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Summary

During the last few years, the production and exports of the Finnish forest industry have grown, with the exception of printing paper. This year, the decline in demand for paper continues in the world market and the wood products industry in particular suffers from increasing competition and decreasing market prices. All these have been reflected in the exports and production of the Finnish forest industry. The forest industry is catching its breath this year, while the growth of production and exports will be more pronounced next year together with the strengthening economic growth in Europe.

In the wood products industry, the year-on-year production volumes of both sawnwood and plywood will decrease this year. In the first half of 2015, the exports of Finnish sawnwood to our key export markets in Europe have decreased due to tougher competition and weaker demand. On the other hand, exports to Asian markets have increased thanks to Chinese demand. Exports of sawnwood to North Africa have also performed well. However, much uncertainty is related to the development in the next months. In China, the economic growth is slowing and the political uncertainties continue in North Africa and Middle-East. In 2015, it is estimated that the volume of exports of sawnwood from Finland will remain close to the level of last year, but the unit prices of exports will decrease. In the domestic market, the consumption of sawnwood is decreasing this year due to decline in residential construction. With respect to plywood exports, the unit prices of hardwood plywood have risen, but export volumes have been declining in the first half of the year. In 2016, production and exports of sawnwood and plywood are expected to improve as the economy in the euro zone continues to pick up and construction projects increase in number. The unit prices of exports are likely to rise a bit from this year's level improving slightly the profitability of the wood products industry production.

In the pulp and paper market, the trends seen in recent years are likely to continue. Global consumption of packaging materials and pulp continues to increase, while demand for printing paper is falling. Increased production capacity makes it possible to start growing the production of pulp and cardboard in Finland, which will impact next year's production and exports. Over the last few years, the reaction to falling market prices in Finland and elsewhere has been to wind up production capacity, which has led to a levelling off of the prices this year. On the other hand, the production and export volumes of paper from Finland will continue to decrease both this year and next. The pulp and paper industry will remain profitable, as confirmed investments will increase the production volumes of pulp and cardboard while the export prices of them both are expected to rise slightly next year.

Changes in forest industry production volumes are being reflected in the Finnish wood market. Year-on-year commercial fellings will decrease slightly, while wood imports continue to fall. In Finland, the fellings of spruce logs have declined as the exports of spruce sawnwood fell in the first half of 2015. Stumpage prices of softwood logs are forecast to decline this year due to a softer market outlook for sawnwood and fallen export prices. As the pulp industry switches to chemical pulp instead of mechanical pulp, demand for spruce pulpwood is likely to decrease, leading to falling stumpage prices this year. Stumpage prices of pine and birch pulpwood will also fall somewhat. In 2016, the growth of the forest industry production increases domestic commercial fellings to 57.1 million cubic metres. Increased pulp production improves the demand for pulpwood, and the stumpage prices of pine and birch pulpwood will rise somewhat compared to the average prices in 2015. On the other hand, the year-on-year stumpage price of spruce pulpwood will decrease. Due to increased plywood production and sawing, stumpage prices of logs will increase slightly. In non-industrial private forestry, gross stumpage income in 2015 and 2016 and operating profit per hectare for the same period will remain at around EUR 1.6 billion and EUR 100, respectively.

Low prices of fossil fuels and emissions allowances, as well as uncertainty related to subsidies, are holding back investment decisions and continuously curbing growth in forest energy. The consumption of forest chips is expected to fall to a level of around 8 million cubic meters (solid volumes) this year, with no growth forecast for 2016. The average purchase price of forest chips at plants in

2015 and 2016 is expected to remain at almost the same level as in 2014. Production of wood pellets in Finland will grow by a few per cent. Investments that will be completed in 2016 will further increase wood pellet production.

Employment in both the forest industry and forestry will improve somewhat in 2015 and 2016, but the employment trends vary according to sector. In the building joinery industry, the decrease in domestic new construction will lead to a fall in the number of workers, while the number of forestry entrepreneurs and their family members grows more quickly than the number of employees decreases.

Changing leadership in world economy

In world economy, developed economies are once again taking the lead position in growth. Slowing economic growth in China is holding back the growth of the entire world trade and global economy, undermining the growth prospects of other developing economies in particular. In the United States, the country's consumption-driven economy is forecast to pick up again and, after a relatively weak first half of 2015, return to its usual growth rates in the latter half of 2015 and in 2016. In the euro zone, the principal market for Finnish forest industry products, the slow economic growth that started in 2014 will continue in 2015 and 2016, as the domestic demand is growing. The weakening euro contributes to growing exports outside the euro zone, but there are still several uncertainties related to the zone's domestic and export markets.

The economies in Sweden and the United Kingdom are growing faster than in the euro zone, but the Russian economy is in recession. The growth rate of the Russian economy in 2016 is forecast to be zero per cent or lower. Canada experienced a short economic downturn this year, but the economy is expected to pick up again and have a growth rate of about 2 per cent. In Asia, the drop in demand in China is bringing uncertainty that also weakens the export prospects for Japan. The economic reforms in Japan are not proceeding as planned, and the growth of the economy is stunted. The Indian economy, on the other hand, is growing fast. In North Africa and the Middle East, the outlook is still uncertain, but the economies in the region will grow faster in 2016 than in 2015.

There are several uncertainties and threats in the global economy at the moment, and if the current risks materialise, the overall economic growth is likely to slow down. This would also affect Finland and the exports and production of the Finnish forest industry through changes in the export demand. The most important risks in the forecasts are related to China and its development, which affect the entire global economy and especially raw material and commodity markets. Although it is generally believed that China, through active economic policy, is able to prevent its economic growth from slowing down too fast and the problems that would follow, the actualisation of the country's huge debt problems and the bursting of the housing bubble would cripple not only the Chinese economy, but international trade as a whole. The Federal Reserve is expected to hike interest rates towards the end of 2015, but the impact on exchange rates and, consequently, the competitiveness of countries remains unclear. An expansion of the conflict in Ukraine and the continuation of the sanctions policy in 2016 are also possible. The unrest in the Middle East is likely to continue, affecting trade even further. The economic impact of the flows of refugees entering Europe cannot be assessed yet.

Economic forecasts for Finland have been following almost the same pattern for several years: in the autumn, the results of the current year and estimates of the economic trends are adjusted downward significantly, and the economy is expected to pick up next year. Last year was not an exception, and current forecasts are again suggesting slight growth for 2016. This year, exports are down, investments that contribute to domestic demand are decreasing, and private consumption will increase only slightly from last year. In 2015, the Finnish economy will remain at the 2016 level. In 2016, however, the improving demand in the euro zone and the weak euro will support the recovery

of Finnish exports, while the impact of the lower exports to Russia are likely to be lessened. Even so, household demand and industrial investments are likely to be curbed by growing unemployment, unused capacity and general economic uncertainty. If the budding growth of exports that began in summer 2015 is going to become stronger, the economy will grow in 2016, albeit at a rate of less than one percent.

The demand for wood products is growing as construction in Europe increases in 2016

In the first half of 2015, the exports of Finnish sawnwood increased by 2 per cent on the same period previous year. The growth was due to pine sawnwood exports, since export volumes of spruce sawnwood were down. The unit prices of imports, however, decreased for both pine and spruce sawnwood. Export price trends are not expected to improve towards the end of 2015, since the production of sawnwood in Europe, which is Finland's principal export market area, has been growing despite of decreased demand. Competition has become tougher due to increased supply from Sweden and Russia, which have both benefitted from their weakening exchange rates against the euro. In the last few months of 2015, export volumes are expected to fall, which means that the total exports of sawnwood in 2015 will remain at almost the same level as in 2016. At the same time, domestic demand is decreasing, as the decline in residential construction continues and the production of sawnwood declines from last year's level. Compared to sawnwood, the export trends for plywood are the complete opposite: export prices have increased, particularly for hardwood plywood, but volumes have decreased. The production volumes of plywood are expected to decrease this year, and export volumes are likely to fall short of last year's level.

For 2016, economic trends and construction forecasts indicate that the growth is picking up in Europe, including Finland, which indicates that the production and export volumes as well as prices of sawnwood and plywood improve. In the short term, the impact of the flows of refugees on the European economy cannot be assessed, but it is certain that the situation will increase the need for accommodation and construction. Growing demand potential for sawnwood in North Africa increases export opportunities, but may be offset by the unstable political situation. The slowing economic growth in China makes the export outlook for sawnwood to Asia more uncertain. In 2016, as the construction in both Europe and Finland will improve somewhat, the year-on-year production of sawnwood and plywood will increase by 1 or 2 per cent.

Increasing export volumes for cardboard and pulp, prices near the 2014 level

In the pulp and paper market, the trends have not changed from the last few years. The consumption of packaging board and tissue paper are increasing, which also increases the demand for softwood pulp. The demand for printing paper continues to fall as printed materials are continuously replaced with electronic communications. In Europe, the key market area for Finland, the slump in the demand for printing paper has been exceptionally steep in the first half of 2015. The demand has also started to fall in Asia. Due to printing paper oversupply, more capacity has been closed down in Europe and North America, and mills have been converted from printing paper to packaging paper and cardboard. In 2015 and 2016, the exports and production of Finnish paper are forecast to decrease by 4 or 5 per cent as the demand in the export market is down and the production capacity is reduced. However, the capacity cuts in Europe have eased the oversupply and balanced price development. The export prices of Finnish paper have been growing continuously since Q4/2014. This year, the export prices for paper are forecast to increase slightly and remain at almost the same level in 2016.

Demand for softwood pulp in the global market will remain at an elevated level in 2016, and the demand for cardboard continues to grow. Increased capacity for pulp and cardboard in Finland

makes it possible to increase production this year, but a more pronounced impact will be seen next year. The exports of pulp are expected to grow 2 and 3 per cent in 2015 and 2016, respectively. There will be a major increase in the Finnish production capacity for cardboard towards the end of 2015 when investments will be completed, with more expected in 2016. The exports of cardboard are expected to grow 3 and 7 per cent in 2015 and 2016, respectively. If the demand remains strong, the export prices of pulp and cardboard are forecast to rise moderately.

Profitability trends in the forest industry vary by sector with a moderate increase in costs

Thanks to continuously high export prices for pulp, profitability in the pulp and paper industry has continued to increase in 2015. At the same time, the profitability of cardboard production has also improved. Despite increasing export prices, the profitability of paper production suffers from increasing raw material costs. In the wood products industry, profitability improved in 2015 for hardwood plywood, while the growth of the profitability of sawnwood is fading due to intensifying competition and falling prices in the most important sawnwood export markets. The trend in stumpage prices for softwood logs has remained at a remarkably steady level, which has helped to reduce the uncertainty related to raw material costs. Companies are making preparations for the weakened economic outlook for autumn 2015, which is reflected in their planned production cuts in sawnwood.

In 2016, the profitability trend for wood products industry will be boosted by the turning demand trend for sawnwood in both Europe and Finland. At the same time, the supply of logs is expected to remain strong and the stumpage prices will increase moderately. In the pulp and paper industry, the profitability outlook for 2016 is equally positive. As investments are completed, the production volumes for pulp and cardboard will slowly start to increase, while the export prices for both pulp and cardboard are expected to rise slightly. Paper production is expected to fall even further, but the export price will remain stable. The global oil prices are expected to remain low in 2015, which tends to reduce the otherwise rising costs in the entire production chain – from timber harvests to the freight costs of finished products.

Stable trends in the timber market

Decreasing forest industry production is reflected in the domestic commercial fellings: the volume in 2015 is falling by around one per cent to 55.3 million cubic metres. Timber supply, on the other hand, is mainly domestic, since roundwood imports are expected to fall by 7 per cent. The fall in the volume of fellings in Finland is largely due to decreasing demand for spruce logs, as the exports of spruce sawnwood have decreased. Stumpage prices of softwood logs are forecast to decline this year due to a softer market outlook for sawnwood and fallen export prices. The average prices of spruce and pine logs are estimated to remain below the 2014 prices by 3 and 2 per cent, respectively. At the same time, the demand for birch logs, as a raw material for plywood, is stable and the stumpage prices remain unchanged. As the pulp industry switches to chemical pulp instead of mechanical pulp, demand for spruce pulpwood is likely to decrease further, leading to a 3 per cent fall in stumpage prices this year. The demand for pine and birch pulpwood as raw material for pulp remains stable, but the stumpage prices will be slightly lower.

In 2016, the growth of the forest industry production increases domestic commercial fellings by 3 per cent to 57.1 million cubic metres as roundwood imports are declining further. The growth of softwood pulp production increases the demand for pulpwood, and the stumpage prices of pine and birch pulpwood are both forecast to increase by 1 per cent from the average prices of 2015. The growing production of both sawnwood and plywood will strengthen log stumpage prices by between 1 and 2 per cent. An exception to this is spruce pulpwood, which is increasingly used as raw material for softwood pulp, leading to a 1 per cent decrease in stumpage price compared to the 2015 level.

Operating profit per hectare in forestry remains at the 2014 level

This year, investments in wood production in privately-owned forests are estimated to rise to EUR 225 million, but investments are forecast to decrease in 2016 with decreasing subsidies. The new Act on the Financing of Sustainable Forestry entered into force in June 2015. The share of own financing by forest owners in wood production investments is estimated to rise from 73 per cent in 2014 to 75 per cent in 2016. The upward pressure is caused by the clear felling of many forests over the last few years. Since no major changes in commercial fellings or roundwood prices are to be expected, gross stumpage income in non-industrial private forestry in 2015 and 2016 and operating profit per hectare for the same period will remain at around EUR 1.6 billion and EUR 100, respectively.

Employment is increasing in forestry and forest industry

This year, forestry and the forest industry are estimated to employ a total of 65,600 people, which is about 3 per cent more than in 2014, with a growth of about one per cent forecast for 2016. However, employment trends vary widely by sector. In the forest industry, the number of employees is estimated to grow to 39,500 in 2015 as the employment in the wood panel industry and in pulp, paper and cardboard production is improving. At the same time, the declining volume of new construction in Finland is likely to reduce the number of employees in the building joinery industry. Employment is also expected to fall in the manufacturing of paper and cardboard products. In 2016, the number of employees in the forest industry is forecast to rise slightly from the 2015 level, particularly due to increased cardboard production.

In forestry, the number of employees is estimated to reach 25,700 people in 2015 as the number of entrepreneurs is growing. Next year, the growing forest industry production will increase commercial fellings, and the number of employees is forecast to reach 25,900. The rising number of forestry employees is partly explained by changes in employment structure, as the number of entrepreneurs and their family members is growing faster than the number of workers is falling.

Consumption of forest chips slumped

In 2015, the total consumption of forest chips is expected to fall to around 8 million cubic metres (solid volume), compared to 8.2 million cubic metres in 2014. No growth is forecast for 2016. Low prices of fossil fuels and emissions allowances, as well as uncertainty related to subsidies, are holding back investment decisions and continuously curbing growth in forest energy. In addition, two consecutive mild winters have reduced the need for heating. The average purchase price of forest chips at plants is estimated to be EUR 21.3/MWh in 2015, with 2016 prices remaining at the same level. The production of wood pellets in Finland is expected to grow by a few per cent from 324,000 tonnes in 2014, while in 2016, several new investments will be completed and the production will grow significantly.

During the last few years, uncertainties related to emissions trading and renewable energy support policies have complicated investment decisions for major plants. However, as the new Government Programme highlights bioeconomy as one of the priority projects, this may increase the consumption of forest-based bioenergy and the number of new investments. According to the Government's new bioenergy policy, the consumption of emission-free, renewable energy should be increased sustainably and reach 50 per cent in the 2020s.

Basis and risks of the forecast

The purpose of the Finnish Forest Sector Economic Outlook is to provide information on the current situation and the future prospects of the forestry sector. The forecast is based on public statistics, forecasts on global economy trends, forestry sector market information from different sources, and

studies by the Natural Resources Institute Finland (previously Finnish Forest Research Institute). The forecasts follow a derived demand principle, which means that the fluctuations of the economic outlook in Finland and the export markets are expected to be reflected in the demand for forest industry products and, consequently, to forest industry production and domestic wood market. Changes in the operating environment of the forestry sector and the impact of the Government's economic instruments are also considered when the forecast is prepared. If the economic growth were to be slower than expected, the export prices, production and profitability of the Finnish forest industry would be lower than this forecast. With decreasing demand for forest products, the impact would spread from the forest industry to the roundwood market, forestry employment, and the profitability of non-industrial private forestry. In this case, the development of the Finnish forestry sector would be weaker than the current forecast.

Key forecasting variables 2014–2016f*

Forecast variables	2014	2015f % change	2016f
Sawnwood production	5	-3	2
Sawnwood exports	4	0	1
Sawnwood export price	3	-2	2
Plywood production	6	-1	3
Plywood exports	9	-2	2
Plywood export price	2	2	2
Pulp production	-1	1	3
Pulp exports	-1	2	3
Pulp export price	6	1	1
Paper production	-3	-5	-4
Paper exports	-2	-5	-4
Paper export price	-2	1	0
Cardboard production	0	2	8
Cardboard exports	1	3	7
Cardboard export price	-1	1	1
Commercial fellings	0	-1	3
Roundwood imports (including chips)	-11	-7	-3
Stumpage prices of sawlogs			
Pine	0	-2	2
Spruce	-1	-3	2
Birch	1	0	1
Stumpage prices of pulpwood			
Pine	-1	-1	1
Spruce	-3	-3	-1
Birch	-1	-1	1

*price changes are nominal

The outlook on the development of the global economy and export markets is based on the forecasts of organisations such as the OECD, IMF, Research Institute of the Finnish Economy, Nordea and the Bank of Finland. The forecasts included in this outlook are based on the September–October 2015 data on the forestry sector and forecasts on global economic trends for 2015–2016. The forestry sector forecasts reflect the perception of researchers of the most likely trends. They are point estimates based on export market growth forecasts and other background assumptions on market trends.

The most significant risk for the forecasts in this outlook is that economic growth and demand in the global economy and the key forest industry market areas will at a lower level than expected. A more steep decline in the growth of the Chinese economy than expected and its impact on world trade, re-escalation of the crisis in Ukraine, the situation in Syria and the economic and political impact of the flows of refugees entering Europe are issues that are causing most uncertainty in the market trends at the moment.

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