billion for the full year 2012, and the 2013 figures are not expected to show any improvement. Investment in timber production in 2012 will nevertheless be at the previous year's level in real terms, rising in nominal terms by about EUR 5 mill. from the 2011 figure of EUR 210 mill. The proportion of this investment accounted for by work input and financing from the forest owners themselves will have risen to over 70% in 2012, while the real value of state subsidies will have fallen by 3–5%. The per-hectare operating profit from non-industrial private forestry will remain at about EUR 75/ha for both 2012 and 2013, down by a quarter from the post-2000 average. The decrease in stumpage prices will push the real investment return on timber production into the red in 2012. In 2013, real stumpage prices will fall, but the investment return will nevertheless climb back into the black (2.5%).

## Assumptions and Uncertainties in Forecasting

The aim of this Economic Outlook is to provide information on the current state of the entire Finnish forest sector and the short-term outlook for the sector. The forest sector forecasts are based on publicly available statistics, world economic forecasts, forest sector market information from different sources, and research conducted by the Finnish Forest Research Institute. The forecasts presented here are based on the principle of derived demand, according to which fluctuations in GDP growth on the domestic and export markets will, via demand, be reflected in forest industry production and thus the domestic roundwood market. Changes in the forest sector's operating environment and the effects of the Government's economic policies are taken into account in making the forecasts. If GDP growth turns out to be below the level forecast, this would mean that export prices, production and profitability for the Finnish forest industry will be lower than indicated in the forecasts

given here. With falling demand for wood, the adverse impact would spread from the forest industry to roundwood markets and would affect forestry employment and the profitability of non-industrial private forestry. Growth in the Finnish forest sector would then fall short of the forecasts presented here.

The views of GDP growth in the world economy and on export markets have been formulated on the basis of forecasts made by a number of different organisations, among them the Organisation for Economic Cooperation and Development, the International Monetary Fund, the Research Institute of the Finnish Economy, Nordea, and the Bank of Finland. The forecasts given in this publication are based mainly on forest sector information available in late September and early October 2012 and world economic forecasts for 2012 and 2013. The forest sector forecasts presented here are the views of researchers about the most likely course of events. They are point forecasts and are based on export market GDP forecasts and other background assumptions about the markets.

The most significant risk regarding materialisation of the forecasts presented here is that economic growth will be lower than forecast. Uncertainty is focused particularly on the euro area's GDP growth in 2013 and the continuation of the fiscal policy stimulus measures being

*Key forecasting variables, 2011–2013.*

Forecasting variables	2011	2012	2013
	% change from previous year		
Sawnwood production	3	-4	2
Sawnwood export	4	-4	2
Sawnwood export price	-4	-2	2
Paper production	-4	-9	0
Paper export	-3	-8	0
Paper export price	5	4	0
Commercial fellings	1	-3	-2
Roundwood imports	-9	-6	19
Sawlog prices			
Pine	3	-5	1
Spruce	3	-6	0
Birch	8	-4	2
Pulpwood prices			
Pine	4	-4	1
Spruce	2	-8	-1
Birch	2	-3	1

*Price changes are nominal*

concluded at the end of 2012 in the United States. If the difficulty in agreeing political solutions in the euro area and the turbulent economic events of spring 2012 are repeated in 2013, the slow rise in the euro area's economy will be delayed further into the future. This would also affect the export recovery in the Finnish wood products industry and pulp and paper industry, as the demand and price trends for sawnwood, paper and packaging materials would remain weak. On the other hand, the emerging growth in the United States could come to a standstill if there is political deadlock over the future direction of fiscal policy. This would also have a considerable impact on the entire world economy. In addition, any regional conflicts, for instance in the Middle East, or natural catastrophes like the Japanese earthquake of 2011 and subsequent destruction, could affect the course of the world economy via cost increases on energy and raw materials.





## I World Economy

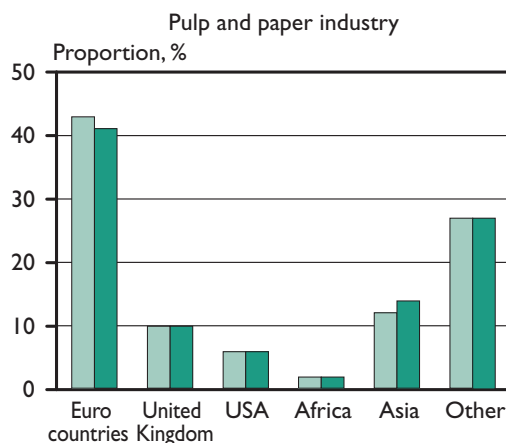
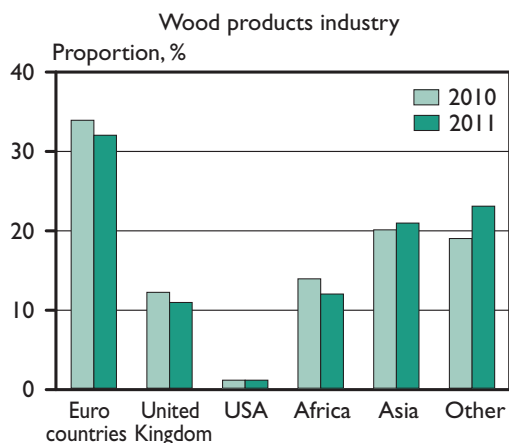
*Growth in the world economy is slowing as the euro area enters a downturn in the second half of 2012. Weighted according to the distribution of Finnish forest industry exports, world GDP growth will slow to about 1% for the full year 2012, and will be 1.5% in 2013. Due to the weakened economic outlook and the protracted sovereign debt crisis, the euro area economy will show a contraction of about 0.5% for 2012. In 2013, led by Germany the euro area economy is forecast to grow by the same proportion, 0.5%. GDP growth in the United Kingdom will largely follow the euro area trend. In Sweden, GDP growth will show a decline, moving to a growth track of just below 2% for both 2012 and 2013.*

*In the United States, the worst is over in the housing market and, supported by private consumption and investment, the economy will show growth of about 2% for 2012 as a whole and in 2013. GDP growth in 2013 will nevertheless be overshadowed by the conclusion of the fiscal policy stimulus measures at the end of 2012. If no new fiscal policy solutions are formulated, there is a risk that the US economy will again enter a downturn. In Russia, the high world market price of oil will ensure that growth remains at the rate of recent years. In China, GDP growth has fallen as a result of the faltering demand on export markets, but economic policy measures are sustaining growth at an annual rate of approximately 8%. The economies of Japan, the Middle East and North Africa – key export countries for Finnish sawnwood – are continuing to grow. The level of growth in the world economy is at risk because of the considerable uncertainty, particularly over the handling of the euro crisis.*

### Growth in World Economy Slows Slightly

In the first six months of 2011 the world economy and international trade were still continuing their slow recovery from the recession caused by the financial crisis. Despite growth of 3.3% in the world economy in 2011, the pace was already tailing off in the second half-year. There were a number of reasons for this. There was still no solution to the sovereign debt and banking crisis prevailing in the euro area, in spite of repeated efforts to resolve the crisis. The situation has in fact worsened into a political dilemma, with different countries seeking to further their own national interests. China chose to consciously tighten both its fiscal and monetary policies in 2011 in order to dampen the overheating of its economy and inflationary pressures. In Japan, the reconstruction following the devastating earthquake began more slowly than expected. The economic stimulus packages that had been introduced in different parts of the world drew to a close, while the ability to put together new packages was hampered by the substantial deficit problems in many countries. In the United States, growth did in fact continue in 2011, though at a slower pace than expected, but this alone was insufficient to ensure stable growth in the world economy.

The impact of 2011 on world GDP growth in 2012 has been far reaching. China's response to the growth slowdown has been to further ease monetary and fiscal policies in the first half of the year, but the effects on its economy will not be evident until at least the closing months of 2012. Although growth in the US economy has continued at a slow rate, the potent use of fiscal policies has been limited by the proximity



Sources: National Board of Customs and Finnish Forest Research Institute.

*Finnish forest industry exports by value, 2010 and 2011.*

of November's presidential and congressional elections. The continued growth of the country's public sector deficit is a threat that could affect the future course of the US economy. In the euro area, the crisis spread to Italy and Spain in spring 2012, despite various attempts to resolve it. The outcome of Greece's parliamentary and re-run elections and its commitment to the deficit-reduction programme fuelled uncertainty in the spring and early summer. The latest indicators point to a euro area downturn in the second half of 2012, which, via weak demand, will also affect the world economy. World GDP growth for 2012 is forecast to slow to just below 3%.

The September 2012 announcements by both the European Central Bank (ECB) and the US Federal Reserve concerning substantial secondary market operations and securities purchase programmes will, when they take effect, briefly support GDP growth and boost market liquidity in the respective countries. The European Stability Mechanism (ESM), to be introduced in mid-2013, will also provide better support for the crisis countries than was the case with the temporary European Financial Stability Facility (EFSF). The actual structural problems behind the deficits will not, however, be eliminated by these actions and organisations, and the scope for manoeuvre in fiscal policy will remain small in the euro area.

In Asia and especially China, the easing of economic policies is expected to support a recovery in GDP growth in 2013. In the United States, the rise in consumer demand

and investment and the gradual easing of the housing market problems are expected to keep the economy on a slow growth track. Although there are positive signs of an improvement in the economy, the economic outlook for 2013 will be overshadowed by the elevated level of uncertainty. The situation is particularly sensitive in the euro area, and political failure to resolve the problems could exacerbate the uncertainty and affect private consumer behaviour and investments. Uncertainty is also being generated by the conflict between Israel and Iran, which could affect world market prices of crude oil. Forecasting the 2013 price trend for other raw materials too is difficult. The forecast of GDP growth in the world economy in 2013 is about 3%.

### Euro Area Deeply Submerged, Brighter Prospects Keenly Awaited

Since autumn 2008, developments in Europe's economy have been dominated by a lurch from one crisis to another. The slump in the housing market in the United States, Ireland and Spain and the doubts over Greece's ability to cope with its substantial debts led to a banking crisis that is tormenting the whole of Europe, and the increase in uncertainty raised interest rates on the interbank market. The interest rates on long-term loans in a number of countries also began to rise as the markets started to doubt whether countries would be able to cope with their major deficit

burdens. Although the fiscal policy stimulus packages sought to guarantee continued growth in Europe, their impact has been only temporary. The scope for manoeuvre in fiscal policy has now been exhausted and countries have been focusing mainly on preventing deficits from growing. Tax increases and public spending cuts have even begun to have an adverse effect on GDP growth. Uncertainty in Europe has been heightened by the political arm-wrestling and the difficulty agreeing solutions to resolve the problems. The market operations of the ECB have also had only a fleeting impact in calming the markets. Euro area GDP growth, mainly led by Germany, was 1.4% in 2011.

The economic downslide in the euro area that began in the latter part of 2011 continued in the first half of 2012. Although the economy had shrunk in the previous quarter, this contraction was halted in the first three months of 2012, but the second quarter of the year again saw a shrinkage, by 0.2%. The latest statistics and indicators suggest that the contraction in the euro area economy continued in July and August, which would signify a recession. There are a number of reasons underlying the faltering economy. Although the euro's weakening in the spring and summer supported exports to destinations outside the euro area, the growth slowdown in international trade and the decrease in internal demand within the emerging economies and the euro area have curtailed growth in exports and international trade. This has been particularly evident in Germany's exports. Even though the German economy – the most important in the euro area – stayed on a growth track throughout the early months of 2012, this growth was nevertheless below the forecast level. What is more, the shrinkage of the Spanish and Italian economies, which began in 2011, continued during the first half of 2012. Due to their size, both of these economies, along with France and Germany, have a considerable effect on the trend in the entire euro area.

Uncertainty in the euro area economies increased during the spring and summer, due to the worsening problems of the Spanish and Italian economies, the turmoil associated with the Greek elections, and the failed attempts to resolve the deficit problems. Combined with

increasing unemployment, this has had the effect of shrinking private consumption. In addition, investment has been adversely affected by the uncertainty over the future, a contraction in industrial output, underutilised capacity and weak demand. The indicators of industrial and consumer confidence have also fallen during the summer and early autumn, indicating that the euro area's GDP growth in the second half-year will remain weak. This is also foreseeable on the basis of industry's low level of orders in hand. The euro area economy is forecast to contract by about 0.5% for the full year 2012.

To ease conditions in the economy the ECB introduced a major financing package directed at banks at the end of 2011, which calmed the financial markets during the winter and early spring. Financial markets were further reassured by the July cut in the central rate and the September announcement of a conditional purchase of crisis country bonds on the secondary market. Although these measures are not sufficient in themselves to stabilise economic growth as structural reforms are also needed within the crisis countries, for the euro area they are nevertheless a step towards restoring confidence and will have an impact on growth in 2013. The ECB is in fact assuming the role of leading economic policy coordinator in Europe, and a further cut in the central rate is possible if the economy requires this. The introduction of the European Stability Mechanism (ESM) in mid-2013 will provide improved opportunities for supporting the course of the crisis countries' economies than the existing European Financial Stability Facility (EFSF).

Slower GDP growth in the euro area than elsewhere in the world is further weakening the euro, though this is improving price competitiveness and exports to destinations outside the euro area. Exchange rates are, however, affected by decisions made outside the euro area and by the economic circumstances in such countries. The outlook for private consumption in 2013 has two key aspects. Although lower inflation will support consumption through greater real purchasing power, the deteriorating employment trend will limit the growth in consumption. If there is no major change in the general level of confidence, it is entirely possible that private

Growth forecasts for world economy (real GDP, annual percentage change).

Area	Proportion of Finnish forest industry's total export value 2011, %	Actual GDP growth % 2011	ETLA 2012	IMF 2012	ETLA 2013	IMF 2013
<b>Weighted by proportion of Finnish forest industry exports</b>	100.0	2.2	1.0	1.1	1.6	1.6
EU-27	61.3	1.5	-0.3	-0.3	0.6	0.4
Euro countries	39.6	1.4	-0.6	-0.4	0.5	0.2
Germany	18.1	3.1	0.7	0.9	1.3	0.9
United Kingdom	10.4	0.7	0.1	-0.4	1.0	1.1
Sweden	4.6	3.9	1.0	1.2	1.8	2.2
Russia	5.1	4.3	3.5	3.7	3.5	3.8
United States	4.6	1.9	2.2	2.2	1.9	2.1
Asia	15.1	5.1	5.1	5.4	5.1	5.8
Japan	3.8	-0.8	2.6	2.2	1.5	1.2
China	4.3	9.2	7.5	7.8	8.0	8.2
Other	13.9					

Forecast by Research Institute of the Finnish Economy (ETLA) published September 26, 2012.  
Forecast by International Monetary Fund (IMF) published October 9, 2012.

consumption will decline further in 2013. Investment, on the other hand, is expected to grow a little. The pattern of GDP growth within the euro area will nevertheless remain uneven. The economies of the Southern European crisis countries are forecast to shrink further, but growth in the core countries led by Germany will result in euro area GDP growth of about 0.5% in 2013.

#### Rest of Europe Marches to Euro Area Beat

In those countries of Europe which are outside the euro area, the economic indicators have been broadly following the euro area trends. As the euro area is the main market for most of these countries, the weak demand is affecting export growth and profitability, which are also affected by changes in exchange rates.

The United Kingdom's economy grew by 0.7% in 2011. In the first half of 2012, however, the UK economy was experiencing a downturn. Despite the weakness of the pound sterling there was no surge in UK exports, because euro area demand was slackening. Higher unemployment, uncertainty and an increase in the rate of saving have conspired to keep private consumption at the 2011 level. Investment will be up only slightly for 2012 as a whole. Together with the continued programme of cuts in public finances,

this could even mean that the UK will report a shrinkage in its economy for the full year 2012. The situation in 2013 is expected to improve slightly, provided that exports to the euro area begin to pick up again. Aided by the stimulus impact of monetary policies, a modest recovery in private consumption and investment should help the UK economy to achieve GDP growth of 1% in 2013.

Sweden's economy has coped better with the effects of the euro crisis than the rest of Europe. Although the country's GDP growth was 3.9% in 2011, the growth rate was already slowing in the latter half of the year. In the first six months of 2012, the economy nevertheless showed signs of picking up again, with a moderate growth in exports and especially an increase in domestic consumption. However, with demand weak and the Swedish krona strong, exports have again tailed off since the spring and private consumption growth has slowed. In manufacturing, the increase in unutilised capacity has diminished the desire to invest. The September decision to reduce interest rates by Sweden's central bank, the Riksbank, was aimed at reinvigorating the declining GDP growth. It was probably also an attempt to weaken the external value of the krona and improve export potential. Sweden has been regarded as a safe haven for investments during the economic crisis, and this has gradually led to a strengthening of the krona

exchange rate along with a GDP growth that has outperformed the rest of the world. The cut in interest rates makes the Swedish krona a less attractive investment and weakens its position. Sweden's GDP growth for the full year 2012 is forecast to be about 1–1.5%. Exports in 2013 are forecast to rise again on account of improved demand on the world market and especially in the euro area. Growth in domestic consumption will be supported by an increase in real purchasing power and by the reasonably stable financial situation among households. Investments generally respond to demand growth after a time lag, and so investment will still have only a minor impact in 2013. The Swedish krona is expected to weaken a little from its current level, but will nevertheless remain strong against the euro. The Swedish economy is forecast to grow by almost 2% in 2013.

In the Baltic countries the dynamic growth of 2011 is continuing at a slower pace. The Estonian economy has been boosted by excellent growth in exports, though this has slowed significantly in 2012 due to the lack of demand. The situation in Estonia has been aided by previous years' improvements in internal price competitiveness and the fact that GDP growth and demand on the country's main export markets, Germany and the Nordic countries, have so far remained moderately good. In Latvia and Lithuania too, export growth is significantly slower than in 2011. The Baltic countries are in fact undergoing a structural change typical of emerging economies, where growth in domestic demand and investment constitute an increasingly important share of the overall growth in the economy. GDP growth in Estonia and Lithuania for the full year 2012 is forecast to be 2–3%, and in Latvia a little above this. Domestic demand factors in 2013 will remain strong, and supported by export growth the Baltic countries' economies will grow by 2.5–4%.

### Russia's Growth Maintained by Oil Revenues and Consumption

The lack of diversity in Russia's exports, being based on energy products, has frequently been

considered a restraining factor on the development of the country's other areas of industrial production. However, in the prevailing global debt crisis, this has been to Russia's advantage. While the world market demand for capital goods and consumer goods has been weak, the demand for energy and for oil products has remained fairly stable despite the economic downturn. This has maintained growth in export revenues, which has enabled considerable growth in private consumption and investment. Private consumption is nevertheless largely linked to imported foreign goods, and Russia's accession to the World Trade Organisation (WTO) at the end of the summer and the consequent lowering of customs duties is likely to increase its imports of consumer goods. The down side of the rapidly growing economy is a rise in consumer prices. The Russian Central Bank has reacted to this by tightening its monetary policies through raising central rates in September. Further interest rate rises are possible, which would add to the prospect of a further strengthening of the ruble. Although efforts have so far focused on maintaining the ruble's external exchange rate within a certain fluctuation interval, Russia intends to gradually shift to a free-floating ruble within a few years. This will give more room for manoeuvre in deploying effective monetary policies without having to use other measures to neutralise the effects on the ruble's external value. Russia's GDP growth for 2012 is forecast to be at almost the 4.3% rate seen in 2011.

In 2013, the robust employment situation and rise in real earnings will keep private consumption growth at about the 2012 level. Growth will also continue in the total amount of investment. Although Russia is acknowledged to have an unattractive investment climate and has had difficulty attracting foreign investments, its WTO membership is likely to mean an increase in the number of foreign companies establishing in Russia in the coming years. This will naturally also depend on Russia's willingness to see this happen and the speed with which it removes trade barriers. With the slow recovery in the world economy, Russia's exports are forecast to grow in 2013, and its GDP is set to be up by 3.5–5%.

## US Recovery Under Way, but Problems Still Abound

Growth in the United States economy in 2012 is expected to be slightly higher than the 1.9% growth recorded in 2011. Although growth slowed a little in the early months of 2012, figures released for the summer indicate that growth is again picking up slightly. The underlying reason for the continuing modest level of growth is the improved economic situation of households and the recovery in investment. Even though households are still repaying debts, their debt burden is not as serious as it was a few years ago. The recovery in consumption is also attributable to the improved state of the housing market. House prices have no longer been falling, selling times have shortened a little and there is distinct growth in residential construction. The modest rise in share prices has also improved the value of households' assets. The level of general confidence has been improving due to the slowly rising employment figures and low inflation, which has not chipped away at purchasing power. The September decision of the Federal Reserve to continue with its relaxed monetary policies has improved market liquidity and the ability to plan ahead. The decision has also weakened the US dollar, which will support export growth and limit imports especially from China. Public consumption will be down on the 2011 figures, however. The growth in the United States' economy for the full year 2012 is forecast to be slightly above 2%.

The economic outlook for the US in 2013 is overshadowed by the substantial public sector deficit, the growth in this deficit, and uncertainty over the continuation of the stimulus-oriented fiscal policies. At the end of 2012 a number of previously agreed fiscal policy stimulus packages will come to an end, the combined growth impact of which is estimated to have been as high as about four percentage points on the nation's GDP. No new fiscal policy decisions are likely to be made before the November 2012 presidential and congressional elections, which means there will be little time for formulating new federal tax and spending packages. If these cannot be put together, there is a risk that the

US economy may slide back into recession. It is nevertheless generally believed that after a period of political wrangling, agreements will be reached and fiscal policy will continue in the form of stimulus measures. It will, however, be essential to make some expenditure cuts in the budget in order to curb growth in the public sector deficit. Based on these assumptions the modest growth in private consumption and investment will continue, keeping the US economy on a 2% growth track in 2013.

Canada's economy grew by 2.4% in 2011. Figures for the first half of 2012 show that growth has continued but has also slowed a little. Export growth eased up during the summer but is forecast to improve again in the second half of the year, supported by the steady demand growth in the US and by the weakening of the Canadian dollar. Falling inflation and rising employment are supporting the growth in private consumption. Residential construction will be up for the full year 2012, but in 2013 it is expected to decline slightly. Other investment will be up in both 2012 and 2013. The Canadian dollar has weakened slightly against the euro in 2012, but in 2013 it is forecast to remain at the same level. Growth in the Canadian economy is expected to be 2% for the full year 2012 and in 2013.

## Growth Slowing in Asia

China is the one of the few countries in the world in which deficit problems have not yet prevented the active use of Keynesian economic policies. The 9.2% GDP growth of 2011 was followed by accelerating inflation and the threat of overheating in the economy. China reacted to these by tightening both its monetary and fiscal policies in 2011. In the first half of 2012 these measures, in combination with the slower export growth, resulted in slower GDP growth. In order to support stable growth, China again slackened its economic policies in stages during the spring and summer by cutting interest rates and increasing infrastructure projects. Due to the weakening demand on world markets, China's GDP growth cannot continue to rely only on exports but must also look to the domestic

market. However, shifting the focus of growth to private consumption is not easy without substantial structural reforms, such as the creation of a social safety net. Currently, a major share of household income is set aside as savings to guard against an uncertain future. To support its export growth, China let the yuan weaken against the dollar in the early part of the year, but because of the monetary policy decisions in the US and due to China outperforming the GDP growth of the rest of the world, the yuan is nonetheless expected to strengthen again in the second half of 2012. GDP growth in the Chinese economy will be about 8% for the full year 2012. In 2013, China's economy is estimated to grow by about 8–8.5% due to the slight improvement in world market demand and the effects of economic policy decisions taken.

Japan's GDP growth in 2011 was dominated by the March earthquake and its destructive aftermath. The reconstruction under way in the second half of the year was not, however, able to make up for the contraction in total output in the first half-year and the poor export performance that continued throughout the year. The country's economy shrank by 0.8% in 2011. In the first half of 2012, there were two growth drivers in place: the reconstruction work and the level of private consumption, which was boosted through fiscal policies. Exports also grew, despite the strength of the yen. In the wake of the downward slide in the world economy, Japan's GDP growth is nevertheless forecast to slow down in the second half of 2012.

The Japanese economy has long been troubled by deflation, and this does nothing to encourage consumption. With the aim of boosting consumption growth, Japan's central bank has set a 1% inflation target, which, if successful, will encourage growth in private consumption. The September decision by the central bank to slacken monetary policies supports this target and also serves to weaken the strong yen. The improved level of world market demand expected in 2013 is forecast to increase Japan's export volumes. The rate of investment is likely to slow in 2013, however. On account of the good growth in the first half of the year, Japan's GDP growth for the full year 2012 is

expected to be 2.5%. Growth in 2013 will be slower, at just below 2%.

In North Africa and the Middle East, which are both key export markets for Finnish sawnwood, the economic recovery has continued, following the unrest of 2011. The growth in the economies of the region for the full year 2012 will generally be in the range 2–4%. In 2013 the growth in these national economies is expected to continue at a slightly higher rate. The region is nevertheless politically in a very volatile state, and further unrest is possible.



## 2 Finnish Forest Industry

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

*The economic outlook for Finland's wood products industry has worsened again. Export volumes of sawnwood and plywood to Europe in the first half of 2012 were lower than in the same period a year earlier. Estimates of the trend in construction indicate that there will be a further reduction in demand for sawnwood and plywood in the second half of 2012, both on the European export market and the domestic market. Although exports are slightly up to markets outside Europe, specifically Africa and Asia, production and exports are expected to show an overall decrease of 4–6% for the full year 2012, varying according to the products in question. The price of sawnwood in the first half of 2012 was rising slightly, but in the second half-year the declining demand is pushing down prices. For the full year, the prices of both sawnwood and plywood are expected to be slightly below those of 2011.*

*In 2013, the demand outlook is expected to brighten somewhat towards the end of the year, and production and exports of Finnish sawnwood and plywood are forecast to be up slightly year-on-year. In Europe, new housing construction will begin to pick up gradually, and sawnwood and plywood exports to Asia and Africa will increase, while in Finland the building renovation sector will continue to grow. However, a real recovery in Europe's construction sector is not expected until 2014. Demand growth is also expected to push up the unit prices of sawnwood and plywood exports, though in annual terms this will only have a minor impact. The price trend for sawnwood*

*in Europe has remained weak during the economic downturn of the past few years, and any more significant rise in prices would require a distinct recovery in construction in Europe and the United States.*

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#### Construction Recovery Slow

In the first six months of 2011, sawn softwood consumption grew in various markets around the world on account of the improved economic outlook. In 2012, the economic outlook has deteriorated, and Euroconstruct estimates in its June report that new residential construction in Western Europe will be down for the full year 2012. Residential renovations will also fall short of the 2011 figures.

The low level of construction activity in recent years has returned Europe's sawn softwood consumption volume (estimated consumption = production + imports – exports) to the level of a decade ago. In 2006, Europe's housing completions peaked at 2.38 mill. units, whereas Euroconstruct's estimate for 2012 is only about half of this. Construction activity varies greatly from one country to another, however. In the euro area's crisis countries, construction activity is declining, whereas in Germany the more favourable economic conditions have aided construction. In Sweden and Finland, new residential construction will be down in 2012, with a turnaround in construction not expected in Finland until 2014. By contrast, Russia's residential construction is expected to be increasing, as its 2011–2015 construction



programme is likely to boost the production of new homes and the use of wood in construction.

Sawnwood consumption in the United States has fallen more rapidly than in Europe over the past few years, dropping about 40% to a level below that of a decade ago. Residential construction has nevertheless begun to grow gradually, and US housing starts were up by 25% in January–August 2012 compared with the same period a year earlier. Starts are nevertheless still far short of the volumes prevailing before the recession. With the decline in domestic consumption, North America’s sawnwood exports to China have grown, and for Canada the first half of 2012 was also a period of export growth.

The growth in consumption of wood products has chiefly been in Asia, with China being the largest consumer. China has become ever more reliant on imported roundwood, and its imports of sawnwood have also grown. China’s imports in the first part of 2012 were nevertheless adversely affected by a minor downturn in construction, which will also continue in 2013. In Japan, reconstruction boosted the demand for sawnwood and wood-based panels in 2011, but more slowly than had been expected. As reconstruction progresses, it is anticipated that the demand growth for wood products will continue and that imports will increase somewhat. Japan’s housing starts in January–June 2012 were up by 5% on a year-on-year basis, and starts of timber-framed buildings were up by almost 4%.

The demand for sawnwood in the Middle East and North Africa has not yet reflected Europe’s economic problems to any great extent. Demand in 2011 nevertheless suffered a temporary setback due to the unrest in the region and the war in Libya. The region’s economies will show continued growth for both 2012 and 2013, but uncertainty is heightened by the military action in Syria and by the possibility of conflict between Israel and Iran.

## Europe’s Economic Outlook Worsens in Second Half of 2012

The weak price trend for sawnwood in Europe has continued for a considerable period already, as consumption has remained low following the

*The Finnish sawmilling and plywood industries, 2011 1000 m<sup>3</sup>.*

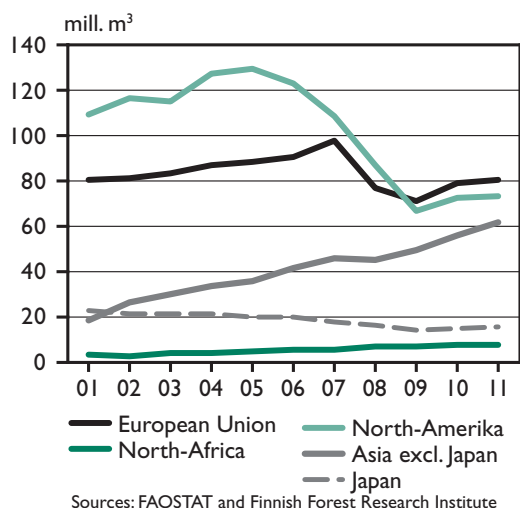
	Sawnwood	%	Plywood	%
Production	9 700	100	1 040	100
*Domestic use	3 585	37	177	17
Exports:	6 115	63	863	83
EU	2 828	30	756	73
Africa	1 582	16	4	0
Asia excl. Japan	861	9	18	2
Japan	722	7	5	0
North America	1	0	28	3
Russia	3	0	1	0
Other	118	1	51	5

*\*Estimated domestic use = production – exports*

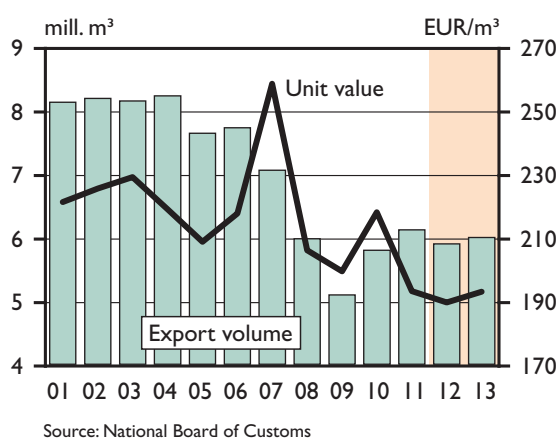
*Sources: Finnish Forest Industries Federation and National Board of Customs.*

recession. Sawmilling capacity is high, especially due to the investments in Germany since 2000, and further additions are on their way. The estimated net increase in capacity in Sweden over the period 2011–2012 is approximately 2.4 mill. m<sup>3</sup> of sawnwood, and the additional capacity in Russia up to 2016 could be 3.5 mill. m<sup>3</sup>, mainly in Northwest Russia and Siberia. The oversupply has meant an increase in exports from Europe to North Africa and the Middle East, and also to markets in Japan and China. An improvement in the price trend in Europe will require a distinct recovery in demand in both Europe and the United States.

The abundant sawmilling capacity has in places led to upward pressure on sawlog prices in Europe, which together with the weak price trend for sawnwood has meant a deterioration in production profitability. Production limits have in fact been introduced in Central Europe in the first half of 2012. In Germany, sawnwood production in January–May was almost 7% lower than a year earlier, and in Austria the difference was even greater. At the same time, Russia’s production has remained close to the 2011 level, while in Finland there was a year-on-year drop of 3%. In Sweden, sawmills have been hit not only by the weak sawnwood price trend but also the strong krona, with second-quarter production falling by 3.5% year-on-year. Despite the production limits set by European producers, the rise in the HWWA index of sawnwood market prices in the early part of the year tailed off in



World sawnwood consumption by region, 2001–2011.



Volume and unit value of sawnwood exports, 2001–2013 at 2011 prices (wholesale price index).

June–July. Given the deteriorating economic conditions, this will mean a weakening of the price trend in the latter part of 2012.

In Finland, the price ratio between softwood sawlogs and sawnwood became significantly less favourable for the sawmilling industry in 2011 in particular, following the drop in the ratio during the recession year of 2009. In the first half of 2012 the economic expectations were nevertheless positive, and there was a slight improvement in the price ratio between sawlogs and sawnwood, as sawnwood export prices were on the rise. Despite this, the average export price for January–June was down by 3% for spruce sawnwood and 1% for pine sawnwood on a year-on-year basis. The economic trend in Europe since the spring has worsened

further. The August 2012 economic survey by the Confederation of Finnish Industries (EK) revealed that in the wood products industry the price trend is expected to reverse into a decline in the latter part of the year. With production being restricted in Europe, the drop in prices will probably be relatively small. The unit price of Finnish sawnwood exports for the full year 2012 is expected to be slightly below the 2011 average.

The total export volume of Finnish sawnwood increased in January–June 2012 year-on-year, even though exports to Europe were down by about 5% in the same period. Exports to Africa were up by about a quarter thanks to orders from Egypt and Algeria, and exports to Asia were up by 6%. Despite the unfavourable movement in exchange rates, Sweden’s exports in January–June were also up by almost the same percentage as Finland’s exports. At the same time, there was a fall of about 2% in Sweden’s exports to Europe, but its exports to destinations outside Europe were up considerably. The profitability of sawnwood production has been hit in Sweden too, due to the significant rise in roundwood prices that has occurred since the storm-damaged trees were sawn up in 2010. The increase in sawmilling capacity in Southern Sweden in particular is expected to bring additional upward pressures on the price of roundwood.

Finnish sawnwood exports to Asia and Africa for the full year 2012 will be up, but exports to Europe will show a decrease due to the fall in demand in Europe. Overall, Finnish sawnwood exports in 2012 are forecast to be about 4% below the 2011 figures.

### Hope of Improved Demand in 2013

Forecasts by Euroconstruct indicate that new residential construction will begin to grow slightly and that residential renovations will increase in Europe in 2013. With this growth taking place from a low base and being unlikely to begin until the latter part of the year, the market outlook will see only a minor improvement. Differences between countries will remain considerable, and some countries will still see a reduction in construction activity. However,

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		
	2011	2012	2013	2011	2012	2013
Sawnwood	9 700	9 300	9 500	6 115	5 900	6 000
	3	-4	2	5	-4	2
Plywood	1 040	980	1 000	863	820	840
	6	-6	2	4	-5	2

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

	2011	2012	2013
Sawnwood	-4 (193 €/m <sup>3</sup> )	-2	2
Plywood	6 (516 €/m <sup>3</sup> )	-1	2

Export prices are nominal unit values

construction will grow in Germany and the United Kingdom, which are among Finland's biggest export destinations. Any improvement in the market outlook in Europe will require that no further worsening of the sovereign debt crisis takes place.

In Africa, the uncertain political circumstances may still continue in 2013, but sawnwood demand is nevertheless expected to remain more buoyant than in Europe. Progress with Japan's reconstruction will stimulate its demand for wood products, and Europe's exports to China are also expected to grow.

This improved demand is expected to push up sawnwood prices a little in Europe in 2013, though this will occur in the latter half of the year. Europe's exports to the United States, which also shrank substantially during the recession, might well start to grow as US construction activity increases. Swedish and Russian exports to Europe may be adversely affected by exchange rate movements, which have weakened price competitiveness in these two countries. The euro was about 16% weaker against the Swedish krona in July 2012 than in January 2010. The euro has also weakened a little against the Russian ruble. In the early months of 2012, Swedish exports were focused on Africa and Asia, while Russia has also focused on its

domestic consumption. In relation to the currencies of the United Kingdom, the United States and Japan, the weakened euro is expected to give Finland a competitive advantage in 2013 as well. Finnish sawnwood exports are forecast to grow in 2013 to Asian and African markets and also to a minor extent to Europe. Export volumes and prices are expected to improve towards the end of 2013, boosting their annual growth to about 2%.

## Decline in Construction in Finland

According to the August 2012 survey by the Confederation of Finnish Industries (EK), economic expectations in the construction sector have deteriorated since the spring. The economic stimulus measures of 2011 resulted in an increase in the construction of new housing, but the pace has slowed in 2012. Construction activity varies considerably across the country, but overall the volume of low-rise housing construction in January–June 2012 was about 9% lower than a year earlier, and building permits were down by one fifth.

Euroconstruct estimates that new residential construction in Finland for the full year 2012 will be down by 7%, and that growth will not be seen until 2014. Renovation of existing buildings, which accounts for 45% of all building construction by value, has continued to grow, and is forecast to be up by 3% for 2012. Renovation work is boosted by the increase in the total building stock and by the ageing of this stock. However, the cut in the household tax credit arrangements in 2012 could slow the growth rate in renovations to a certain extent. The decrease in new residential construction is expected to reduce domestic consumption of sawnwood by about 5% in 2012, and consumption is unlikely to grow significantly until 2014.

The slowdown in domestic consumption and the deteriorating economic outlook on export markets began to be reflected in sawnwood production during the first half of 2012, when production volumes were down by 3% year-on-year. With domestic consumption and exports falling in the second half of the year, Finnish sawnwood production volumes for the full

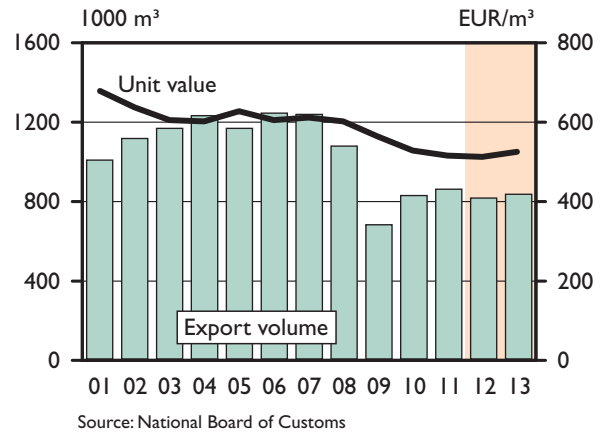
year 2012 are expected to fall to approximately 9.3 mill. m<sup>3</sup>. Growth in domestic consumption and in exports in 2013 is not expected to be very high, and so production growth is forecast to be about 2%.

## Plywood Markets

The improved economic outlook at the start of 2011 was also evident in the wood-based panels market, where consumption increased in Europe and North America. Finnish plywood exports grew to the principal export markets in Europe, and there was a rise in the export unit price. Plywood prices were also rising in the first part of 2012, as the supply in Europe had decreased due to the destruction of a Chilean pine plywood factory and a reduction in imports of Chinese hardwood plywood on account of the rising cost of sea freight.

The deterioration in economic trends has also been evident in plywood markets. In January–June 2012, export volumes of Finnish softwood plywood were down by 6%, and hardwood plywood by 2%, as exports to Europe and the United States declined. By contrast, there was an increase in export volumes to destinations outside Europe. The majority of Finnish plywood exports are bound for the European Union, however, where the biggest export destinations are the United Kingdom and Germany. The trend in export prices was more favourable than that in export volumes, with the export unit prices of birch and softwood plywood in January–June 2012 being about 2% higher than for the same period in 2011. About 60% of Finnish plywood exports consists of softwood plywood and the rest is birch plywood. The price of birch plywood is about twice that of softwood plywood.

Plywood consumption is affected not only by construction activity but by demand from the furniture and transportation equipment industries and the packaging industry, which is reliant on world trade. Plywood consumption in Europe relies on a certain level of imports, as Europe's own production covers about 80% of consumption. Europe's biggest plywood importer is Germany, whose imports of softwood and



Volume and unit value of plywood exports, 2001–2013 at 2011 prices (wholesale price index)

hardwood plywood fell by 14% year-on-year in the first half of 2012, according to figures from Eurostat. The first six months of the year saw no significant changes in the biggest exporters' market shares in Germany. Among Germany's imports of hardwood plywood, Russia's share was about a quarter, while Finland and China each accounted for 18%. In the first half of 2012, German imports of hardwood plywood were slightly higher than its imports of softwood plywood.

Russia's plywood capacity has grown in recent years, and new investment plans are also in hand for the coming years. China has significantly increased its market share on the European plywood market in recent years. Finnish plywood production remains the highest in Europe after Russia, although production volumes have fallen to about 1 mill. m<sup>3</sup> since the 2006 peak of 1.4 mill. m<sup>3</sup>.

The deterioration in economic conditions in 2012 is expected to be reflected in many different areas of plywood use in Europe. The recovery in housing and other construction has been delayed, the growth setback in international trade is affecting the transportation equipment industry and packaging, and the decline in consumer confidence is having an impact on furniture demand. In the second half of 2012, the trend in Finnish export volumes and prices is expected to be weaker than in the first six months, especially in regard to softwood plywood, which is used in construction. In comparison with 2011, plywood export volumes are expected to be down by 5%

for the full year 2012, and export unit prices will be down a little. Export volumes and prices will rise in 2013 as Europe's economy improves.

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

*As uncertainty over the future course of the economy increased and GDP growth slowed in the second half of 2011, consumption and production of paper and paperboard products in Europe and the United States declined. Paper consumption has fallen further in 2012, and export volumes of Finnish paper and paperboard decreased considerably in the first six months of the year. With consumption remaining slack in the second half of 2012, Finnish paper production and exports are forecast to be down by 8–9% for the full year, while paperboard production and exports will be down by 1%. Pulp production and exports are forecast to be up by 1–2% due to a growth in exports to China.*

*Prices of paper and paperboard products in Europe rose considerably in 2011 as a result of the production limits, and paper prices continued to rise in the first half of 2012. The average price of paper exports for the full year 2012 is forecast to be up by 4% in comparison with 2011, while the paperboard price will be unchanged. Pulp prices are forecast to be down by 7% year-on-year.*

*No improvement is expected in paper and paperboard demand in 2013, and an increase in demand is not likely until 2014. Production and exports of Finnish paper, paperboard and pulp in 2013 are expected to be at about the level of 2012. Prices are expected to be close to the 2012 level due to the continued weak demand in Europe.*

## Further Fall in Paper Demand in Europe and North America

Mid-2011 saw an end to the growth in world paper consumption that had occurred since the last economic recession, as a result of slacker growth in the world economy. Paper consumption growth was reversed into a decline in Europe and North America in the second half of 2011. Consumption of printing and writing papers fell by 3% in Europe and by 5.2% in North America in 2011. The biggest drop was in the consumption of uncoated magazine and fine papers. The reasons for the decrease in consumption of printing and writing papers are the same in Europe as in North America: consumers are switching from printed to digital media as reading habits change, unfavourable economic trends have reduced the total amount of advertising, and printed media have lost some of their market share of advertising revenues to the competing electronic media channels.

In North America, consumption of paperboard and packaging papers fell in 2011, by 5.2%. Consumption of paperboard and packaging papers in Europe actually grew a little, although at a considerably slower pace. Over the longer term, consumption of printing and writing papers in North America has fallen by a significantly greater proportion than the consumption of paper and paperboard used in packaging. As a consequence, packaging materials consumption already accounts for more than half of all paper and paperboard consumed, in both Europe and North America.

Although capacity has been cut considerably in the paper industry in recent years in Europe and North America, there is still overcapacity on the printing and writing papers market. While production volumes fell in 2011, capacity utilisation rates also fell for paper and paperboard: to 90% in Europe (a drop of 1.5 percentage points) and 85% in North America.

In Russia and several other Eastern European countries, GDP growth slowed in 2011, also reducing the growth in paper and paperboard consumption. Russia's production of paper and paperboard has been growing at a relatively slow rate throughout the period since 2000. Russian consumption growth has focused especially

	Chemical pulp	% of production	Paper	% of production	Paperboard	% of production
Production	6 748	100	8 602	100	2 726	100
Domestic use*	4 398	65	631	7	197	7
Exports:	2 350	35	7 971	93	2 529	93
EU	1 361	20	5 172	60	1 485	54
Russia	21	0	345	4	210	8
Other Europe	88	2	399	5	163	6
Asia	793	12	731	8	360	13
Africa	62	1	126	2	81	3
United States	3	0	571	7	151	6
Other	22	0	627	7	79	3

\* Estimated domestic use = production – exports

Sources: Finnish Forest Industries Federation and National Board of Customs.

on the more expensive paper and paperboard products, which have had to be imported on account of the small scale of the country's own production.

In 2011, the Chinese economy continued to grow, and the production and consumption of paper and paperboard were up by 6–7%. The highest growth was in the production and consumption of coated fine paper. China is the world's largest producer and consumer of paper and paperboard. In all, 70% of its consumption and production of paper and paperboard consists of packaging board and packaging paper. In 2011, China's production of packaging board and packaging paper amounted to approximately 60 mill. tonnes, compared with US production of 47 mill. tonnes.

Since the start of 2012, the demand for printing and writing papers and the production of these have continued to decline, both in Europe and in North America. In January–July, the demand for newsprint and wood-fibre containing printing and writing papers fell on a year-on-year basis by 8–9% in Europe and by 7% in North America. By contrast, China's consumption and production of paper and paperboard products have continued to grow in 2012 as well.

### Rise in Paper Prices

Production and exports of Finnish paper and paperboard fell in 2011 by a slightly greater proportion than the decrease in consumption and production in Europe. Although production of

paper and paperboard was down by 4% and pulp production remained unchanged, the capacity utilisation rate in the paper and pulp industry rose by more than 3 percentage points to 87% in 2011 as capacity was reduced.

In the first half of 2012, exports of paper to European markets fell further. Although exports of paper from Finland to the United States grew slightly, Finland's total export volume of paper in January–June 2012 was 11% below the figure for the same period a year earlier. Exports of magazine paper were down by almost 20% in January–June 2012. Magazine paper's share of Finnish paper exports has been falling substantially since 2008, and now constitutes less than half of all paper exports. Fine paper has correspondingly accounted for a growing share, rising to almost 40%, while newsprint has shrunk to 3% of all paper exports. Exports of paperboard in January–June 2012 were down by 5% year-on-year.

Paper prices began to rise in Europe in 2009, and this continued in 2011. The average price of Finnish paper and paperboard exports in 2011 rose by 6–7%. In the first six months of 2012, the average price of paper exports was 2% higher, and of paperboard exports 2% lower, than the average prices for the full 12 months of 2011. Among the different paper grades, magazine paper prices rose in the first half of 2012 and fine paper and newsprint prices fell slightly. Among paperboard products the biggest fall was in the price of fluting.

Finnish forest industry companies have announced new price increases for certain

product groups to take effect during the second half of 2012. The average price of Finnish paper exports for the full year 2012 is forecast to be up by 4%, while the paperboard price will be unchanged. The decrease in production and exports of Finnish paper and paperboard is expected to level out towards the end of 2012. Paper exports are forecast to be down by 8% and production by 9% for the full year 2012. Production and exports of packaging papers and paperboard products are forecast to be down by 1% for 2012.

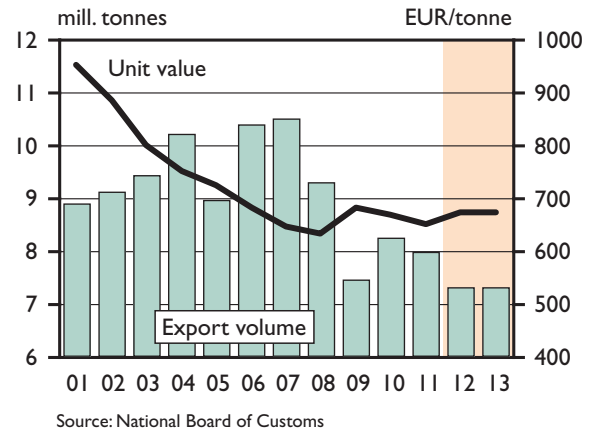
### Pulp Demand Remains Good, but Prices Fallen

In China, consumption of wood fibre and of recycled fibre from recovered paper has tripled since 2000, whereas production and consumption of other fibres has fallen. Recycled fibre today accounts for over 60%, and wood fibre for almost 25%, of overall fibre use in China's paper industry. In 2011, China's consumption of recovered paper fibre grew by 6% and its consumption of wood fibre by 15%. China's consumption of wood fibre and its need to import wood fibre will grow considerably in the coming years too, because almost 30 mill. tonnes of new paper and paperboard capacity is planned for construction in China in the period 2012–2016.

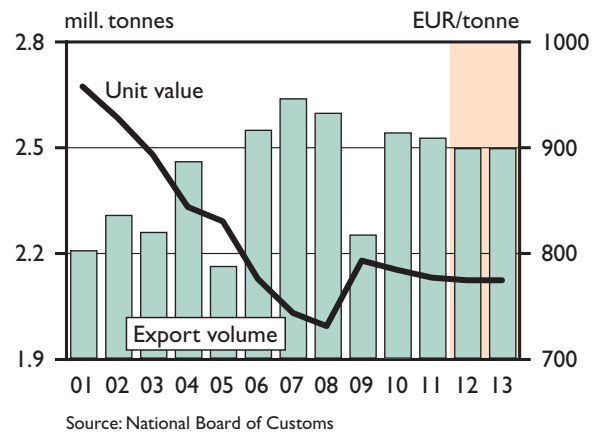
In January–July 2012, China's pulp imports were up by 20% compared with the same period a year earlier. Exports of Finnish bleached softwood pulp to China grew in 2011 by almost 90%, and in the first six months of 2012 by 35%. China already accounts for 35% of Finland's softwood pulp exports.

The dollar price of pulp in China remained high in the first half of 2011, but subsequently fell by 25% by the end of the year. The prices of hardwood and softwood pulp rose rapidly at the start of 2012, as China's imports were at a record high from December 2011 to February 2012, but then they began to fall. However, by the start of August 2012, the FOEX PIX index of the market price of hardwood pulp in dollars had risen by 15%, while that of softwood pulp had fallen by 5%, since the start of the year.

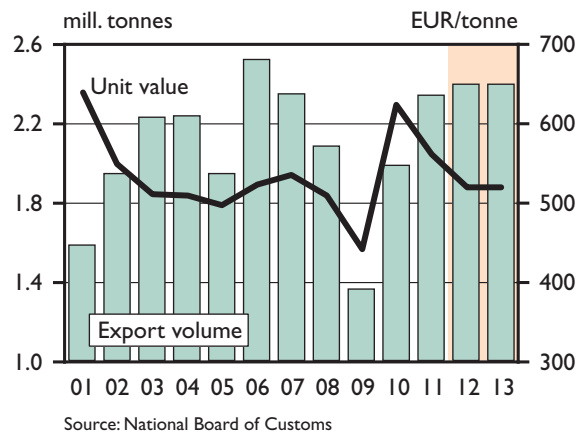
In Europe, the decrease in paper industry production in 2011 reduced the consumption of



Volume and unit value of paper exports, 2001–2013 at 2011 prices (wholesale price index).



Volume and unit value of paperboard exports, 2001–2013 at 2011 prices (wholesale price index).



Volume and unit value of pulp exports, 2001–2013 at 2011 prices (wholesale price index).

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

	Production			Exports		
	2011	2012	2013	2011	2012	2013
Chemical pulp	6 748 0	6 800 1	6 800 0	2 350 18	2 400 2	2 400 0
Paper	8 602 -4	7 800 -9	7 800 0	7 971 -3	7 300 -8	7 300 0
Paperboard	2 726 -4	2 700 -1	2 700 0	2 529 -1	2 500 -1	2 500 0

Forecasts of export prices for pulp and paper products (as percentage change from previous year).

	2011	2012	2013
Chemical pulp	-2 (562 €/t)	-7	0
Paper	5 (647 €/t)	4	0
Paperboard	8 (779 €/t)	0	0

Export prices are nominal unit values.

wood pulp by 2.8%. With the growth in exports of market pulp to Asia and particularly with the growth in demand in China, Europe's market pulp production was up by 3% in 2011. Total production of wood pulp in Europe remained at the previous year's level, and the capacity utilisation rate stood at 88%. Three quarters of Europe's exports of market pulp go to markets in Asia, and these Asian exports were up by 40% in 2011.

The pulp price remained stable in the first two quarters of 2011 as paper production grew in Europe and especially in Asia, but began to decline significantly in the second half-year. The unit value of Finnish bleached pulp exports in 2011 was down by 2% year-on-year. By the start of September 2012, the euro PIX price of softwood sulphate pulp had fallen by 6% since the beginning of the year. The price differential between hardwood and softwood pulp has narrowed from EUR 140 down to EUR 10, due to the 18% rise in the euro price of hardwood sulphate pulp. The dollar price of bleached softwood pulp was down by 8% in Europe and 6% in the United States by the start of September.

In January–June 2012, export volumes of Finnish bleached sulphate pulp rose by 6%

compared with the same period a year earlier. This growth came from exports to Asia, whereas there was a drop in exports to the European Union. Pulp consumption in Finland's paper industry decreased in the early part of 2012 as a result of the reduction of paper and paperboard production in Finland during that period. Pulp production in January–June 2012 was down by 2% year-on-year. Finnish pulp exports for the full year 2012 are forecast to be up year-on-year by 2%, and pulp production by 1%, due to the growth in demand in China. The average export price of bleached pulp for 2012 is expected to be down by 7% on the average price for 2011.

### Finnish Paper Exports in 2013 Hampered by European Economy

The outlook for the economy in Europe remains uncertain and neither GDP growth nor, more particularly, industrial output are expected to improve in the latter part of 2012. A positive turnaround in economic trends is not likely until the second half of 2013. Consumption of printing and writing papers in annual terms will be down slightly, and consumption of packaging papers and paperboard will remain at current levels on the European markets important for Finnish exports.

Profitability in the Finnish paper industry has risen as a consequence of higher prices and more efficient production, but is still far short of the level seen a decade ago. Production costs have remained high in comparison with competitor countries and in relation to end-product prices. Moreover, Finland's competitiveness in magazine paper production is weaker than that of Central and Western European producers, because these producers use a high proportion of recycled fibre.

The capacity cuts made in Finland and elsewhere in Europe and also in the United States have reduced capacity overall, but despite this there is still considerable overcapacity in Europe. Production and exports of Finnish paper, paperboard and pulp in 2013 are forecast to remain at the 2012 level, as no growth anticipated in paper and paperboard demand. Average export prices of these products will also remain unchanged.



## 2.3 Costs and Profitability in the Finnish Forest Industry

*The profitability trend in the Finnish forest industry in 2012 is fairly flat. Economic conditions in the industry's key export markets have remained difficult and the outlook in the latter part of 2012 is dominated by uncertainty. Production volumes in both the wood products industry and the pulp and paper industry will be down year-on-year, but at the same time the low economic growth has kept production and transportation cost rises in check. There has been a drop in stumpage prices for example, with the decrease in roundwood demand. A modest decrease in profitability is therefore expected for 2012 in comparison with the previous year, in both the wood products industry and the pulp and paper industry. It is encouraging that despite the challenging economy and the planned production limits, companies have been investing or have announced investments in production development in the wood products and pulp and paper industries, in Finland too.*

*In 2013, the export outlook for Finnish forest industry products is expected to improve gradually. The trend in export prices in the wood products industry is expected to be marginally positive. Export prices of pulp and paper industry products are expected to be at about the same level as in 2012. No significant upward pressures are likely in production costs, and sawlog stumpage prices are forecast to rise in 2013 by only a small amount, while pulpwood stumpage prices should remain almost unchanged. Profitability in both the wood products industry and the pulp and paper industry in 2013 is therefore expected to be about the same as in 2012.*

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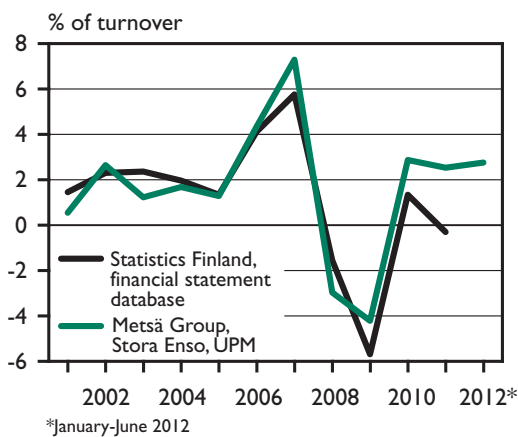
### Wood Products Industry's Profitability Trend Weak but Steady

After a positive start to 2011 in the wood products industry, circumstances began to deteriorate towards the end of the year, with sawnwood

export prices falling in the autumn by about 10%. The industry's second half-year profitability figures were considerably weaker than those for the first six months. The financial statements of the major forest industry corporations showed that in terms of operating result as a percentage of turnover, profitability in the wood products industry for the full year 2011 nevertheless remained almost at the previous year's level. By contrast, preliminary data from Statistics Finland indicated that 2011 was a particularly poor year for profitability in the wood products industry, as the industry made a loss overall. For the wood products industry, these two measures of profitability (one using operating result as a percentage of turnover based on the forest industry corporations' financial statements and interim reports, and the other using Statistics Finland data) have typically been consistent with each other, but 2011 proved to be an exception.

There are a number of possible reasons for this difference in the profitability figures. On one hand, the preliminary data for 2011 from Statistics Finland is provisional and could change in one direction or the other. On the other hand, the financial statements and interim report data covers only the corporations in question and also includes operations outside Finland, which account for a smaller proportion in the wood products industry than in the pulp and paper industry; the Statistics Finland dataset comprises data for all Finnish companies across the entire sector. Furthermore, the corporations decide themselves how they divide their operations between different sub-sector categories, whereas Statistics Finland uses a classification based on the TOL 2008 industrial classification. The Statistics Finland dataset is also based on adjusted financial statements, whereas the corporations' reporting can be affected by discretionary entries. However, both information sources agree that profitability in the wood products industry weakened in 2011 in comparison with the previous year.

For the wood products industry it seems that 2012 will follow the trend of 2011. Sawnwood export volumes and prices rose in the first six months of the year, mainly as a result of exports to destinations outside Europe, but by the autumn the positive trend had come to



*Profitability in the wood products industry, 2001–2012, measured in terms of operating result as a percentage of turnover.*

a standstill as uncertainty grew on the export markets. In Finland, construction activity has slowed and the share of production destined for domestic consumption has fallen. Companies have reacted to this apparent turnaround by announcing plans to limit sawnwood production in the latter part of 2012. The situation is similar in plywood production, where export volumes and prices of plywood are expected to fall in the final months of the year.

Wood raw material costs constitute the largest cost item in the wood products industry. This cost item is especially high in sawnwood production, where the price of roundwood in relation to the price of the final product largely determines the profitability of production. The ratio between softwood sawlog stumpage prices and sawn softwood export prices remained stable during the period 2000–2005. The ratio then rose significantly during the 2006 and 2007 boom years for sawnwood, as sawlog prices rose by more than sawnwood export prices. For producers, the price ratio was particularly bad in 2008, which saw a collapse in the profitability of the wood products industry. In 2009 and 2010 the price ratio returned to its pre-2006 level, but it rose again in 2011, causing a dip in the wood products industry's profitability. In the first six months of 2012, the ratio between sawlog stumpage prices and sawnwood export prices fell once more, boosting the industry's profitability. This positive price ratio trend for the industry may continue in the latter part of 2012

as sawlog stumpage prices fall as a consequence of a decrease in production in the wood products industry and a reduction in roundwood demand.

An analysis of the ratio between sawlog stumpage prices and sawnwood export prices is an oversimplification of the reality, however, and does not take into account the effect of, for instance, the trend in harvesting and transportation costs on the sawlog mill price. In the analysis the sawnwood yield is assumed to be constant, although according to those in the industry the average sawlog size has fallen in recent years, which means that a given quantity of sawnwood requires more roundwood volume than before. In addition, the analysis does not take account of the time lag between roundwood sales and sales of the final product. The trend in the domestic sawnwood market also falls outside the analysis, as does consideration of the markets for wood industry products other than sawnwood. Despite the shortcomings, an analysis of the price ratio of sawlogs to sawnwood does help in looking at the direction of profitability in the wood products industry, as the trend in the ratio has generally reflected the industry's profitability fairly well, with the exception of the peaks and troughs in the cycle.

The major forest industry corporations' financial indicators for the first six months of 2012 showed signs that profitability in the wood products industry was starting to pick up a little in comparison with a year earlier. The industry's profitability trend in the second half of the year is being adversely affected by the deterioration in the outlook on export markets but also favourably affected by the moderate nature of the cost trend. Profitability for the full year 2012 is expected to be more or less at the previous year's level. Although the wood products industry's profitability, based on the forest industry corporations' operating results as a percentage of turnover, will be far short of the peak figures of 2006 and 2007, it will nevertheless be higher than the sector's average profitability in the period 2000–2005. Within the sector there are also differences in the profitability trend for different products. The profitability trend for birch plywood and higher value added construction components in 2012 has been more favourable than for sawnwood. Although the outlook has deteriorated and

plans to introduce production limits have been announced, investments have been made in the wood products industry during 2012, for instance in plywood production, and investment plans have also been announced for 2013.

A recovery is expected in the wood products industry's export demand in the latter part of 2013 at the latest. Production and export volumes and export prices of the industry's most important export products – sawnwood and plywood – are forecast to rise. The recovery will be slow, however, with the export price of sawn softwood, for example, rising by 2% from its 2012 level. The cost trend in 2013 is expected to be moderate. Softwood sawlog stumpage prices are expected to remain at about the 2012 level, while birch sawlog stumpage prices will rise by 2%. Based on forecasts by the US Energy Information Administration, 2013 will not see any upward pressures on oil prices. Instead, the dollar price of crude oil is expected to fall from its 2012 level, which will curb the rise in energy costs and freight costs, the latter being unusually low according to the Baltic Dry Index. Export competitiveness will also be boosted by continued weakness of the euro. The profitability of the wood products industry in 2013 is expected to follow the fairly level trend of recent years. The profitability level is low, but this is typical for the industry.

### Pulp Production Most Profitable Part of Pulp and Paper Industry

The pulp and paper industry's profitability rose rapidly in 2010 from the trough reached in 2009. This favourable development was reversed in 2011, however, and the slight decline in profitability is also continuing in 2012, based on figures from the forest industry corporations' interim reports. Despite this decline, the sector's profitability remains relatively high compared with the mid-2000s, for example. Finland's pulp and paper industry has gone through a major structural change, which has included some major capacity closures and also efficiency improvements in those units left operating. These measures have improved the sector's competitiveness and profitability.



*Profitability in the pulp and paper industry, 2001–2012, measured in terms of operating result as a percentage of turnover.*

The profitability differences among sub-sectors of the pulp and paper industry have been considerable in recent years. The various paper and paperboard grades have accounted for about 75% of the sector's turnover, and about 80% of its exports. Among these, the demand for magazine paper, in particular, has fallen in the main markets of Europe. Overcapacity has been reduced, and a significant proportion of the pulp and paper industry's production capacity closures in Finland have specifically concerned magazine paper. The capacity cuts have helped to maintain the price level for magazine paper as demand has fallen. The first half of 2012 was in fact quite an optimistic period for magazine paper. Even though production and export volumes have fallen, the export price of magazine paper showed a distinct rise. Export prices of other paper grades and paperboard have, for the most part, been on a slight decline.

The cyclical peak in the pulp sector ended in autumn 2010. The export price of bleached sulphate pulp fell sharply at first, but then levelled out in the first half of 2011. In the remainder of 2011 the price level fell further but then in the first half of 2012 it rose again. In autumn 2012 the price of softwood sulphate pulp was again falling, while the hardwood sulphate pulp price was continuing to climb. The pulp price fluctuations are principally the result of fluctuations in wood fibre demand in China. Despite the boom coming to an end, pulp production has been the most profitable sub-sector of the pulp and paper

industry since 2010. Although the major forest industry corporations' interim reports show that the profitability of pulp production has decreased significantly in 2012 from the previous year, it is still at a high level. As part of the forest industry's structural changes, almost 1 mill. tonnes of sulphate pulp production capacity in Finland was closed in 2008–2009. The decrease in production volumes has been less than this, however, as efficiency has been improved in the remaining units, which in recent years have even broken production records. During 2012, decisions have also been announced about investments to further develop pulp production and add capacity in Finland.

Besides pulp, the profitability of paperboard production in recent years has been high compared with paper. The profitability of paperboard production for the full year 2012 will be down a little year-on-year, due to the slight drop in export prices. Nevertheless, the consumption outlook in the main market – Europe – is seen as relatively stable, particularly for packaging board. Investment has also been made in paperboard production in Finland during 2012.

The trend in pulp and paper industry costs during 2012 has been favourable in profitability terms. Raw material costs have fallen as a result of the year-on-year decrease in pulpwood stumpage prices and pulp prices in 2012. Freight costs have also been low. The costs of minerals and chemicals used in paper and paperboard production are very significant, and reports indicate that chemical costs have increased during 2012. The cost trend in 2013 is expected to be moderate, as in 2012. Stumpage prices of spruce pulpwood are forecast to be down by 1% for 2012 as a whole, while those of pine and birch pulpwood will be up by 1%. The reduction in Russia's roundwood export duties are improving the price competitiveness of its roundwood, and this will affect the Finnish pulp and paper industry's roundwood procurement in the future, leading to an expected rise in imports of Russian roundwood. The EU's Sulphur Directive, which will take effect at the start of 2015, has been the subject of considerable public discussion, but is not expected to have any impact on freight costs in 2013. It is still premature to assess the later effects of the Directive, not least because the

nature of any compensation mechanism is yet to be clarified.

Although the outlook for the second half of 2012 in the pulp and paper industry is not particularly bright, the economic conditions in the sector's key European export markets are expected to gradually improve. The profitability trend in the pulp and paper industry in 2013 is expected to be flat. Production and export volumes and export prices of paper, paperboard and pulp are forecast to remain unchanged from 2012. The moderate trend in costs is supporting profitability in the pulp and paper industry, which is expected to remain at the 2012 level overall.



## 3 Forestry in Finland

### 3.1 Utilisation of Wood Resources

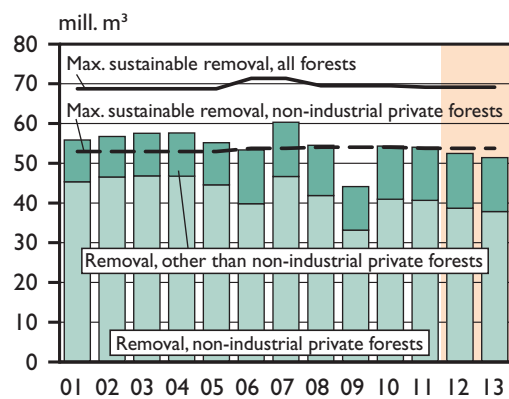
*In 2009–2011, the Finnish forest industry used an average of 59 mill. m<sup>3</sup> of roundwood annually, of which 50 mill. m<sup>3</sup> was domestic roundwood. The projected used of roundwood in 2012 is 60 mill. m<sup>3</sup>. Finland's roundwood imports in 2009 fell to half of the preceding years' levels, marking a significant change in the industry's roundwood procurement. However, roundwood imports have since risen by about one third. Finland has abundant forest resources, and these are easily sufficient to cover the need for softwood. However, there continues to be a need to import certain categories of roundwood, in particular birch pulpwood.*

Finland has almost 23 mill. ha of forest, and the total volume of growing stock is approximately 2 300 mill. m<sup>3</sup>. Pine accounts for 50% of this, spruce for 30%, birch for 17% and other broad-leaved species for 3%. The annual increment in the growing stock is about 104 mill. m<sup>3</sup>. Some 2.8 mill. ha of forest, mainly in Northern Finland, is excluded from commercial roundwood production. Forestry can thus be practised across an area of 20 mill. ha, containing a growing stock of about 2 100 mill. m<sup>3</sup> with an annual increment of approximately 101 mill. m<sup>3</sup> (or 4.8%). Growing stock drain amounts to about 69 mill. m<sup>3</sup> p.a. (or 3.3%). Roundwood reserves are therefore increasing by a small amount each year.

The maximum sustainable removal is approximately 70 mill. m<sup>3</sup> of useful wood per year, while the maximum justifiable in silvicultural

terms over a short period is as much as 95 mill. m<sup>3</sup>, taking account of all tree species. Annual fellings of roundwood meeting the dimensional requirements for industrial wood (see figure) in recent years have been about 54 mill. m<sup>3</sup>, or 78% of the calculated maximum sustainable removal. In non-industrial private forests, the proportion of the maximum sustainable removal harvested is slightly lower.

Some 63% of Finland's commercial forests are in the possession of non-industrial private owners, 22% are owned by the state, 9% by companies and 6% by other groups of owners. The state's forest assets are concentrated in Northern Finland, which is why the average increment in the growing stock for the state's holdings is low compared with forests in other ownership. Forests in non-industrial private ownership account for 70% of the growing stock increment, state-owned forests for 13%, company-owned forests for 11% and the rest for 6%. The non-industrial private forests are of crucial importance for the



Source: Finnish Forest Research Institute

*Removals of industrial wood and maximum sustainable removal, 2001–2013.*

industry's roundwood procurement, as about 75% of the domestic roundwood (and about 60% of all roundwood, both domestic and imported) consumed by the forest industry is from such forests. The volume of imported roundwood has been about 18% of the total.

The accompanying table shows the Finnish forest industry's consumption of roundwood, and compares these figures with the maximum sustainable removal estimated for Finnish forests. The calculation of maximum sustainable removal is based on information about the amount, composition and annual increment of the growing stock and assumes that the standard of silviculture will remain unchanged. The calculation indicates the level (upper limit) to which fellings could rise without prejudicing the size of future removals. The Finnish Forest Research Institute's calculation is an optimisation calculation, in which the structure of the estimates of maximum sustainable removal is affected by factors such as the relative prices of different roundwood categories. The calculation does not take into account site or ownership constraints, and for this and other reasons it is not a forecast of removals.

Fellings in excess of the maximum sustainable removal on a temporary basis only will not jeopardise future harvests. Flexibility of this kind, which is justifiable in silvicultural terms, is considerable in Finnish forests. In regard to spruce, use of this flexibility meant that spruce reserves fell slightly in the period 2000–2010, but the subsequent decrease in spruce consumption has returned spruce reserves to their former level.

From a wood resources viewpoint, pine has the best potential for quickly meeting an increase in the demand for roundwood, both as sawlogs and pulpwood. Despite this, harvesting of spruce exceeded that of pine for two decades prior to 2005, when the situation was reversed. This change has been inevitable, although ultimately it is the product markets that decide. In recent years pine pulpwood has been the most popular roundwood grade in terms of felling volume, and this is evident in the abundance of pine stands ready for thinning.

The industry's birch consumption is greater than the level which the maximum sustainable

removal in Finnish forests will allow, and consequently more than half of the industry's birch requirement has been imported since 2000. In 2009, however, the situation changed and birch imports collapsed. The proportion of domestic birch resources harvested has not been very high, as birch procurement is hampered by the fact that a significant proportion of birch grows in softwood-dominant forests, and downy birch principally on drained peatland. Only 9% of Finnish forests are birch-dominant.

Roundwood imports from Russia fell by half in 2009 from the previous year's level, due to factors such as high prices and export duties. The collapse in imports from other countries was even greater.

Though Finnish roundwood resources are easily sufficient to replace imported softwood, domestic birch is only sufficient to replace a proportion of imported birch. As part of its process of adjustment to changed circumstances, the industry has begun to replace birch with pine in pulp production, and birch plywood production has been cut. Since the collapse of imports, the volume of imports has grown again, particularly for birch pulpwood but also softwood pulpwood, but the level is still far short of previous volumes. The forest industry's roundwood procurement challenges are nevertheless eased by the fact that it needs about 15 mill. m<sup>3</sup> less roundwood than it did in 2006 and 2007.

Non-industrial use of roundwood – principally household firewood – is also of importance in forest management terms, but its main significance is in terms of energy use. In the tending of young stands, an increasing volume

*Wood consumption by the forest industry and maximum sustainable removals in Finland.*

Tree species	Consumption 2009–2011, mill. m <sup>3</sup> /yr		% of maximum sustainable removal	
	Domestic wood	Wood total	Domestic wood	Wood total
Pine	23.3	24.6	72	76
Spruce	18.5	19.7	74	79
Birch	7.7	10.8	79	110
Total	49.5	55.1	74	82

*In addition, the industry consumed 3.4 mill. m<sup>3</sup>/yr of aspen and unspecified imported wood.*

*Source: Finnish Forest Research Institute*

of small-diameter trees is chipped into energy wood.

The aims of the National Forest Programme 2015 (2008; updated 2010) include an increase in the use of domestic industrial wood and energy wood, which was also the case in the previous National Forest Programme 2010 (1999). The significance of this aim has grown as imports of roundwood have fallen considerably.

Overall use of domestic industrial wood has not grown since 2000, although in 2007 it did temporarily rise to a record level (59 mill. m<sup>3</sup>) though quickly fell back again with the decrease in the industry's production. By contrast, the use of forest chips (mainly felling residues from clear cutting) for energy purposes has risen rapidly since 2000. In recent years, 5–7 mill. m<sup>3</sup> in forest chips has been used annually in thermal and other power plants. Such use of wood material unfit for industrial products is in fact very high: wood-based energy accounts for about 20% of all energy consumed in Finland and about 60% of the Finnish forest industry's energy consumption (black liquor from the pulp industry, tree bark, sawdust, etc.).

### 3.2 Roundwood Markets

*Following a brisk start to 2012, roundwood sales in Finland were lower than normal in the autumn, as the deteriorating market outlook for sawnwood and paper affected the demand for roundwood. Pine and spruce sawlog prices are forecast to be down by 5–6%, and spruce pulpwood by 8%, year-on-year for the full year 2012. Pine and birch pulpwood prices will be down the least, due to the demand for pulp remaining relatively high. Commercial fellings are forecast to reach 51 mill. m<sup>3</sup> for 2012, which is 3% less than in 2011.*

*Roundwood sales in the first half of 2013 are forecast to be lower than in the same period of 2012, but should pick up in the second half-year as sawnwood demand improves. Average roundwood prices for 2013 as a whole will be about the same as in 2012. However, commer-*

*cial fellings will be down in 2013 by 2%, to 50 mill. m<sup>3</sup>, as imports of roundwood will be up significantly on account of the reduced price of imported Russian roundwood as a result of the country's WTO membership. Demand for forest chips used for energy purposes is continuing to grow, reaching 7.8 mill. m<sup>3</sup> in 2012 and 8.3 mill. m<sup>3</sup> in 2013. The energy plant gate price of forest chips in 2012 will remain unchanged from 2011, while in 2013 it will rise slightly.*

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### Roundwood Sales Slower than Normal in Late 2012

Roundwood sales in Finland in the second half of 2012 are slower than normal, as the demand for sawnwood and paper has fallen due to the prolonged euro crisis. For the full year 2012, roundwood sales will nevertheless reach the same level as in 2011, because sales in January–September amounted to 20.2 mill. m<sup>3</sup>, or 2.5 mill. m<sup>3</sup> more than a year earlier. The brisk sales in the first half of 2012 were partially attributable to the storms of late 2011, which resulted in approximately 3 mill. m<sup>3</sup> of storm-damaged wood.

A total of 34.2 mill. m<sup>3</sup> of roundwood was felled in January–August 2012, or 1% less than in the same period of 2011. Fellings in state-owned and company-owned forests were up by 4%, whereas those in non-industrial private forests were down by 3%. The latter reduction focused on standing sales, as the volume of delivery fellings and their proportion of the total have been growing significantly.

The volume of commercial fellings for the full year 2012 is forecast to be 51 mill. m<sup>3</sup>, or 3% below the 2011 figure. Fellings are forecast to be down by 5% in non-industrial private forests, but to rise by 2% in forests owned by companies and by Metsähallitus. A contributory factor behind the rise in fellings in state-owned forests managed by Metsähallitus is an increase in the government's need to generate income. Sawlog fellings will be down by 6% as a result of the decrease in sawnwood production, while

Forest industry's roundwood procurement, 2011–2013.

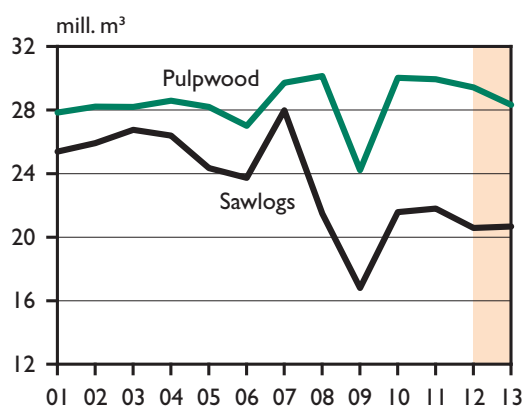
Roundwood type/ Ownership group	2011 mill. m <sup>3</sup>	2012 mill. m <sup>3</sup>	Change %	2013 mill. m <sup>3</sup>	Change %
Commercial fellings, total	52.4	50.8	-3	50.0	-2
Non-industrial private forests <sup>1</sup>	41.0	39.2	-5	38.2	-2
Company and state-owned forests <sup>2</sup>	11.4	11.7	2	11.8	1
Sawlogs	21.8	20.6	-6	20.7	0
Pulpwood	29.9	29.4	-2	28.3	-4
Imports of industrial roundwood	10.0	9.4	-6	11.3	19
Commercial fellings and roundwood imports, total	62.4	60.2	-3	61.3	2

<sup>1</sup> Includes municipalities, parishes, etc.

<sup>2</sup> Metsähallitus manages state-owned forests

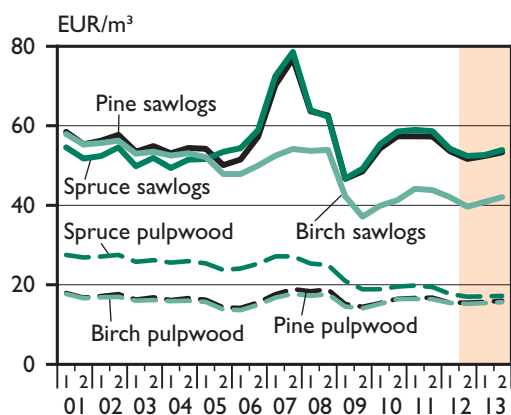
Sources: Finnish Forest Research Institute and National Board of Customs.

pulpwood fellings will be down by only 2%. This means that proportionately more pulpwood has been felled, which means proportionately more thinnings, and this in turn means lower average stumpage prices.



Source: Finnish Forest Research Institute

Commercial fellings of sawlogs and pulpwood, 2001–2013.



Source: Finnish Forest Research Institute

Semiannual stumpage prices by roundwood category, 1/2001–2/2013 at 2011 prices (cost of living index)

The prices of pine and spruce sawlogs have been falling since June, due to the decline in sawnwood demand. For 2012 as a whole, softwood sawlog stumpage prices are projected to be down year-on-year by 5–6%. The drop in plywood demand is expected to mean a fall of 4% in birch sawlog prices for 2012 as a whole. The price of spruce pulpwood has been falling due to the lower demand for magazine paper, and its stumpage price is expected to be down by 8% year-on-year. By contrast, pulp demand has remained relatively high in 2012, and so pine and birch pulpwood prices are expected to have fallen the least, by 3–4%.

### Roundwood Market to Pick Up in Late 2013

In the coming winter, sawnwood production and exports will be lower than in recent years, which means that the early months of 2013 are expected to be slower than normal on the roundwood market. A long cold winter could of course change the situation, as the demand for winter stands is dependent on the ground conditions for winter felling. The supply of winter stands is considerably greater than the supply of summer stands and, in particular, stands with good access under wet, unfrozen ground conditions.

When summer 2013 approaches, an increase in sawnwood production is expected to stimulate the roundwood market, resulting in brisker sales in the second half of 2013 than in the same period of 2012. Commercial fellings in 2013 are nevertheless expected to be a little below the level of 2012, reaching 50 mill. m<sup>3</sup>, because



the use of domestic roundwood is forecast to fall due to a growth in roundwood imports.

Average stumpage prices of pine and spruce sawlogs in 2013 are forecast to be about the same as in 2012, as sawnwood production will be up by only a small amount. Only the price of birch sawlogs is expected to rise, in response to an improvement in plywood demand. Average stumpage prices of pulpwood are forecast to remain more or less unchanged, as paper and pulp production continue at their 2012 levels. The growth in demand for energy wood will create upward pressure on pulpwood prices.

### Roundwood Imports from Russia to Grow in 2013

Russia joined the World Trade Organisation (WTO) in August 2012. In connection with this, the country's roundwood export duties were reduced substantially. The duties on roundwood exported from Russia are now composed of two elements: duties on wood exported within the export quota limits, and duties on wood exported in excess of the export quotas. Russia's export quotas to the EU for spruce and pine are 5.96 mill. m<sup>3</sup> of spruce, on which the export duty is 13% of the customs clearance value, and 3.65 mill. m<sup>3</sup> of pine, with a duty of 15% of the customs clearance value. If exports exceed this quota, the duties may be determined by Russia itself. In addition, the duty on birch is a uniform 7% and on aspen 5%. The 5% duty on chips will be eliminated completely during the four-year transition period.

Application of the WTO rules has brought some initial problems, as it has still not proven possible to introduce the EU quota arrangements in the first few months of membership. This has even led to a suspension of Russian softwood imports to Finland. At the same time, duty regulations more favourable than the outcome of the WTO negotiations have been permitted, as the duty-free status of birch pulpwood of diameter less than 15 cm has not yet been removed. The impact of Russia's WTO membership is discussed in greater detail in the featured topic starting on page 36.

Roundwood procurement costs in Russia are fairly high despite the low stumpage prices, and



Volume of imported roundwood by category, 2001–2013.

Average stumpage prices in non-industrial private forestry, 2011–2013.

Roundwood	2011 EUR/m <sup>3</sup>	2012 EUR/m <sup>3</sup>	Change %	2013 EUR/m <sup>3</sup>	Change %
Pine sawlogs	55.4	52.6	-5	53.1	1
Spruce sawlogs	56.8	53.6	-6	53.8	0
Birch sawlogs	42.5	40.7	-4	41.6	2
Pine pulpwood	16.1	15.3	-4	15.5	1
Spruce pulpwood	18.9	17.3	-8	17.2	-1
Birch pulpwood	15.8	15.2	-3	15.3	1

Source: Finnish Forest Industries Federation and Finnish Forest Research Institute

the country's own roundwood consumption has also been on the increase. Although the duties have been cut, the mill price of Finnish roundwood is expected to be similar to or lower than that of Russian wood, depending on the long-distance transportation involved. The benefits of scale in importing and the nature of the margin on the imported wood are more important than the mill price though, which is why imports have continued even when duties are high. Due to the expectations associated with Russia's WTO membership and the initial problems involved, imports of industrial wood (including chips) are forecast to be down temporarily to 9.4 mill. m<sup>3</sup> for the full year 2012, but to grow in 2013 to over 11 mill. m<sup>3</sup>.

### Demand for Energy Wood Continues to Grow

In 2011, the use of forest chips grew by 9% to 7.5 mill. m<sup>3</sup>. Thermal and other power plants

accounted for 6.8 mill. m<sup>3</sup> of this, which is equivalent to an energy content of 13.6 TWh. Small-diameter trees account for 45% of the forest chip raw material used in thermal and other power plants, while large-sized stemwood accounts for 8%, felling residues for 33% and stumps for 14%. The biggest change over the previous year, 2010, was the increase of one fifth in the use of small-diameter trees.

The demand for energy wood is expected to rise because of the scarcity of peat. Based on information gathered by Bioenergia ry, just 12.8 mill. m<sup>3</sup> of energy peat had been produced by the end of August due to the wet summer, which will leave peat production for 2012 as a whole significantly below the previous year's total. Stocks of energy peat were low after last winter, and so demand for solid fuels to replace this will grow during the coming year. Until now, the scarcity of peat has had little impact on the use of energy wood, as the scarcity has been met mainly by using coal. This has also served as the sole alternative for power plants that can only burn a limited amount of wood. The price of coal in heat production rose substantially in 2011, however, due to taxation changes in Finland and the rise in coal import prices.

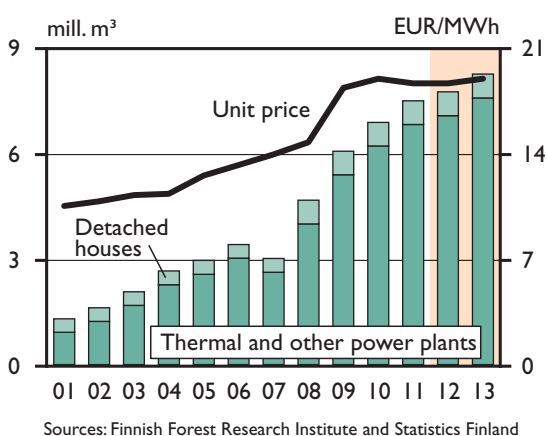
The use of forest chips for the full year 2012 is forecast to have grown to about 7.8 mill. m<sup>3</sup> (15.6 TWh). The average mill price is forecast to be unchanged at about EUR 18.5/MWh. As fellings of domestic small-diameter trees decrease owing to the uncertainty of subsidies and the reduced amount of subsidy, the growing demand

for energy wood will be met by imports of chips and firewood, and to some extent also by the use of wood of pulpwood dimensions. Use of forest chips in 2013 is forecast to be 8.3 mill. m<sup>3</sup> and its average price is expected to rise to EUR 19/MWh.

### 3.3 Investment and Profitability in Non-Industrial Private Forestry

*Forestry in Finland has entered a downturn in late 2012. The decline in stumpage prices and the reduced felling volumes will mean that gross stumpage earnings in non-industrial private forestry will fall to EUR 1.3 billion for 2012 as a whole, and the 2013 figures are not expected to show any improvement. Investment in timber production has nevertheless remained at the same level in real terms as in 2011, though rising in nominal terms from EUR 210 mill. to approximately EUR 215 mill. The proportion of this investment accounted for by work input and financing from the forest owners themselves will rise to over 70% for 2012, while the real value of state subsidies will be down by 3–5%.*

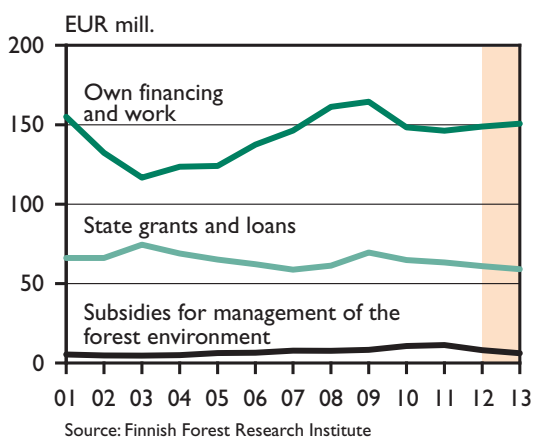
*The per-hectare operating profit from non-industrial private forestry will remain at about EUR 75/ha for both 2012 and 2013, which is down by a quarter from the post-2000 average.*



Use of forest chips and the energy plant gate price, at 2011 prices (cost of living index).

#### Investment Level Unchanged

In 2011, a total of EUR 210 mill. was invested in silvicultural and forest-improvement works in non-industrial private forestry, which was about the same in real terms as in 2010. Total investment in 2012 and 2013 is expected to remain in real terms at the 2011 level. In its budget proposal for 2013, the Ministry of Agriculture and Forestry aims to increase the amount of work tending young stands by about 2%. The real value of state subsidies will be down by 3–5% in 2012 and by the same amount in 2013.



State and forest-owner funding of investments in non-industrial private forestry, 2001–2013 at 2011 prices (cost of living index).

The work input and financing from the private forest owners themselves in 2011 amounted to EUR 146 mill., or 70% of the total value of the investment undertaken. Forest regeneration was the biggest area of investment, at more than EUR 70 mill. In this, the proportion of the total investment attributable to the forest owners was 86%. Slightly more than EUR 67 mill. was invested in work on young stands, and the forest owners' share of this was 52–58%. Financing by the private forest owners in 2012 is estimated to have risen by 1–2% in real terms, and this is likely to be the same in 2013. Work input by private forest owners in 2013 will rise to 72% of the investment in non-industrial private forestry, which will be 4 percentage points above the average for 2001–2011.

### Operating Profit from Timber Production Drops to Less than EUR 80/ha

In 2011, the gross stumpage earnings in non-industrial private forestry amounted to a little less than EUR 1.5 billion, which in real terms was almost the same as in 2010. Gross stumpage earnings in the period 2002–2011 were an average of EUR 1.6 billion. The fall in stumpage prices and the reduction in fellings in 2012 have decreased gross stumpage earnings to EUR 1.3 billion, and in 2013 the figure will be about the same.

Per-hectare gross stumpage earnings will remain at less than EUR 100/ha for both 2012

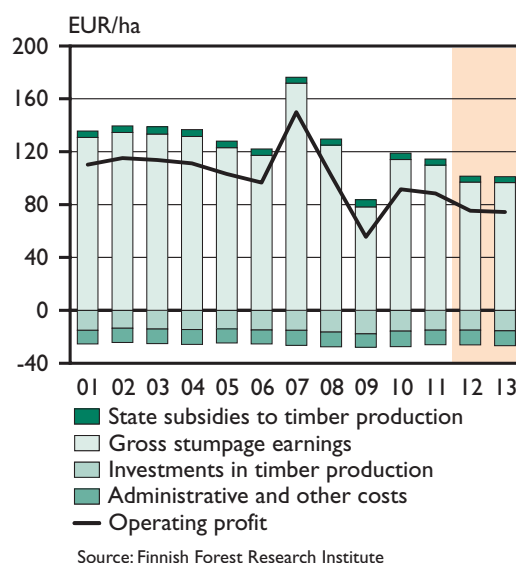
Non-industrial private forestry balance sheet calculation for 2011 and forecast for 2012 and 2013, EUR/ha.

	2011	2012	2013
<b>Gross stumpage earnings</b>			
Whole country	110	99	98
Southern Finland	144	128	128
Northern Finland	43	42	42
<b>– Gross costs</b>			
Whole country	26	27	27
Southern Finland	30	31	31
Northern Finland	18	19	19
<b>+ Subsidies</b>			
Whole country	4.7	4.6	4.6
Southern Finland	4.6	4.5	4.5
Northern Finland	4.9	4.8	4.7
<b>= Operating profits</b> (before taxes and external capital costs)			
Whole country	88	77	76
Southern Finland	119	102	102
Northern Finland	30	28	27

Northern Finland is defined as North Ostrobothnia, Kainuu and Lapland regions.

Source: Finnish Forest Research Institute

and 2013. The total per-hectare costs of timber production in both years will be about EUR 27/ha, though in 2013 the costs will be about 2% above the average for 2002–2011 in real terms. The operating profit in non-industrial private forestry will be less than EUR 80/ha for both 2012 and 2013, which in real terms is about 25% below the 2002–2011 average (EUR 105/ha).



Earnings, costs and operating profit in non-industrial timber production, 2001–2013 at 2011 prices (cost of living index).



## Featured Topic

### Membership of World Trade Organisation Opens Up Russian Market

Sari Karvinen

Russia became a member of the World Trade Organisation (WTO) in August 2012. This accession to the WTO opens up the Russian market and eliminates the option of using protective customs duties to support domestic production. The cut in Russian import duties on a range of forest industry products will improve the position of Finnish companies on the Russian market. The operating environment will steadily become more predictable and transparent, making the situation clear to all involved. The reduction in Russia's roundwood export duties will place a strain on its market for softwood sawlogs, but will improve the position of hardwood.

#### Roundwood Export Duties Cut to Moderate Level

The roundwood export duties introduced by Russia in 2007 and subsequently increased in stages were cut as soon as its WTO membership took effect (see Figure 1). Russian softwood is now subject to export quotas, within the limits of which the export duty on pine is 15% and on spruce 13%, in place of the previous 25% for both. The reduced duties apply to an annual export quota of 22 mill. m<sup>3</sup> of softwood, of which the EU's share is set at 9.6 mill. m<sup>3</sup>. For the EU, the quota is almost equal to the total amount of Russian softwood exported to Europe in the peak years of roundwood exports, and so it is not likely to restrict exports to any significant degree. In recent years, China has imported about 13 mill. m<sup>3</sup> of Russian softwood annually, equivalent to the non-EU portion of the present quota. Any exports outside the quota will be subject to an export duty of 80%, which will limit the growth of spruce and pine exports to China. If the full quota of softwood is exported from Russia in the future, the export volume will be up by 40% in comparison with recent years, marking a return to the 2008 level.

The maximum export duty for birch under the WTO terms is 7%, which applies to all the customs tariff headings in use. Birch of less than 15 cm diameter has been exempted from export duties for more than 10 years already, and this situation will continue (Table 1). The 25% export duty imposed since 2008 on larger diameter

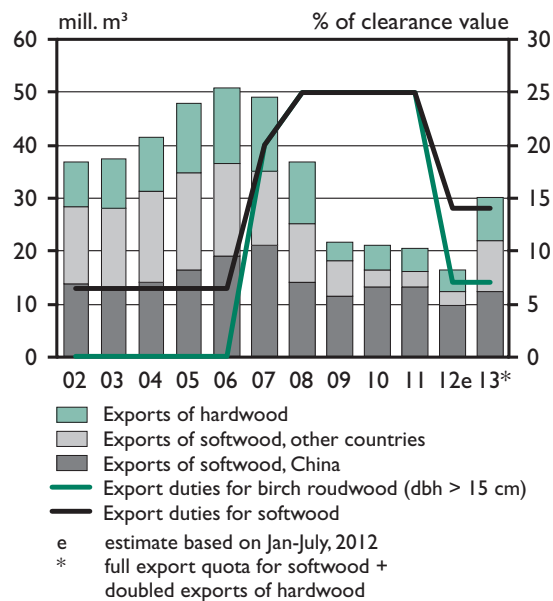


Figure 1. Russian roundwood exports and export duties, 2002–2013\* (Sources: Consultant Plus, Faostat, UN comtrade).

wood brought about a collapse in Russia's birch exports. According to Finnish representatives in the industry, birch imports from Russia could double in the future as a consequence of the duty reductions. Russia's exports of wood chips<sup>1</sup> to Finland in the past three years have been growing, even exceeding exports of birch pulpwood. The growth in chip exports will probably continue when the present 5% export duty is removed completely after the four-year transition period.

Russia's WTO membership did not bring any changes to the roundwood customs nomenclature, and so the sorting requirements and related costs will remain the same,

<sup>1</sup> Volumes of pulp chips and energy chips cannot be distinguished in the customs statistics, as they are included in the same tariff heading.

Table 1. Export duties for roundwood and wood chips before and after WTO membership.

Product	Before membership, starting on 1 April 2008	After membership, starting on 22 August 2012
Softwood	25%, minimum EUR 15/m <sup>3</sup>	Duty applying to quota: pine 15%, quota 16.0 mill. m <sup>3</sup> (EU: 3.6) spruce 13%, quota 6.2 mill. m <sup>3</sup> (EU: 6.0) Outside the quota: 80%, minimum EUR 55.2/m <sup>3</sup>
Birch	25%, minimum EUR 15/m <sup>3</sup> diameter <15 cm: 0%	WTO max. for all export headings 7% diameter <15 cm: 0%
Aspen	10%, minimum EUR 5/m <sup>3</sup>	5%
Chips	5%	5% (after transition period: 0%)

Sources: Protocol 2011, Russian Government Resolutions 779, 756, 88, 1190.

at least initially. In the future, the Russian Federal Customs Service will not be permitted to use its own reference prices for determining the customs clearance value of a product, but instead the value will have to be based on the product's actual price, which will make the rules clearer and eliminate the scope for the customs authorities to make their own interpretation.

### Rise in Softwood Sawlog Prices

Northwest Russia's roundwood exports will increase in the future, especially from areas close to the international border, although the volumes seen in the past are scarcely likely to be reached, at least not in the very short term. Roundwood consumption in the Finnish forest industry has fallen in recent years, and in practice the availability of roundwood and especially softwood in Russia could be limited. Roundwood harvesting volumes across the whole of Russia have grown in the past two years, but in Northwest Russia the trend has been downwards. In addition, the structure of the roundwood harvesting sector has changed since 2008. A large number of small and mid-sized roundwood harvesting companies in Russia have ceased operating, and roundwood harvesting has been dominated by larger companies. Most of the main

roundwood harvesters are owned by major forest industry corporations, as these corporations have sought to reduce the risks of wood procurement by owning harvesting companies. Domestic demand for roundwood has also grown as investments have been made in sawmilling and production of wood-based panels. The demand for softwood sawlogs in particular has been high at times, and in certain areas sawmills have had to restrict their production due to raw material shortages.

For hardwood, the situation is just the reverse. Russia's domestic processing capacity has not been developed rapidly enough to be able to use the hardwood volumes previously exported. The harvesting companies have had to focus on softwood-dominant stands because of the lack of demand for hardwood. With the growth in exports, the rising demand for hardwood will improve the profitability of roundwood harvesting in Northwest Russia. The conditions for developing roundwood harvesting will also improve in the longer term, as the import duties on forwarders and timber transporters will decrease considerably after the transition period. The reduction in the protective duties established in 2009 is good news for machinery manufacturers in Finland, and will improve their export opportunities to Russia.

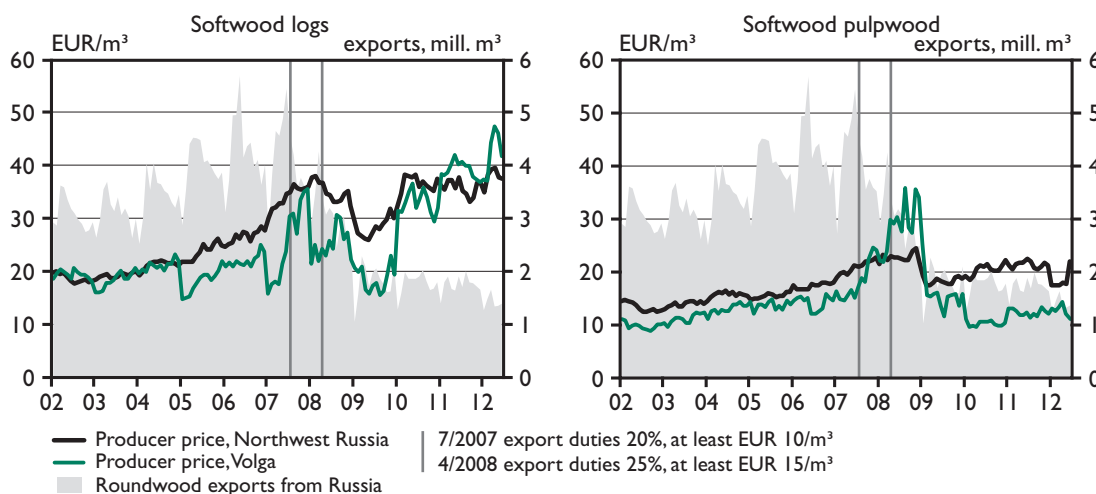


Figure 2. Nominal producer prices of softwood in the Northwest Russia and Volga federal districts. Monthly statistics. (Sources: Consultant Plus, Russian Federal State Statistics Service, Russian Federal Customs Service)

Russian experts have forecast a rise in roundwood prices as a consequence of WTO membership and increased exports. In the light of producer price statistics (see Figure 2), this does seem probable especially for softwood sawlogs. In the roundwood export peak years of 2005–2007, softwood producer prices in the Northwest Russia federal district – a strong roundwood exporter – were higher and rose faster than in the Volga federal district, which is further from European markets. Softwood prices fell sharply in 2008–2009, but the impact of reduced roundwood exports on prices is difficult to separate from the effects of the wider economic crisis. The roundwood price fluctuations in these years may also have been partially attributable to the extensive reform of Russia's forestry administration, which hampered practical operations for instance via changes in forest leasing and felling permit practices. During the past two years, softwood prices in Northwest Russia have stabilised at the level seen before their decline. The decrease in export volumes following the increase in roundwood duties appears to have slowed the rise in prices particularly for softwood sawlogs in Northwest Russia, where softwood sawlog prices in recent years have risen more slowly than in the Volga federal district.

In examining the difference between Finnish import prices and Northwest Russia's producer prices, it can be seen that the export duty increases in July 2007 and April 2008 were passed on to Finnish buyers, which was evident as an increase in the price differential (see Figure 3). For softwood pulpwood, the difference between the import price and producer price has been significantly greater than the export duty, as the import price has been affected by other factors, such as higher transportation costs. The price differential in the case of softwood sawlogs shows

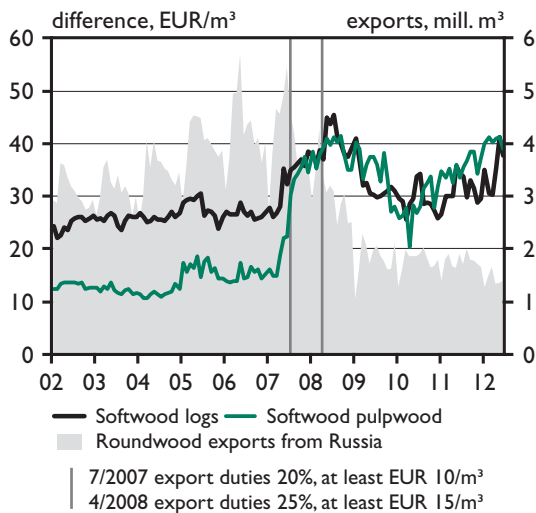


Figure 3. Difference between Finnish import prices and Northwest Russian producer prices for softwood. Monthly statistics. (Sources: Board of Customs, Russian Federal State Statistics Service, Russian Federal Customs Service)

that after 2009 there was a return to almost the level seen before the duty increases. Due to the fall in demand, Russian roundwood sellers have had to be flexible in their prices and to adjust their margins.

In Russia, roundwood availability and price are affected not only by market forces but also by factors related to the operating environment, such as the tariff policy of state monopolies, delivery problems concerning rail consignments, weight restrictions in road transportation, and administrative decisions on forest use. The factors affecting roundwood prices will be analysed in more detail in 2013, in a Finnish Forest Research Institute study of the Russian forest sector.

### Increase in Bureaucracy and Supervision

The softwood quota system means an increase in bureaucracy for roundwood exports in Russia. Softwood export quotas are granted to companies that are entitled under a forest lease agreement to harvest spruce and pine on their leased land, provided that they have no overdue forest lease payments. A purchase contract with such a company can also be accepted as grounds for an export quota. Russia's Federal Forestry Agency publishes an annual list of forest lessees, which is used by the Russian Ministry of Industry and Trade to grant export licences. Before a licence can be issued for exports to the EU, it is necessary for the applicant to supply a notary-approved Russian translation of the relevant EU quota permit. In the EU, the distribution of quotas is based on the previous importing operations of the party in question: 70% of quotas are reserved for so-called traditional importers. There is therefore an increase in bureaucracy in the EU as well. Problems have arisen concerning the introduction of the EU's quota system, and this has affected the EU's roundwood imports in the early months of Russia's WTO membership.

Supervision of roundwood markets will increase in Russia in 2013. To prevent illegal felling, Russia is preparing a federal supervision system for comprehensive monitoring of roundwood harvesting, transportation and sales. The system is planned for introduction in 2013, and it is intended to meet the EU Timber Regulation requirements regarding verification of lawful origin.

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