

ECONOMIC COMMISSION FOR EUROPE

Timber Committee

FINLAND

October 2015

MARKET STATEMENT

1 GENERAL ECONOMIC TRENDS

For several consecutive years, the forecasts for the Finnish economy have followed almost the same pattern. In the autumn of the prevailing year, prospects and estimates of economic performance will be corrected briskly downwards and economic growth expectations are targeted for the next year. The year 2014 was no exception. In the autumn of 2014, economic forecasts were refined downward due to poor exports development. Economic sanctions imposed by Western countries to Russia, and the countersanctions imposed by Russian Federation against the Western goods, reduced considerably Finnish exports to Russia. Also, the weak economic growth in the euro area was not sufficient impetus to start up export growth, which was also hampered by the weakened competitiveness. Domestic investments were also not journeyed in line with the previous estimates. After the summer, the economy contracted in the last two quarters compared to previous quarters, and Finland sank once again back into recession. In 2014, Finland's economy contracted by 0.4 percent.

During the first quarter of the prevailing year, the Finnish economy was no longer declining, if not also increasing. In the second quarter of this year, the economy turned slightly to growth because of the unexpectedly increases of exports and the fall in the investment deflection. Although this summer and early autumn can be the possible turning points in the economic recovery to begin, nothing great growth jumping in the Finnish economy cannot be anticipated. Exports of goods and services grow by a little, but overall, the single-sided structure and the focus on the investment assets of Finnish exports are not supported by the rapid growth of exports. Almost half of Finland's exports are targeting to the euro area where the investments and the demand for investment goods have not yet properly begun. The weakened euro promotes Finnish exports outside the euro zone, but on the other hand, the slowdown in world trade and, especially, in Asia is hampering the export recovery.

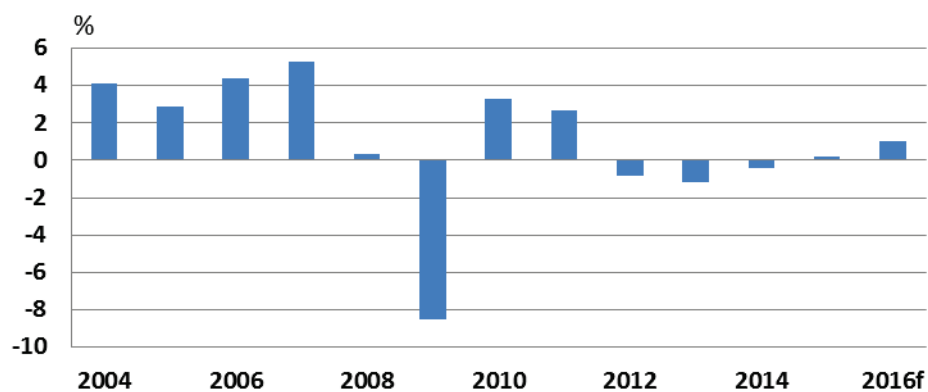
According to recent business tendency survey, released by Confederation of Finnish Industries, the industrial confidence in Finland has remained fairly stable during this year, but is significantly below than its long term average. In construction, economic expectations are, however, unexpectedly improved. The industry's expectations in Finland are much bleaker than elsewhere in Europe, as evidenced also by the decline of new orders in manufacturing, as well as the decline in net sales and industrial production in July.

In oncoming years, the government spending is highly restricted by avoidance of additional government debt, so the public consumption in this year is expected to remain close to last year's level. The recent consumer confidence indicators, released by Statistics Finland, reveal that after the winter the confidence among the households has turned to a declining path indicating a weak

domestic confidence in the general development of the economy. Even though the level of earnings will rise slightly this year and inflation has turned to mild deflation, the private consumption is likely to grow only few tenths of a percent due to increasing unemployment and general economic uncertainty. If the slow export growth continues to the end of the year, the Finnish economy will remain close to last year's level in 2015. Otherwise, the economy will shrink a few tenth of a percent from last year.

The economic outlook for 2016 seems only slightly better than for ongoing year. The slowly growing demand in euro area and the weakening of euro are supporting exports growth. Even though the economic sanctions on Russia imposed by Western countries and the Russian counter-sanctions may continue over the next year, the highest negative impacts of these actions on Finnish exports to Russia have already taken place. Removal of sanctions over the next year, in turn, would provide a significant boost to Finnish trade and exports. The generous amount of free production capacity discourages industrial investments. However, construction is expected to revive slowly over the next year, the tip of construction being the project of biorefinery in Äänekoski. Slowly accelerating inflation restricts household income level increase, which, together with persistent high unemployment rate, keeps private consumption growth at a slow pace. In 2016, the Finnish economy is estimated to grow 0.5–1 percent.

Annual changes of GDP in Finland, 2004-2016f



Sources: Statistics Finland, The Research Institute of the Finnish Economy (2015, 2016)

2 RECENT POLICY MEASURES

In Finland, the new Forest Act came into force on 1.1.2014. This act provided more freedom for the Finnish forest owners to decide practical issues concerning fellings and regeneration of stands. For example, under the new Forest Act it is possible to regenerate forests by so called continuous cover silviculture, that is, by thinning forests by single tree fellings of uneven ages. Also, the regeneration fellings are not any more subject to such former legal restrictions as stand age or mean diameter of trees. To paraphrase the spirit of the present act, the new act forces to create new forest stands after the regeneration fellings as well, but it allows more freedom and alternatives for implementation.

Along with the new Forest Act, the changes in act concerning the operation of the Forest Management Associations came into force on 1.1.2015. According to the updated act, the special status of Forest Management Associations as forest management fee collector is removed and the

membership of forest owners to local Forest Management Association becomes voluntary. Otherwise, Forest Management Associations are able to provide, as now, forest management services related to the exercising of forestry for the forest owners. Restrictions on further business or commercial activities of Associations are removed, although according to the Act they should be organised in a separate company. This separation is seen to be necessary for the management of business and financial risks and transparency of operations.

In February 2015, the Finnish Government approved Finland's National Forest Strategy (NFS) which lists the main objectives of the forest sector by 2025. This new Strategy replaces and continues the work of previous National Forest Programme 2015 (NFP 2015). The vision of the NFS is that the sustainable forest management is the source of increasing welfare including the following objectives:

- 1) Finland is a competitive operating environment for forest-based businesses.
- 2) The forest sector and its structures become more regenerated and diversified.
- 3) Forests are in active, sustainable and versatile use.

Concentrically, the aim is to create growth, investments and new jobs in the forest sector in Finland. Moreover, one of the objectives of the NFS is to increase the fellings of industrial wood as much as 15 million cubic meters by 2025. If this target is reached, the gross stumpage earnings would increase by approximately EUR 0.5 billion, together with exports value conservatively estimated at EUR 1.5 billion.

In practice, the National Forest Strategy is implemented in eleven separate projects. The key projects include, among others, the development of electronic customer and information services, promotion of the wood entering on markets by creating a new incentive system concerning generational transfer of forest owning and the development of nature management in commercial forests.

Forestry Strategy is based on the forest policy report given to the Finnish Parliament. In addition, the Finnish bioeconomy and biodiversity strategies can be found behind the NFP. Forest Strategy supports the implementation of bioeconomy strategy.

The specific goals related to the forest biodiversity safeguarding are stated in the Forest Biodiversity Programme for Southern Finland, METSO 2008–2016. In METSO Programme, biodiversity conservation is based on voluntariness and compensation payments for landowners who will give their lands for protection. Within the framework of METSO program, currently there are about 54 400 hectares protected under the Nature Conservation. The goal is 96 000 hectares by 2025.

In April 2015, The European Commission approved the new Act on the Financing of Sustainable Forestry (Kemera), the aim of which is to finance Finnish private forestry from the national budget sources. In Kemera Act, which came into the force in 1st June 2015, financial support will be provided for the young forest management and harvesting concerning small wood, fertilisation, the fight against root rot, for the treatment of peat land forests, forest roads, forest treatment, and environmental agreements. In addition, support will be provided for early silvicultural treatment of young stands.

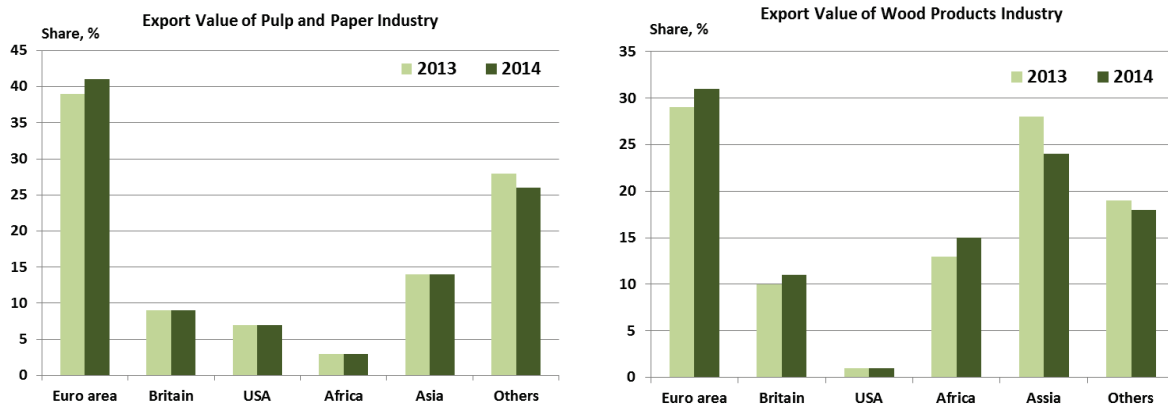
In order to promote the use of domestic energy, Finnish government made a policy decision in October 2014 to reduce the taxation for the peat fuel together with an increase for woodchips

subsidies. The tax for the peat fuel decreased from EUR 4.9 to EUR 3.4 per megawatt hour at 1st January 2015. The government has also given a further proposal to decrease the tax to EUR 1.9 at 1st January 2016. In addition, the subsidy for electricity, produced from wood chips, has increased at 1st January 2015 from EUR 13.1 to EUR 15.9 per megawatt hour, and, according to the new proposal, it will increase further to EUR 18 per megawatt hour at 1st January 2016.

In 1st January 2015, MTT Agrifood Research Finland, the Finnish Forest Research Institute (Metla), the Finnish Game and Fisheries Research Institute (RKTL), and the statistical services of the Information Centre of the Ministry of Agriculture and Forestry (Tike) were merged under a new entity called Natural Resources Institute Finland (Luke). This new Institute is the second largest research institution in Finland and one of the biggest clusters of bioeconomy expertise in Europe.

3 MARKET DRIVERS

While most of the products manufactured by the Finnish forest industry are exported, the industry is highly dependent on the development and changes in international trade and demand in the main export markets. Also, the development of exchange rates (USD, CAD, SEK, GBP, JPY, RUB, CNY) with respect to euro is important for competitiveness of Finnish forest industry products not only outside Europe to promote exports but also inside the euro area when competing against the imports from outside the euro area. In paper industry, about 90 percent of production is exported, while in wood products industry the corresponding share is close to 70 percent. The most important export destinations are Europe, Asia, Near East and North Africa.



Sources: National Board of Customs, Luke.

The outlook for Finnish forest sector products as a whole in 2015 and 2016 is twofold. On one hand, the demand for pulp on the global market as well as the growth in demand for packaging materials are increasing the production and export of paperboard and pulp with respect to previous year together with ongoing investments in new capacities. These, in turn, affect positively on future production and export prospects. The export unit prices of pulp and paperboard are also slightly increasing in 2015 and in 2016. On the other hand, the demand for paper in the main market area, the euro area, continues to fall, causing a decline in Finnish paper production and exports. However, the capacity cuts both in Finland and abroad, offset the recent development of paper unit prices. Also, due to the decreasing demand in main export areas for wood products industry, the production

and exports of wood products are likely to slightly decrease in this year. However, along with the estimated recovery of constructing activity in the euro area, the production, exports and the export unit prices of Finnish wood products, mainly sawnwood and plywood, are estimated to slightly go up again in 2016.

The main uncertainties concerning the outlook and projections for the Finnish forest industry, its production and exports in 2016 are related to changes in consumer behaviour, attitudes and moods in the main markets. These, in turn, are closely related to general and economic uncertainty both in Finland and in main export areas. The economic consequences, as well as political affects, of massive refugee flow inside Europe remain still uncertain. The European Union's economic sanctions against Russia and Russian countersanctions, due to the escalation of the crisis in Ukraine, may continue in next year causing problems for Finnish exports. The direct effects of China's slowing economic growth on world trade, world economy and demand for forest products together with the indirect effects, for instance, via changes in exchange rates, can be only guessed.

4. DEVELOPMENT IN FOREST PRODUCTS MARKETS

A. Raw wood

In the first half of 2015, due to the decreasing sawnwood production together with destocking of the purchased roundwood storages, the commercial removals in Finland were far below from the figures with respect to the corresponding time span in previous year. In addition, the second consecutive winter with little snow and a mild winter in Southern Finland reduced the purchases for cutting areas suitable for winter fellings. Despite the weakening in demand the stability of roundwood prices has continued, and the fall in prices has been only small.

In 2015, the amount of total market fellings will be reduced to 55.3 million cubic meters (under bark, hereafter u.b.) which is roughly one percent less than in 2014. Both log and pulpwood removals are decreasing one percent. The reduced log fellings are mainly due to a decrease in demand for spruce logs, the stumpage price of which are estimated to fall by 3 percent. The decreasing export unit prices of pine sawnwood are also reflected to stumpage prices of pine logs, which are anticipated to decrease by 2 percent in this year. Demand for birch logs for plywood as raw material will remain stable, and the stumpage price of birch logs will remain at last year's level.

Spruce pulpwood demand for mechanical pulps continues also to decline, and the stumpage price is estimated to reduce as much as by 3 percent in 2015. Although the demands for pine and birch pulpwood as raw material for pulp production, in turn, remain fairly constant, their stumpage prices will fall one percent. Roundwood imports to Finland will be reduced by 7 percent consisting of about 9 million cubic meters.

In 2016, the total commercial fellings will grow by 3 percent totaling 57.1 million cubic meters u.b. In particular, because of the increasing pulp and plywood capacity in Finland, the demand for pulpwood is increasing and the pulpwood fellings are anticipated to grow by 4 percent up to 32.8 million cubic meters u.b. Pine and birch pulpwood stumpage prices are forecast to rise by one percent. Also, the increasing production of sawnwood and plywood will strengthen the log stumpage prices by 1–2 percent. The exception is spruce pulpwood, the stumpage price of which continues to fall by one percent. Roundwood imports continue to reduce by 3 percent in 2016 up to 8.7 million cubic meters.

B. Wood energy

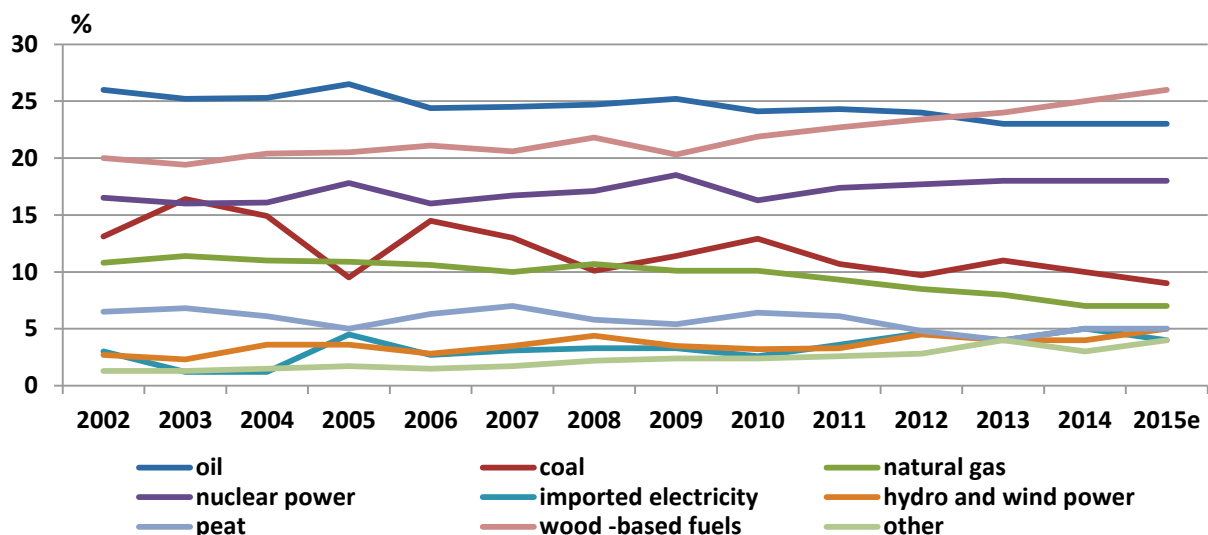
According to the decision of the European Commission, Finland should produce 38 percent of its consumed energy from renewable sources by 2020. In this respect, the role of forests is important as currently about 80 percent of the bioenergy production in Finland is based on wood. Wood based energy accounts for 23 percent of all energy consumed in Finland and 80 percent of the Finnish forest industry's energy consumption (black liquor from the pulp industry, tree bark, sawdust, etc.). Meeting the 2020 goals depends much on the development of wood processing industry.

The target for 2020 in Finland is to use 13.5 million cubic meters (m³) of forest chips annually. In 2014, the use of forest chips was 8.2 million m³ of which 7.55 million m³ was used in heating and power plants. The use of forest chips decreased by 6 percent from 2013. Small diameter trees are by far the most important raw material source for forest chips in Finland (49 percent of forest chips in 2014), logging residues accounted for 34 percent of raw material, stumps 11 percent and stem wood 6 percent. The use of forest chips is estimated to remain at the same level also in 2015 and 2016.

In the second quarter of 2015, the plant price of forest chips was EUR 21.32 per megawatt hour, which is equivalent to the price level of the same period in last year. In 2016, the average plant prices of wood chips are expected to remain at the same level.

Domestic production of wood pellets in Finland increased 324 000 tons in 2014, which was almost 20 percent higher than in 2013. Also, the domestic consumption increased by 7 percent accounting of 239 000 tons. Both domestic production and consumption of pellets in Finland are estimated to increase also in 2015, as well as in 2016, due to increasing production capacity in Finland.

Energy consumption in Finland by source of energy



Source: Statistics Finland

The emission trading has a strong influence on the competitiveness of wood-based fuels and their use in energy plants. Increasing the proportion of wood-based fuels is very difficult at the current price level of the EU emission allowances (under 10 €/t CO₂). A strong increase in the use of wood-

based fuels would require a price level of over 25 €/t CO₂ of emission allowances, until the forest biomass can compete with coal. Also, the very cheap world market price of coal has created the situation, where forest biomass is not competitive in some cases. The other challenge is RES directive, which will increase the costs of energy wood supply chains. Other directives could create also new challenges to bioenergy sector.

In bioenergy markets, changes in taxes, subsidies and regulations have fast and strong influence on the use of renewable energy sources. In the European Union, there are several directives concerning the usage of solid and gaseous biomass in energy production under construction. Uncertainty with emission trading together with different directives are postponing investment decisions and making future planning difficult and highly challenging. However, during the recent years, there have been few new investments and plans of new biofuel plants in Finland. Also, several large scale CHP plants using forest biomass have been launched in Finland, and in addition there have been reconstructions in old plants in able to use more forest biomass.

C. Certified forest products

After the main group certificate holders - regional forest owner associations - changed their terms of membership, the amount of certified forests endorsed by the international Programme for the Endorsement of Forest Certification schemes (PEFC) have decreased by 3.1 million hectares to 17.5 million hectares in 2015. However, it still accounts for 81 percent of the forest available for wood production. After introducing the Finnish certification standard in 2011, the forest area certified under Forest Stewardship Council (FSC) scheme has already increased to 1.1 million hectares. This is mostly due to two main Finnish forest companies as a certificate holder.

The use of forest certification labels in forest products has experienced just modest changes over the last year. The number of PEFC Chain of Custody (CoC) certified companies in early 2015 were 206, whereas FSC has granted 105 CoC certificates. The actual numbers of certified products is far higher, but they are distributed similarly in both certification schemes; about half of the certificated products are directly connected to pulp and paper or printing. However, in PEFC primary wood and wood product companies are more widely presented. Also two main wholesale and DIY chains hold PEFC CoC certificate. Both forest and CoC certificate schemes contribute to the wood material criteria of the Nordic Ecolabel (The Swan), a widely recognised consumer oriented eco-label in the Nordic countries.

D. Value-added wood products

E. Sawn softwood

In 2014, the production of coniferous sawnwood grew by 5 percent from the previous year. The production volume has gradually increased since the drop of 2009 and reached 10.9 million m³ last year. The Finnish sawmilling industry is traditionally highly export oriented, and the importance of exports has grown until recently. On the contrary, the share of domestic markets of the sawnwood deliveries has decreased. The volumes of residential construction, that is the most important end use sector of sawnwood in Finland, have dropped drastically during the last three years of economic contraction. In 2014, the share of domestic consumption with respect to production volume was 34 percent.

Finnish sawnwood exports grew to roughly 7.5 million m³ in 2014 showing a year-over-year growth rate of 5 percent. The export volume has grown after the large drop in 2009, and the last years' level was the highest since 2006. The main markets for the Finnish exporters are in Europe which has suffered from weak economic development during the recent years. For the Finnish sawnwood industry, the share of Europe has been decreasing because of sluggish demand for and occasional oversupply of sawnwood especially in the euro area. Finnish producers have sought for the new market opportunities outside Europe in North Africa, Middle East and Asia since 2008. In 2013, the share of Europe of the total Finnish sawnwood exports dropped to 38 percent.

Deliveries of Finnish sawn- and plywood in 2014, 1000 m³

	Soft sawnwood		Plywood	
	1000 m ³	%	1000 m ³	%
Production	10 900	100	1 160	100
Domestic consumption *	3 419	31	162	14
Exports:	7 481	69	998	86
European Union	3 055	28	821	71
Africa, of which:	2 084	19	8	1
<i>Egypt</i>	1 223	11	1	0
Asia, of which	2 159	20	59	5
<i>Japan</i>	776	7	6	1
<i>China</i>	408	4	8	1
North-America	5	0	31	3
Others	178	2	79	7

**apparent consumption= production-exports*

Sources: Finnish Forest Industries Federation, National Board of Customs

Differently from the development in several previous years, in 2014, the increase in the total export volumes was due to the growth in exports to Europe. European economy and construction started to show signs of recovery in several countries and exports to North Africa, especially to Egypt, were increasing. However, exports to Japan dropped by 29 percent in 2014, which was, almost as expected due to the increase in the consumption tax.

However, in the autumn of 2014, uncertainty started to increase in several export markets of Finnish sawnwood. Construction turned on a downturn throughout the European Union, dampening the market outlook for the wood product industry. Thanks to the development at the beginning of the year, sawnwood exports grew and the unit price rose by three percent from 2013. The new residential construction activity was still weak in Finland, but the growth in remodelling and repairing drove the consumption of sawnwood up by 3 percent. However, it still remained at a historically low level. Due to an increase in export and consumption volumes the total sawnwood production increased by 5 percent to 10.9 million m³ in 2014.

Outlook for years 2015 and 2016

After the relatively brisk demand during the first half of 2014, the uncertainties started to affect all the export markets. In Europe, the demand started to decline towards the end of the year 2014 and during the spring 2015 the demand did not recover as expected. Especially, the spruce market was weak. Because of the oversupply market prices were sliding downwards in Europe. At the same time, the main competitor countries for Finnish sawnwood, Sweden and Russia, have benefitted the

weakening of the Swedish crown and Russian rouble with respect to euro. As a result, Finnish sawnwood exports to Europe declined during the first half of the year and there was a small drop also in the export unit prices compared to the same period in 2014.

In the markets outside Europe, Finnish export volumes increased to North Africa during the first half of 2015 thanks to the demand growth in Egypt and Moroccan. The share of North Africa of Finnish sawnwood exports was 27 percent. The demand potentials of North African countries are high, but also uncertainties are high because of the current political discrepancies in the area. The Asian market is another important market area for Finnish sawnwood producers accounting about 30 percent of total sawnwood exports. In the first half of 2015, exports to China increased by about 50 percent compared to the same period in 2014. On the contrary, exports to Japan continued to decline. In Japan, the growth of residential construction has been very slow after the increase of consumption tax in 2014. High uncertainty is also related to the Chinese economy that is slowing and the construction sector which suffers from oversupply.

In Finland, the development of housing starts and buyers' activity in housing market remain modest in 2015. Construction activity in single family houses is still decreasing. Growth in housing construction is forecasted not to start until 2016. Consequently, domestic sawnwood consumption is forecasted to decline in 2015 and turn up again in 2016.

In 2015, the export volumes are estimated to remain close to the level of 2014, but production volume decreases by 3 percent to 10.6 million m³ due to declining domestic consumption. Export unit prices show a downward trend in 2015.

For 2016 the economic forecasts show improving development and increasing housing construction in Europe and in Finland, which indicates brighter market developments and higher demand for sawnwood. In North Africa demand growth is possible, but there exist also high uncertainties related to trade. In Asia, the economic growth is slowing and uncertainties concerning Finnish exports to China remain high. In sum, Finnish sawnwood export and production volumes are forecasted to increase by 1–2 percent in 2016. An extra boost for European wood products demand may become from the housing sector due to the increasing refugee flows. However, the timing and strength of the effects is difficult to predict

F. Sawn hardwood

Coniferous sawnwood currently accounts for over 99.5 percent of the sawnwood production in Finland. Sawn hardwood (mainly birch) is a marginal product with the production volume of roughly 40 000 m³ in 2014. The annual production of sawn hardwood has been declining continuously from the level of 100 000 m³ in the early 2000's.

G. Wood-based panels

In Finland, the production of wood-based panels is dominated by plywood. In 2012, the year of the latest comprehensive production statistics, plywood accounted for 85 percent of the production and over 90 percent of the exports of wood-based panels. The remaining 15 percent of total production was divided in half between particle board and fibreboard, the production of which was predominantly directed to domestic market. In the case of particle board, the production has been

declining rapidly. Due to privacy reasons, official statistics on particle board production are no longer available.

The first half of 2014 was positive in plywood industry and the production of plywood grew 6 percent and exports by 9 percent year-over-year. The recovery of housing construction in several European countries boosted the exports of softwood plywood, while the exports of hardwood plywood were promoted by the demand in industrial applications, especially in transport industry.

In 2014, the plywood production was 1.16 million m³ in Finland. Of the total production, about 70 percent was softwood plywood (incl. LVL) and the remaining 30 percent hardwood (birch) plywood (at least the surface veneers hardwood). Last year 86 percent of the plywood production was exported and the main export market area was Europe. The markets outside Europe are still rather insignificant, especially in the case of softwood. In the case of value added birch plywood assortments markets in Asia, and especially the shipbuilding sector in South Korea, have been promising.

Outlook for years 2015 and 2016

In the first half of the year 2015, Finnish plywood exports to Asia, however, went down about 15 percent due to decreasing demand for birch plywood compared to the same period in last year. The drop was large especially in deliveries to South Korea. The export quantities decreased slightly also to Europe, where increasing uncertainties in economic development have affected demand. Exports of softwood plywood have shown a slightly better development in quantities. All in all, the total export volumes of plywood are forecasted to decrease by 2 percent in 2015 year-over-year terms and production quantities will go down by the same percentage.

In 2016, high uncertainties still remain even though the most recent forecasts for economic development and housing construction in Europe indicate a bit brightening market demand especially in the case of birch plywood. In 2016, the plywood exports and production are forecasted to increase 2–3 percent.

H. Pulp and paper

In 2014, paper production in Finland declined to 7.45 million tonnes, representing a reduction of 3 percent from previous year. The exports of paper decreased by 2 percent in comparison to 2013. Finnish paper production is highly export-driven, and these declines in production are due to poor demand for paper in the global market and, especially, in the euro area. Production of pulp and paperboard, however, did not change much from previous year. In 2014, the total production of pulp was 10.47 million tonnes, out of which two thirds were chemical pulp. While the overall production of pulp decreased by 0.5 percent, the production of chemical pulp decreased by 1 percent in comparison to 2013. Mainly due to reduction in exports of mechanical pulp, the total exports of pulp declined by 2 percent. While the pulp production was close to its full capacity in Finland, the reduction of production volumes, as well as decrease in exports, was caused by the maintenance shutdowns. About 62 percent of pulp is consumed domestically in order to produce paper and paperboard. The production of paperboard in Finland remained unchanged from the previous year, at 2.96 million tonnes. After the sharp increase in production in 2013, the paperboard capacity was almost fully in use. The export volumes of paperboard increased by 1 percent.

Finnish pulp and paper industry is highly dependent on international demand and exports. In 2014, 94 percent out of paper and paperboard production in Finland was exported. The main target for exports is European Union. However, it is noteworthy that the exports to Russia reduced sharply in 2014 due to the poor economic performance in Russia together with the economic sanctions. Paper exports to Russia fell by 13 percent and paperboard exports by 1 percent.

The export price development in 2014 was rather divergent. The export price of paper fell by 2 percent and the price of paperboard by 1 percent. The price of paper indicates that there is still overcapacity and/or over supply in markets, whereas the change in the price of paperboard can be explained by increasing capacity. By contrast, the export price of pulp increased by 6 percent. Finnish pulp exports consist mainly of bleached softwood pulp, and the price increase can be interpreted to indicate rather good demand in the global markets.



Sources: Finnish Forest Industries Federation and National Board of Customs

Outlook for 2015 and 2016

The outlook for Finnish pulp and paperboard for 2015 and 2016 is characterised by capacity increases. The production capacity of chemical pulp increases when two investments (in Varkaus by UPM and in Kymi by Stora Enso) are completed by the end of this year. However, the full impact in production cannot be seen until 2016. The pulp production is estimated to increase close to 1 percent in 2015 and by 2 percent in 2016. The increase in pulp production is profitable because of the good market demand for softwood pulp. Good international demand will also stimulate exports, and the export of pulp is anticipated to increase by 1 percent in 2015 and by a further 3 percent in 2016. Mainly this is driven by increasing exports of bleached chemical pulp, which consists most of the Finnish pulp exports. Export prices are estimated to increase only moderately in 2015 and 2016, by about 1 percent each year. Production of chemical pulp is experiencing kind of a boom in Finland, because of a large biorefinery investment in Äänekoski by Metsä Fibre is to be completed in 2017. Also, there are other preliminary planning stages to increase pulp production capacity in Finland.

The production capacity of paperboard in Finland increases significantly when a large-scale machine conversion and another smaller investment are completed at the end of this year. Paperboard production is estimated to increase by 2 percent in 2015 and 8 percent in 2016 reaching

3.26 million tonnes. Because most of produced paperboard in Finland is exported, the export volumes are estimated to increase by 3 percent in 2015 and further 7 percent in 2016 reaching the level of 3.09 million tonnes. However, because the paperboard capacity is increasing also in other producer countries, the development of export prices remains weaker. Export prices of paperboard are likely to increase by only one percent both in this year and in 2016.

The outlook for paper industry contrasts strongly with the outlook of pulp and paperboard. Demand for paper continues to decline in Europe, the key export region for Finnish paper. Also, there are no signs of a turning point in this trend, and due to the decreasing market demand for paper several paper machines have been shut down, which have curtailed production of paper. In Finland, the production of paper is anticipated to fall by 5 percent in 2015 and by 4 percent in 2016. In 2016, paper production will be 6.77 million tonnes. Due to decreasing demand in main market areas, the exports of paper will similarly fall by 5 percent in 2015 and by 4 percent in the following year. In 2016, paper exports will reach 6.37 million tonnes. The positive sign comes from the exports prices for paper. Due to the positive development in the first part of this year, export price is estimated to be up by 1 percent this year and remain stable in 2016.

I. Innovative wood products

Manufacturing of engineered wood products (EWP) is gaining pace in Finland. CrossLam Kuhmo Ltd opened its cross laminated timber (CLT) plant in the late 2014. It is the first CLT factory in Finland with the initial production capacity of 10 000 cubic meters annually. In three shifts, the production is planned to be 35 000–40 000 cubic meters annually. Stora Enso Plc is investing in the construction of a laminated veneer lumber (LVL) line in Varkaus. The line will enter production in the second quarter of 2016 with the planned production capacity of 100 000 cubic meters annually. In the summer of 2015, the new sawmill of Lappi Timber Ltd., which belongs to Keitele Group, reached full production in Kemijärvi. Half of sawmill's annual sawnwood production of 150 000 cubic meters is processed further in the new laminated beam plant on the same site. The increase in the production and use of EWPs is reflected in the emergence of firms providing services for further processing of EWPs into construction modules, for example.

In the Finnish Bioeconomy Strategy, one aim is to increase use of wood in construction. Largest growth potential is seen in large-scale constructions for housing as well as commercial and industrial uses. As manifested in the final report of the Strategic Programme for the Forest Sector by Ministry of Employment and the Economy, in the construction of multi-storey residential buildings, the market share of wooden buildings is envisaged to reach the aim of 10 percent in 2015. Modern wooden multi-storey residential buildings were also in the core of the 2015 Housing Fair held in Vantaa. The increase in the construction of large-scale wooden buildings is obviously promoting the production of EWPs in Finland and competition between different construction solutions is increasing. For example Stora Enso has boosted its own CLT system based - due to the lack of Finnish CLT production - on the products of Austrian origin. However, with investment in LVL production in Varkaus, Stora Enso will enter the markets of LVL construction solutions dominated by Metsä Group and its Kerto products.

As to the biorefineries, the development is divided. In some cases, such as the Joutseno wood-based biogas plant, the investments are found unprofitable in the current economic situation. In some other cases, such as the wood-based bio-oil production in Iisalmi, construction of the plant is postponed to unknown future. In some cases, such as the production of wood-based bio-oil in

Fortum CHP plant in Joensuu or the production wood-based biodiesel in UPM's plant in Lappeenranta, actual commercial production has already commenced.

The aforementioned biorefinery cases are mainly concentrated in the production liquid biofuels. Another story is the hype around modern pulp mills called bioproduct or bio pulp factories. Metsä Fibre, which belongs to Metsä Group, made the investment decision to construct a bioproduct factory in Äänekoski in the early 2015. The main product will be wood pulp (1.3 million tons annually), yet other biomaterials and bioenergy will also be produced. The construction work has started and the mill will enter production in 2017. In the early 2015, Finnpulp announced its plan to construct a pulp mill in Kuopio. The mill would produce 1.2 million tons of softwood pulp annually. Planning for the necessary environmental and construction permissions has started but actual investment decisions are still far ahead. Also in Kemijärvi, a project aiming at the construction of bio pulp mill is being run. The capacity of the mill would be 400 000 tons of softwood pulp. The project is being led by the Finnish Forestry Centre, yet the financing of the actual mill investment is still a question.

J. Housing and construction

According to the August 2015 update of the outlook by the Confederation of Finnish Construction Industries RT, the total construction in Finland is projected to decrease by 1.5 percent in 2015. However, if the construction will start as anticipated at the end of this year, the construction activity can grow as much as 2–3 percent in 2016. The Research Institute of the Finnish Economy (ETLA), however, estimated the total construction investments to decrease by 4 percent in 2015, with the emphasis of residential construction decrease of 1.8 percent. In 2016, ETLA anticipates the total construction to grow by 3 percent, and the residential construction 3.2 percent. In spite of the slightly different projections, the activity in construction markets in Finland remains weak, with the exception of renovation construction. This insight is also supported by the recent indicators of consumers and industries at September 2015 which show rather weak confidence for the general economic development.

Even though there are some positive signals of construction activity to be brace up, the household spending remains only moderate and the acquisition of durable goods as well as housing investments are easily postponed to the future as long as the economic situation of consumers remain poor, the unemployment rate is high and the economic performance in Finland has not any sign of recovery.

Construction in Finland 2014–2016f

	2014	2015e	2016f
Construction, change in volume, %	-3.7	-1.5	2.5
Renovation construction	2.5	2.5	2.0
Construction investments, change in volume, %	-4.5	-1.5	2.5
Building construction	-5.8	-1.7	3.1
Land and water construction	1.8	-0.5	0.0
Starting up of building construction production, mill. m³	31.7	32.2	32.0
Residential buildings	9.9	9.7	9.7
Free-time residential buildings	0.8	0.8	0.8
Commercial and office buildings	5.4	6.2	5.4
Public service buildings	2.8	3.4	3.4
Industrial and warehouse buildings	6.6	7.6	8.1
Agricultural buildings	3.7	2.2	2.2
Other buildings	2.5	2.2	2.3
Number of housing production start-ups	26 000	26 500	26 500
Non-subsidised	18 600	18 500	18 500
State-subsidised housing	7 400	8 000	8 000

Source: Confederation of Finnish Construction Industries RT, August 2015

5. TABLES

A. Economic Indicators

Key economic indicators	2014	2015f	2016f
Gross domestic product growth, %	-0.4	0.1	1.0
Consumer price index change, %	1.0	-0.1	0.7
Wage and salary earnings change, %	1.7	1.1	1.1
Unemployment rate, %	8.7	9.6	9.5
Current account surplus/GDP, %	-2.2	-1.0	-0.5
Industrial output change, %	-1.2	-1.4	1.5
Three month EURIBOR, %	0.2	0.0	0.0

Source: The Research Institute of the Finnish Economy 23.9.2015

B. Production and Trade

1. Forest Industry Production in Finland

Product	Unit 1000	2013	2014	2015e	2016f
Sawn softwood	m ³	10 400	10 900	10 600	10 800
Plywood	m ³	1 090	1 160	1 150	1 180
Particle board	m ³	105	105	105	105
Fibreboard	m ³	100	47	48	49
Mechanical pulp	ton	3 450	3 470	3 470	3 470
Chemical pulp	ton	7 070	7 000	7 070	7 280
Pulp, total	ton	10 520	10 470	10 540	10 750
Paper, total	ton	7 650	7 450	7 050	6 770
Paperboard	ton	2 950	2 960	3 020	3 260
Paper & Paperboard total	ton	10 600	10 410	10 070	10 030

Sources: Finnish Forest Industries Federation (2013–2014)

Natural Resources Institute Finland (wood products, pulp and paper 2015–2016)

2. Exports of Finnish Forest Industry Products

Product	Unit 1000	2013	2014	2015e	2016f
Sawn softwood	m ³	7 140	7 520	7 500	7 600
Plywood	m ³	920	998	980	1000
Particle board	m ³	24	22	17	17
Fibreboard	m ³	46	43	44	44
Mechanical pulp	ton	373	335	330	330
Chemical pulp	ton	2 700	2 670	2 720	2 810
Pulp, total	ton	3 073	3 005	3 050	3 140
Paper, total	ton	7 152	7 000	6 630	6 370
Paperboard	ton	2 767	2 800	2 890	3 090
Paper & Paperboard, total	ton	9 919	9 800	9 520	9 460

Sources: National Board of Customs and Finnish Forest Industries Federation (2013, 2014),

Natural Resources Institute Finland (wood products, pulp and paper 2015–2016).

3. Imports of Forest Industry Products

Product	Unit 1000	2013	2014	2015e	2016f
Sawn softwood	m ³	331	350	350	380
Plywood	m ³	92	86	84	84
Particle board	m ³	98	93	97	97
Fibreboard	m ³	159	169	167	167
Pulp, total	ton	410	403	400	400
Paper, total	ton	189	176	170	170
Paperboard	ton	261	249	250	250
Paper & Paperboard, total	ton	450	425	420	420

Sources: National Board of Customs and Finnish Forest Industries Federation (2013, 2014),
Natural Resources Institute Finland (wood products, pulp and paper 2015–2016).