



Financial needs in the agriculture and agri-food sectors in Finland



June 2020



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Glossary and definitions

Expression	Explanation
Agri-food survey	Survey of the financial needs of EU agri-food processing enterprises carried out in mid-2019 in the framework of study 'EU and Country level market analysis for Agriculture' and based on respondents financial data from 2018.
CAP	Common Agricultural Policy
COSME	EU Programme for Competitiveness of Enterprises and SMEs
EAFRD	European Agricultural Fund for Rural Development
EaSI	EU Programme for Employment and Social Innovation
EC	European Commission
EIB	European Investment Bank
EIF	European Investment Fund
ELY Centre	Centre for Economic Development, Transport and the Environment
ESIF	European Structural and Investment Funds
EU 24	The 24 EU Member States covered by the <i>fi-compass</i> 'EU and Country level market analysis for Agriculture': Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.
EU 28	All EU Member States: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, The United Kingdom.
EUR	Euro
FADN	Farm Accountancy Data Network
<i>fi-compass</i> survey ¹	Survey on financial needs and access to finance of 7 600 EU agricultural enterprises carried out by <i>fi-compass</i> in the period April-June 2018 and based on respondents financial data from 2017.
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
ha	Hectare
ICT	Information and Communication Technology
Ltd.	Limited
M&A	Mergers & Acquisitions

¹ *fi-compass*, 2019, 'Survey on financial needs and access to finance of EU agricultural enterprises', Study report, <https://www.fi-compass.eu/publication/brochures/survey-financial-needs-and-access-finance-eu-agricultural-enterprises>.



NPL	Non-performing loans
Oyj	Julkisen osakeyhtiö / Public Stock Company
RDP	Rural Development Programme
SAFE	Survey on the Access to Finance of Enterprises
SME	Small and medium-sized enterprise
SO	Standard Output
UAA	Utilised Agricultural Area



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EXECUTIVE SUMMARY

This report gives an insight into agriculture and agri-food financing in Finland by providing an understanding of investment drivers, financing supply and financing difficulties, as well as on the existing financing gap.

The analysis draws on the results from two comprehensive and representative EU level surveys carried out in 2018 and 2019, namely the *fi-compass* survey on financial needs and access to finance of EU agricultural enterprises and a survey of the financial needs of EU agri-food processing enterprises. The report does not take into account the impact of the ongoing COVID-19 health crisis and/or the effect of any new support scheme being set-up by the Member State and/or changes in legal basis and/or policies at European level to mitigate the crisis, as surveys and data available covered a period prior to its outbreak. This would need to be subject to further analyses by interested stakeholders, administrations and/or researchers.

Financing gap for the agriculture sector in Finland

Investments in the Finnish agriculture sector are far higher than in the EU 28², but they are on a downward trend. The level of investment in Finnish agriculture in 2018 was 75% of its 2014 level. This decrease is partly explained by the high costs of production and low selling prices that Finnish farms have experienced in recent years. In addition, the hot and dry weather during the 2018 growing season reduced the total yield for some crops, thereby reducing the capacity to invest for some sub-sectors. The key drivers of investment for Finnish farmers is the modernisation and upgrading of the production process, as well as purchase of land, notably in the livestock and poultry sub-sectors. Working capital requirements, to cover the high costs of production, are significant and also lead to demand for finance.

Public sector interventions, both EU and nationally funded, are supporting farmers' incomes and stimulating investments in the Finnish agriculture sector. Direct payments from the Common Agricultural Policy (CAP) contribute to farmers' income and increase farmers' repayment capacity, thereby increasing their access to finance. Banks provide short-term loans for working capital purposes against these payments as collateral. Investment support from the 2014-2020 Rural Development Programme (RDP) has resulted in more, and higher volumes, of investment. Total support approved for investments, including start-up support for young farmers, amounted to over EUR 600 million for the period 2014-2019, supporting a total investment volume going beyond EUR 1 billion.

The provision of finance to the agriculture sector is concentrated within four banks, which together control 95% of the market. A range of financial products are available to farmers, including working capital and investment loans. The total outstanding loan volume to the Finnish agriculture, forestry and fishery sectors exceeded EUR 1.7 billion in 2018, of which almost 90% is directed to the agriculture sector.³ Outstanding loans have been increasing since 2013. This demonstrates Finnish banks' interest in the sector, which they consider both attractive and important. The increase of loan volumes has also been stimulated by the low overall levels of non-performing loans (NPLs) of Finnish banks. The average loan amounts to the agriculture sector have been increasing in recent years due to the structural changes taking place in the sector, in which enterprises are increasing their size.

Nevertheless, a financing gap of between EUR 47 million and EUR 162 million was identified for the Finnish agriculture sector. It is mainly medium-sized farms⁴ who face difficulties accessing finance and the gap is concentrated on medium and long-term investment lending⁵. However, some constraints also exist with reference to short-term loans and credit lines, which are rejected by banks more often than long-term loans, although this translates into a lower financing gap due to their lower average amount. Even though the overall

2 When comparing the share of Gross Fixed Capital Formation to the value of Gross Value Added

3 According to Finnish banks, about 10% of their agriculture portfolio is for forestry. The fishery sector in Finland does not constitute a major part of the national economy, however it plays a locally important role in many municipalities.

4 The *fi-compass* survey, on which the results are based, divided farms in three size categories: small (<20 hectares), medium-sized (20-100 hectares), large (>100 hectares).

5 The *fi-compass* survey defined short-term loans: <18 months, medium-term loans: 18 months – 5 years, long-term loans: >5 years maturity.



gap is low compared to other EU 24 Member States, access to finance for some viable farming enterprises in Finland might still be a challenge.

Rejection levels are relatively low in Finland. Most loans that are rejected are due to that the investment risks are considered too high by banks or because the farm is seen as economically unviable. The small and varying economic profit margins of Finnish farmers are also a reason for loan rejections, as this increases banks' risk. Limited competition on the agriculture finance market further explains some rejections, as banks can be selective in choosing their clients. Furthermore, banks limit their exposure to specific sectors in order to avoid the concentration of risk, which may stop some viable farms from accessing finance even though they are considered creditworthy. In addition, some Finnish farmers, even if few, are discouraged from approaching banks due to the fear of being rejected a loan, further contributing to the financing gap.

Young farmers sometimes face difficulties in obtaining the finance required which reduces investments from this segment of the sector. Young farmers often seek to grow from small or medium-scale operations to large scale-operations, in order to benefit from economies of scale and to thus increase their competitiveness. As they often have high levels of debt from previous borrowing, stemming from the take-over of the farm, their capacity to take on additional debt is limited.

RECOMMENDATIONS

The following recommendations for further actions related to financial instruments, including under the EAFRD, could be considered in order to increase Finnish farmers' access to finance:

- Based on the analysis, young farmers with ambitious investment projects face obstacles in accessing finance. A financial instrument providing risk coverage to financial institutions, in the form of a guarantee or a loan risk-sharing fund, might improve young farmers' possibilities of obtaining the financial resources they need. The opportunities offered by the new legal CAP framework, for example related to the eligibility of the purchase of land for young farmers, the easier combination of grant, financial instruments and interest rate subsidies, as well as stand-alone working capital support, might provide further help.
- The use of financial instruments could be considered also for the wider segment of medium-sized enterprises, which sometimes face obstacles in accessing finance. This segment represents the largest farm enterprise group in Finland and is the one which can lead the development of the sector in the future, whereby securing access to finance for this group is of importance. Considering that the interest rates faced by farmers are relatively high, a risk-sharing loan instrument might be considered, as it would combine risk coverage for banks with a substantial reduction of interest rates.
- The set-up of one or more instruments, with the launch of competitive procedures to select the partner financial institutions, might stimulate the interest of new banks to operate in the sector, reducing market concentration.

Financing gap for the agri-food sector in Finland

Investments in the agri-food sector are on an increasing trend. The Finnish agri-food sector is the fourth largest industrial sector in the country, in terms of output and value added. The food industry had a turnover of EUR 10.7 billion in 2018 and the value added from food and beverages manufacturing was EUR 2.5 billion in 2017, of which 43% came from the dairy and meat processing sub-sectors. Investments in tangible goods by Finnish food and beverages producers have increased constantly in recent years, peaking at EUR 530 million in 2017. Most investments were made in machinery and equipment.

For the agri-food sector, the study identified the following main drivers of demand for finance:

- **Capacity expansion**, with bakeries, dairies and slaughterhouses, in particular, investing in highly automated equipment. Increased technological innovation has also helped to improve cost efficiency in production and the real-time control of production processes.
- **Inventory and working capital needs**, in order to cover daily operational costs.
- **The development of new products**, particularly with the objective of increasing value added.



- **Hiring and training employees**, to support the development of the sector.

The Finnish financial sector is sound and no significant constraints in supplying finance emerged from the analysis. There are no specific financial products targeting the agri-food sector, but the standard business loans are available to the same extent as for other economic sectors. The low levels of NPLs in the Finnish financial sector and the sound financial standing of financial institutions encourages lending. This has translated into increasing levels of outstanding loans to the agri-food sector over the last years.

Public support measures are focussing on SMEs and start-ups, and provide business promotion tools, such as innovation funding, grants and guarantees. The EAFRD also finances the investment needs of the agri-food processors, including on-farm processing.

Based on the agri-food survey, no financing gap has been identified for the Finnish agri-food sector. In fact, based on the survey, rejection levels for all loan maturities are relatively low in Finland. In addition, no enterprises reported to have refrained from applying for finance due to the fear that their application would be rejected.

While interviewees have highlighted the high efficiency of the Finnish financial sector, as well as the positive results of the public support to SMEs and start-ups in contributing to their access to finance, and while no large-scale structural impediments have been identified, **interviews with agri-food enterprises and banks indicated that, particularly for agri-food start-ups, a gap may still exist.** This is due to their often lack of collateral and insufficient levels of own equity. In addition, these enterprises sometimes lack the technical knowledge necessary to prepare business plans in order to demonstrate that the investment will contribute to increased future business growth. **Also mature agri-food companies seeking expansion may face finance constraints**, if the value of their own assets is low.

RECOMMENDATIONS

The following recommendations for further actions related to financial instruments, including under the EAFRD, could be considered in order to increase access to finance for agri-food businesses:

- Despite the overall efficiency of the Finnish financial market, agri-food start-ups may face obstacles in accessing finance. A specific financial instrument for the agri-food sector providing risk coverage to financial institutions (in the form of a guarantee or a loan risk-sharing fund) might increase their probability to obtain the financial resources they need. The opportunities offered by the new EAFRD legal framework, for example related to the easier combination of grant and financial instruments support, might provide further help.



1. INTRODUCTION

Objective

This document belongs to a series of 24 country reports and presents an assessment of the potential financing gap for the agriculture and agri-food sectors in Finland. The assessment is based on the identification and evaluation of the supply of and demand for financing, on the one hand, and on the quantification of the currently unmet demand for financing for the two sectors, on the other hand. This report aims to contribute to an understanding of the potential need for continuing currently operating financial instruments, or the creation of new or additional ones, supported by the European Agricultural Fund for Rural Development (EAFRD).

Approach

To conduct an analysis of the potential financing gap in the agriculture and agri-food sectors, the study, under which this report is prepared adopts the following three-step approach:

1. Assessment of the number of farms/firms participating in the credit market and analysis of the dynamics of their demand.
2. Mapping of the sources of finance and examination of the dynamics of supply of credit.
3. Assessment of the potential existence of a financing gap, whereby parts of the demand cannot be satisfied by the existing supply but could benefit from financial instruments.

Per definition, a financing gap (for a specific sector) arises from unmet financing demand from economically viable enterprises (operating in the same sector). This unmet demand includes two major elements:

- (i) lending applied for (by the viable enterprises), but not obtained; as well as
- (ii) lending not applied for (by the viable enterprises) due to expected (by the same enterprises) rejection of the application (by a financial institution).

The analysis draws on the results from two comprehensive and representative EU level surveys carried out in 2018 and 2019, namely the *fi-compass* survey on financial needs and access to finance of EU agricultural enterprises and a survey of the financial needs of EU agri-food processing enterprises. The latter survey was undertaken as part of this study. The analysis is further elaborated by desk research and enriched with secondary data from EU and national data sources.

The financing gaps for the two sectors are calculated using data from the above-mentioned surveys and additional data and statistical indicators from Eurostat. The calculated financing gaps for the two sectors are independent from each other. The report also outlines the drivers of unmet demand for finance as identified from desk research, and from interviews with key stakeholders from the agriculture and agri-food sectors, government representatives, and financial institutions, and as identified by two focus groups, one for each sector. Information on the supply side of finance was obtained from interviews with nationally or regionally operating financial institutions.

The report does not take into account the impact of the ongoing COVID-19 health crisis and/or the effect of any new support scheme being set-up by the Member State and/or changes in legal basis and/or policies at European level to mitigate the crisis, as surveys and data available covered a period prior to its outbreak. This would need to be subject to further analyses by interested stakeholders, administrations and/or researchers.

Report structure

This report is structured in two parts, each focused on one of the sectors of interest: Part I covers financing for the agriculture sector; and Part II discusses financing for the agri-food sector. Each part is structured in five sections: an overview of the market, an analysis of the demand for financing, an analysis of the supply of finance, an assessment of the financing gap, and conclusions and recommendations.



2. PART I: AGRICULTURE SECTOR

2.1. Market analysis

Key elements on the Finnish agriculture sector

- Agricultural output accounted for 2.5% of Finland's Gross Domestic Product (GDP) in 2018 and the sector employed 3.2% of Finland's total workforce.
- The value of the agricultural production was estimated at EUR 4.0 billion in 2018; however, there has been limited growth since 2015.
- Animal production accounted for 63% of agricultural output in 2017, while crop production had a share of 32%.
- There were 49 720 farms in Finland in 2016, of which 66% operated on an Utilised Agricultural Area (UAA) between 5 and 50 ha.
- 87% of Finnish farms are family-run, while 11.4% are corporations. Co-operatives are 1.6% of all businesses.
- Although just 8.8% of all farmers were categorised as young farmers (under 40 years old) in 2016, the overall age distribution of Finnish farmers is more balanced than it is for other EU Member states.
- Agricultural cooperatives play an important role in Finland, particularly in milk and meat production.
- Agricultural income has been below the average of other economic sectors since 2010.
- While agricultural productivity is on the rise, profitability is declining due to increasing input costs and farmers' declining share of retail prices.
- Finland has a negative agriculture trade balance with other EU Member states, but a nearly balanced trade with non-EU countries – Russia and Norway are the country's largest trade partners outside the EU.

While the Finnish agriculture sector⁶ only accounts for a small part of the economy, it is a socially important sector. Although the share of agricultural output in Finland's Gross Domestic Product (GDP) was only 2.5% in 2018,⁷ agriculture employed 3.2% of the country's total workforce.⁸ The sector had a total labour input of 80 900 workers in 2017. In 2016, young farmers (under 40 years old) accounted for only 8.8% of the total workforce, while older farmers (over 55 years old) accounted for 23.7 %.⁹ Most farmers are aged between 40 and 55 (67.5%).

In recent years, the value of agricultural production has stagnated. In 2015, the value of production dropped by almost 8% to EUR 3.8 billion, due to cold weather, sleet and night frost that occurred during the growing season. It then remained at the same level until 2017, before increasing to an estimated EUR 4.0 billion in 2018 (a change of 4% compared to 2017). While productivity is generally on the rise, the cereal sub-sector output declined sharply in 2017 (-13.4%), driven mainly by the farm's decision to plant less barley (-17.8%) and oats (- 11.6%).¹⁰ In 2017, factor income in agriculture shrunk by 10.1% compared to the previous year, driven partially by an increase in input costs of 4.1%.¹¹

In 2017, animal production accounted for 63% of output, with the main contributors being cattle and dairy production, followed by pigs and poultry. Crop production accounted for 32%, with vegetables and horticultural products being the main contributors, followed by cereals¹².

6 A01 – Crop and animal production, hunting and related service activities.

7 World Bank, December 2019, World Development Indicators.

8 Eurostat, 2019 Edition, Agriculture, Forestry and Fishery Statistics.

9 Eurostat, *ibid*.

10 Both are very sensitive to climate change, particularly in terms of drought or excessive rain early in the season, as well as high temperatures during the growing period.

11 Eurostat. Based on latest data.

12 Eurostat.



Climate change poses challenges to Finnish agriculture production. Rainfalls are expected to increase, particularly outside the growing season, and peaks of high temperatures are foreseen. This will have negative effects on the crop production. At the same time, Finland has rich water resources in relation to the population. Thus, irrigating crops will not be a challenge for Finnish farmers. Finnish sustainably produced horticultural products might even have increasing opportunities on global markets in the future.

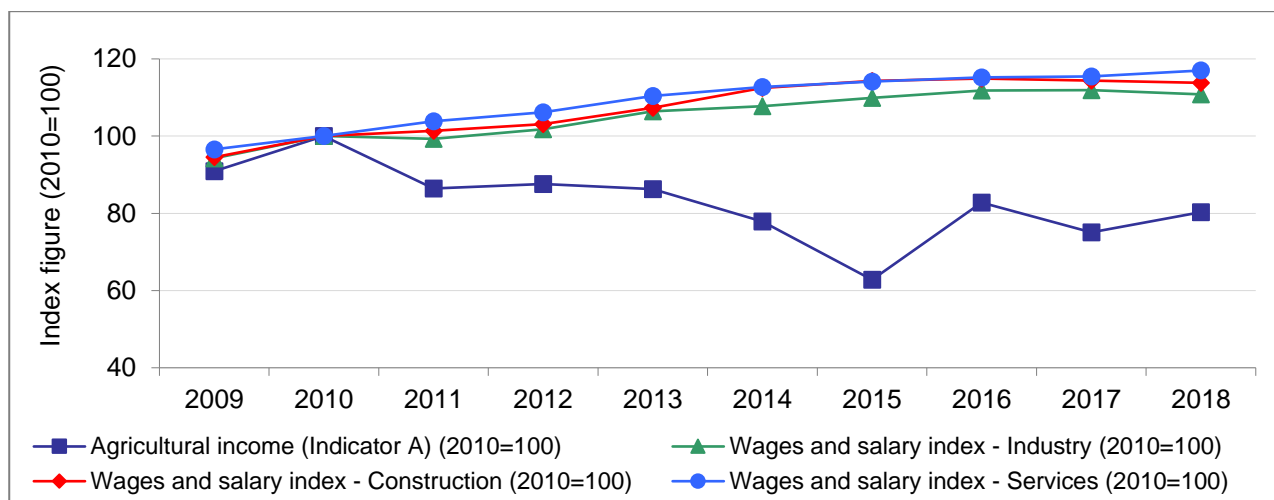
In 2016, 66% of the farms had an Utilised Agricultural Area (UAA) between 5 and 50 ha. These farms also account for most of the agricultural land utilised. 29.97% of all farms had an Utilised Agricultural Area (UAA) above 50 ha.¹³ The remaining 4.03% of farms are very small-sized farms (under 5 ha) that are often characterised as part-time holdings. Usually, these farmers have important incomes from non-farm activities.¹⁴ Between 2004 and 2012, the number of farms farming between 50 and 100 ha grew by 4%, while those farming more than 100 ha increased by 74%.¹⁵

Agricultural cooperatives play an important role in Finland and they are particularly dominant in the milk (97% market share, in terms of production) and meat (80%) sub-sectors.¹⁶ The largest cooperatives include *Metsä Group* (forestry), *Pohjola Bank* (forestry), *HKScan Ltd.* (meat), *Valio Ltd.* (dairy) and *Atria Ltd.* (meat).

Finland has an agricultural trade deficit, particularly with EU countries. EU countries account for 88% of Finnish imports but only 59% of its exports. The largest non-EU agricultural trade partners are Russia and Norway. In reference to these countries, the trade balance is narrowly in Finland's favour.

Over the last decade, agricultural income has remained below 2010 levels. While wages and salaries in other parts of the economy grew constantly during this period, income in the agriculture sector continued to fall until 2015, before stabilising at around 80% of its 2010 level in 2016-2018. This fall was due to the very hot and dry weather conditions that negatively impacted the sector during this period. The agriculture sector has also been subject to much higher income fluctuations than other parts of the economy, during this period (Figure 1).

Figure 1: Evolution of agricultural income in Finland compared to wages and salaries in other sectors, 2009-2018



Source: European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland.

¹³ European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland.

¹⁴ For the forthcoming analysis in this report, where the *fi-compass* survey results will be analysed, it is important to consider the particular farm structure of Finland. For the analysis, the survey divided farms into small-sized farms (under 20 hectares), medium-sized farms (20-100 hectares), and large-sized farms (over 100 hectares).

¹⁵ Statistics Finland, April 2014, 'Average size of farms has grown in the 2000s', https://www.stat.fi/til/mmtal/2012/mmtal_2012_2014-04-03_tie_001_en.html.

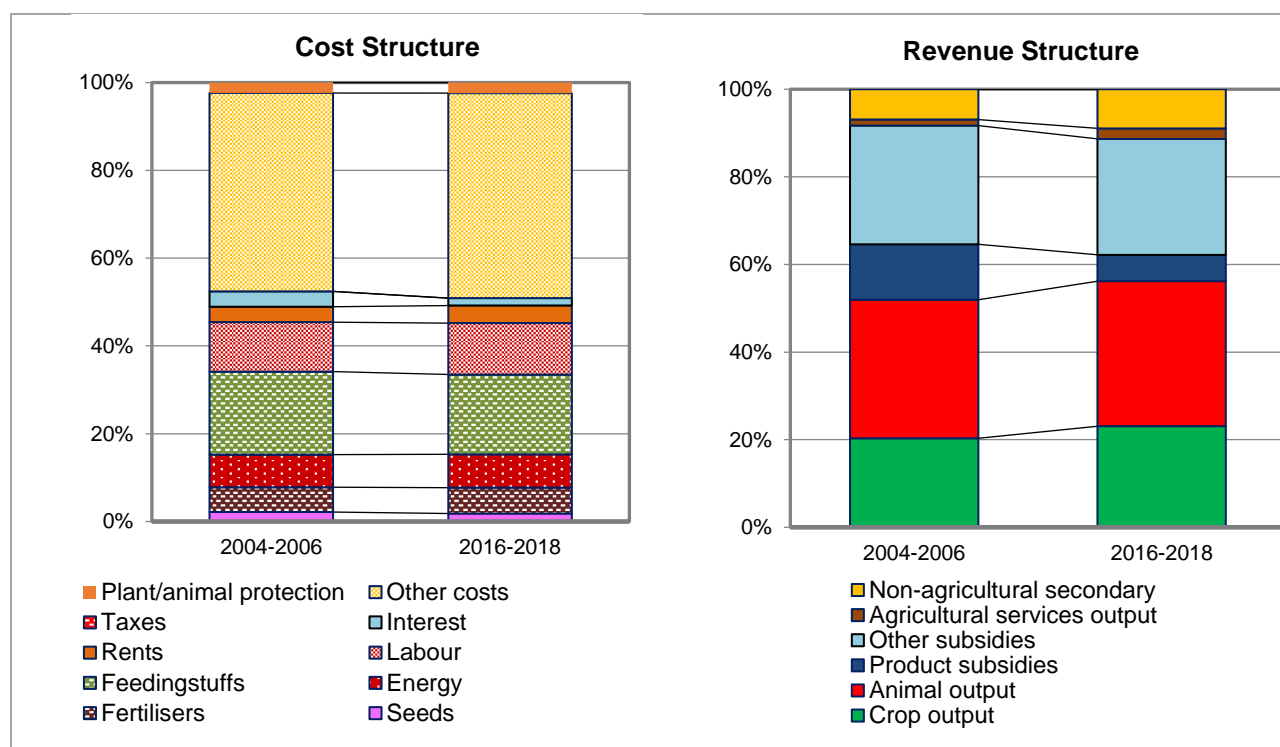
¹⁶ Pellervo Coop Centre (a service and a lobbying organisation for all Finnish cooperatives and a forum for cooperative activities), <https://pellervo.fi/english/cooperation-finland/>.



The agricultural cost structure over the last 15 years has largely remained the same (

Figure 2). Comparing the 2004-2006 and 2016-2018 periods, it can be said that while interest rate costs have slightly decreased and other costs have slightly increased, the remaining cost components have remained fairly stable. On the revenue side, the share of the revenues from animal and crop output has increased slightly, while revenue from product specific support has decreased, which is most likely due to the Common Agricultural Policy (CAP) reforms.

Figure 2: Agricultural income – only cost and revenue structure in Finland, 2004-2018



Source: European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland.

Since 2011, input prices have been rising more than output prices, increasing pressure on farms' economic margins. In addition, over the last three years, the consumer price index for food products was below the consumer price index for all goods in 2018.

Statistical factsheet Finland, 2019

More data on agriculture indicators from Finland can be found in the [Statistical factsheet for Finland 2019](#) of the Directorate General for Agriculture and Rural Development, Farm Economics Unit and in the Annex A.6.



2.2. Analysis on the demand side of finance to the agriculture sector

This section describes the drivers of demand for finance in the agriculture sector and analyses its met and unmet demand. It seeks to identify the main reasons for farm enterprises to request financing and the agricultural sub-sectors showing the largest need for finance. The section also provides an analysis of the type of producers, which face more constraints in accessing credit. The analysis of the demand for agricultural finance is based on the findings from the *fi-compass* survey results of 327 Finnish farms, as well as on interviews with key stakeholders from the agriculture sector, combined with information obtained from the Farm Accountancy Data Network (FADN).

Key elements on finance demand from the agriculture sector

- The agriculture sector shows a significantly higher level of investments than other EU 28 countries. Investments in GFCF¹⁷ as a share of GVA stood at 87% in 2018 and decreased factor income in recent years.
- The main drivers of the demand for agriculture finance are (i) Investment in new machinery; equipment or facilities, (ii) working capital; and (iii) the purchase of land.
- Horticulture farms are most reliant on external debt, while arable crop farms have the lowest dependency on external financing according to FADN data.
- The main difficulties faced by Finnish farmers are related to the cost of production, low sales prices and access to land.
- The total unmet demand for finance was estimated at EUR 237 million in 2017.
- When banks reject loan applications, this mostly relates to short-term loans and credit line applications.
- The loan applications of young farmers and new entrants are rejected more often due to their higher business and financial risks; in addition, these farmers often lack collateral.
- The unmet demand is due to the following problems that constrain farmers' access to finance: (i) limited economic viability of the enterprises, (ii) absence of collateral (particularly for young farmers), (iii) insufficient management skills, (iv) restrictive bank policy, potentially due to the concentration of the agriculture financial market, and (v) lack of credit history.

2.2.1. Drivers of total demand for finance

While the Finnish agriculture sector shows a more positive attitude towards investment than the EU 28, Gross Fixed Capital Formation (GFCF) in the sector has been decreasing in recent years. Gross Value Added (GVA) in Agriculture, Forestry and Fishing in Finland stood at EUR 1.1 billion, as of January 2018 (Table 1). Meanwhile, investments in GFCF as a share of GVA stood at 87% in 2018, compared to an average of only 31.2% for the EU 28.¹⁸ Thus, Finnish farmers are investing considerably more into their farms than the average EU 28 farmer.

¹⁷ The GFCF measures the value of acquisitions of new or existing fixed assets by the business sector, minus disposals of fixed assets. GFCF is a component of the expenditure on gross domestic product (GDP), and thus indicates how much of the new value added in the economy is invested rather than consumed. Fluctuations in this indicator can provide pointers towards business activity, business confidence and the pattern of economic growth. In times of economic uncertainty or recession, typically business investment in fixed assets will be reduced, since it ties up additional capital for longer periods, with the risk that it will not pay itself off. Conversely, in times of robust economic growth, fixed investment will increase across the board, because the observed market expansion makes it more likely that such investment will be profitable in the future.

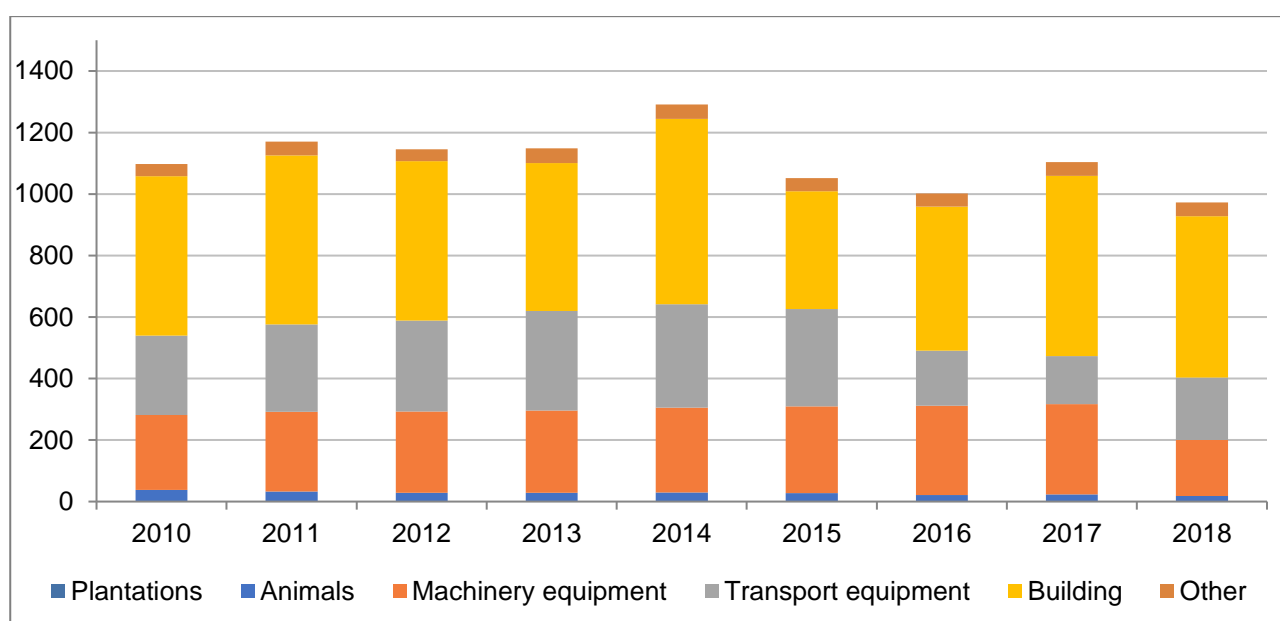
¹⁸ Eurostat, 2019.

**Table 1:** Overview of agriculture GVA and GFCF developments, 2013-2018, in EUR billion

	2013	2014	2015	2016	2017	2018
GVA Agriculture (basic price)	1.3	1.3	1.1	1.2	1.1	1.1
GFCF	1.2	1.3	1.1	1.0	1.1	1.0
GFCF over GVA	90%	101%	97%	87%	97%	87%

Source: Author's calculations based on Eurostat – economic accounts for agriculture, 2019 figures.

In recent years, agricultural GFCF in Finland has shown a volatile, decreasing trend, hovering around EUR 1 billion (Figure 3). This is in line with the decrease in Finnish agricultural income over a similar period, with income in 2018 being only 80.3% of 2010 levels.¹⁹ In 2018, total GFCF was slightly lower than in 2016 (97% of 2016 levels), but substantially lower than in 2014 (75% of 2014 levels).

Figure 3: Gross Fixed Capital Formation in the Finnish agriculture sector, 2010-2018, EUR million

Source: Eurostat – economic accounts for agriculture, 2019.

Investments in buildings are much higher than those in machinery and transport equipment. Since 2017, the share of investments in buildings as a proportion of total GFCF has increased, while the share in machinery and transport has decreased.

Three main factors drive the demand for finance in Finland's agriculture sector (Figure 4):

- (i) the need for investments in new machinery, equipment and facilities, in order to upgrade the production process;
- (ii) the need for working capital; and
- (iii) the purchase of land.

Most loans received by Finnish farmers were used for investments in facilities, machinery and equipment. According to the *fi-compass* survey, 64% of Finnish farmers used loans for this purpose. This is in line with the shares of GFCF shown in Figure 3 and discussed above.

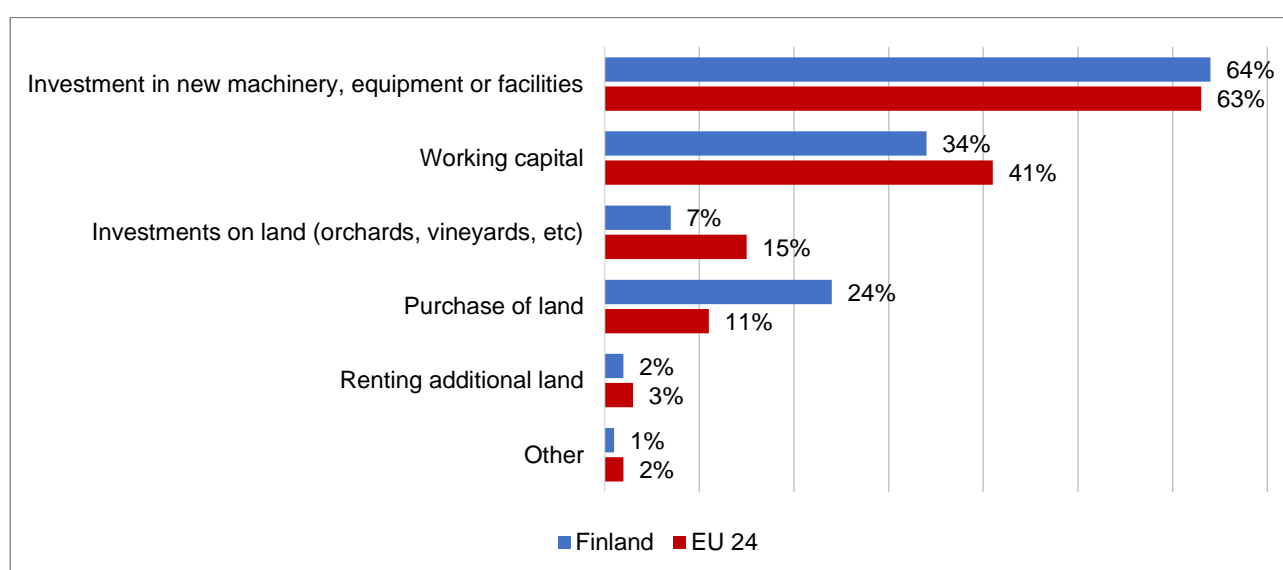
¹⁹ European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agri-statistical-factsheet-fi_en.pdf.



Livestock farmers pointed out in interviews that they have focused on renovation and construction measures on their farms in recent years. This has included underground drains, cow stables and grain drying facilities. They also invested in animal sheds, but to a lesser extent. While investments in machinery and equipment still took place, they were at much lower levels compared to those in buildings. Investments in machinery are particularly common among plant and beef production farms.²⁰ Farmers also said that investments were most often made to upgrade existing production equipment and machinery, rather than to expand agricultural output or to meet new production requirements.²¹

Given the long and cold winters in Finland, many horticulture farmers have also expanded production by investing in greenhouses that allow them to grow berries and vegetables for longer periods.²² Most horticultural farmers in Finland grow berries with strawberries and blackcurrants being the most widely grown ones, and the production of raspberries is currently on the rise²³. Investments covered the purchase and the planting of new bushes and the replacement of old ones, irrigation systems, and at a lower level, the purchase of equipment and machinery.

Figure 4: Purpose of bank loans in the agriculture sector in 2017



Source: fi-compass survey.

One-third of the Finnish farmers (34%) approach banks for loans to cover their working capital needs.

Working capital loans are able to cover the operating expenses of the businesses, as the costs for intermediate inputs have increased in recent years (by 4.1% in 2017 and 1.5% in 2018). Working capital demand is defined by cost items such as feeding stuff and energy, followed by other goods and services. The prices for feeding stuff increased by 5.9% over the 2017/2018 season. Energy costs slightly decreased (-1.8%), but prices for seeds and plantings stocks increased by 6%.²⁴

Finnish farms used loans for the purchase of land (24%) more than twice as often as the EU 24 (11%).

Livestock farmers, including pig and poultry farmers, purchased land slightly more often than plant production farmers, according to the farmers interviewed by us. Access to land is a particular concern for these two sub-

²⁰ According to our interviews with banks, a farmers' association and some of their members, other sector stakeholders, and the two focus groups.

²¹ Interviews with Farmers' Associations and members, 2019.

²² Interviews with Farmers' Associations, 2019.

²³ Between 2012 and 2016 raspberry production in Finland doubled to a total of 1 312 tons in 2016. In 2017, the production decreased to 1 071 tons, still the second highest output recorded in the last 50 years. Source: tilasto, Finland: Raspberries, production quantity (tons), 2017. Available at: <https://www.tilasto.com/en/topic/geography-and-agriculture/crop/raspberries/raspberries-production-quantity/finland>.

²⁴ European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland.



sectors, as they require arable land for both animal feed and as a place for outsourcing the animals' by product and using it as fertiliser.²⁵ Farmers said that while the purchase of arable land has remained stable in recent years, the prices for land vary between regions. The prices of agricultural land is much higher in Western and Southern Finland than in Eastern and Northern Finland, where more purchases were made. In interviews, farmer associations' and their members said that access to arable land is quite challenging, especially in the regions where land prices are higher, and especially for new entrants.²⁶

Financial needs vary across the different sub-sectors. In grain-based agriculture, investments are largely machine-oriented. The loans for machinery have shorter maturities and most of the financing is already provided through leasing (by leasing companies, including leasing companies owned by banks). Given their higher levels of investment, loans to livestock farmers typically have longer maturities, especially in the dairy sub-sector. Banks pointed out that the majority of farm ownership changes in Finland are carried out 'inside' the family (i.e. from 'parent to child'). In those cases, finance needs are substantial as the entire farm will have to be purchased. The maturities also tend to be longer than what normally is available in the EU markets.

The horticulture sub-sector has the highest dependency on external financing (Table 2). Horticulture farms have the highest proportion of liabilities as a share of total assets, reflecting their relative dependency on external debt, while arable crop farms have the lowest proportion. Horticulture farms also have the highest proportion of short-term liabilities. As outlined above horticultural enterprises in Finland produce both outdoors and in greenhouses. Interviews with farmer's associations suggested that the high liabilities could be due to the high up-front costs of greenhouses, including irrigation needs. In terms of short-term liabilities, those could be caused by the strong seasonal and annual variations of the prices paid to farmers. For example, the prices of onions, carrots, strawberries and apples were considerably lower in 2017 than in 2016,²⁷ meaning that many farmers relied on working capital to close the gap. In terms of total assets, granivore farms are by far the largest.

Table 2: Assets and liabilities by type of farming, per farm, Finland, 2017²⁸

Type of farming	Total assets, EUR	Total liabilities, EUR	Short-term liabilities, EUR	Medium and long-term liabilities, EUR	Liabilities to assets ratio, %	Short-term to total liabilities ratio, %	Number of farms
Field crops	364 510	69 960	4 028	65 932	19.2%	5.8%	20 110
Horticulture	564 923	342 220	119 212	223 008	60.6%	34.8%	1 500
Milk	614 143	211 258	5 222	206 035	34.4%	2.5%	8 220
Other grazing livestock	630 260	223 156	9 387	213 768	35.4%	4.2%	3 560
Granivores	1 068 033	253 555	42 888	210 667	23.7%	16.9%	1 080
Mixed	675 468	162 723	5 764	156 959	24.1%	3.5%	1 600
All farms	488 686	137 387	10 811	126 575	28.1%	7.86%	36 070

Source: FADN, 2017, author calculation.

Finnish farmers face relatively greater challenges than farmers in other EU 24 Member States, with respect to reduced profits over time. This is despite enjoying a better overall access to market channels (Figure 5). In the *fi-compass* survey, 76% of the Finnish farmers said that they faced difficulties due to high production costs, while 55% stated problems due to low sales prices of their products. This is significantly

25 Interviews with farmers and farmers' associations, 2019.

26 Interviews with farmers and farmers' associations, 2019.

27 Jyrki Niemi and Minna Väre, 2018, Agriculture and food sector in Finland.

28 2017 data are the latest data available on FADN database.

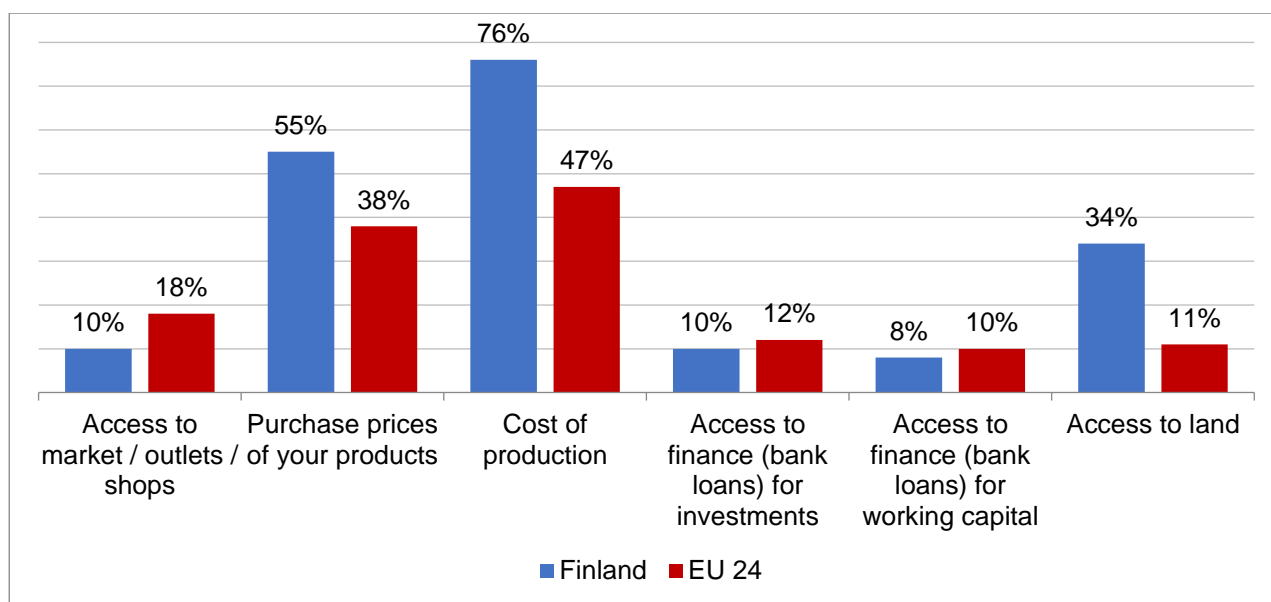


higher than the EU 24 averages. As outlined above, input prices in Finland increased by 4.1% from 2016-2017 and by 1.5% from 2017-2018, underlining Finnish farmers' concerns.²⁹

The third most significant difficulty identified is access to land. It was mentioned as an issue for 34% of survey respondents. Against this background, farmer associations pointed out that given Finland's Northern location, the land suitable for agriculture is limited. In recent years, agricultural land and wetlands have decreased, while forestland and urban land have increased.³⁰ Despite the difficulties in accessing land, almost a quarter of the Finnish farmers reported to have used a bank loan in the previous years for the purchase of land.

While access to finance is less of a challenge for Finnish farmers than for the EU 24, it is still a significant problem compared to neighbouring countries. In the *fi-compass* survey, 10% of Finnish farmers responded that they faced challenges in obtaining finance for investments. While this is lower than the EU 24 average, it is significantly higher than the neighbouring countries of Sweden and Denmark, where only 1% and 6% of all farmers, respectively, reported similar difficulties. With regards to access to finance for working capital, 8% of Finnish farmers reported problems, compared to only 1% for Sweden and 4% for Denmark.

Figure 5: Difficulties experienced by farmers in 2017



Source: *fi-compass* survey.

As in the rest of the EU, young farmers in Finland often face difficulties in obtaining the finance they require to undertake investments.³¹ Young farmers, who have recently borne the costs of entrance into the sector (through the acquisition of farms or start-up costs), often need to expand their production from small or medium-scale to large-scale operations in order to benefit from economies of scale to increase their competitiveness. However, due to the start-up nature of these investments, the financial risk is often considered too high by banks who view the farmers' capacity to service the loans as limited. Additionally, young Finnish farmers often lack the necessary collateral to secure a loan, making it difficult for them to obtain financing (see Section 2.2.2).

In Finland, support to farmers is provided through the CAP and national support. Finnish farmers benefit from CAP support through Pillar I, which is financed entirely from the EU budget and involves direct payments

29 European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agri-statistical-factsheet-fi_en.pdf.

30 European Environment Agency, 2019, The European environment — state and outlook 2020. Knowledge for transition to a sustainable Europe, Chapter 5, <https://www.eea.europa.eu/publications/soer-2020>.

31 Interviews with farmers' associations and their members, 2019.



and market support, and Pillar II, rural development support, which is co-financed with national resources and consists of numerous measures aimed at increasing the competitiveness of the sector, its environmental performance, knowledge basis, etc. There are two rural development programmes in place - Finland (Mainland) and Åland Islands.

In 2018, the total annual agricultural support from the CAP amounted to EUR 873 million. Of this, direct payments were the largest component, representing 60% of the total subsidies for Finland (EUR 523 million). This was followed by the EAFRD, representing 39% (EUR 341 million; for 2019 - EUR 343 million) and market measures, representing 1% (EUR 7 million).³²

Direct payments support farmers' incomes and facilitate their access to finance. When farmers apply for short-term (working capital) loans, banks and often require the direct payment to be used as collateral. At the same time, direct payments contribute to higher investment activity with regard to facilities and machinery and equipment, according to interviewees from the sector.

As for rural development, and in particular for the Mainland RDP, one of the core measures in budgetary terms (total public funding) for the 2014-2020 programming period is Measure 4, 'Investments in Physical Assets', which has been allocated EUR 1.0 billion (including top-ups). Measure 6, 'Supporting Farm and Business Development' has been allocated EUR 378 million.³³ These measures include two sub-measures of particular relevance for stimulating investments among farmers: sub-measure 4.1, 'Support for Investments in Agricultural Holdings', and sub-measure 6.1, 'Business Start-up Aid for Young Farmers'.

Several support measures are available under the RDP Mainland to facilitate the undertaking of investments by farmers. For sub-measure 4.1, the level of investment support is estimated as a pro-rata of the total investment costs, conditional upon the type of investment proposed and the scope for national support. Aid ranges from 10-50% of the validated investment budget estimate, plus an addition of 10 percentage points for a young farmer. The terms and conditions for receiving the EAFRD investment aid are similar for all investments. The dairy and beef sub-sectors obtain more than half of all investment support grants.

Under sub-measure 4.1, the maximum investment support is EUR 1.5 million per farm over three financial years.³⁴ Eligible farmers under sub-measure 4.1 could invest in:

- livestock farming and plant production;
- the set-up of product warehouses and storage (and investments in rendering products in a marketable condition);
- improving the status of the environment;³⁵
- improving quality;³⁶
- energy production on farms; and
- conducting feasibility studies and plans.³⁷

Under sub-measure 6.1, special setup support is available for young farmers, provided that the farmer is younger than 40 years old, it is the first time they are setting up their business as the responsible person, and that adequate vocational skills can be documented. When the applicant's business plan can demonstrate that the farm income at the third year of setting up is between a minimum of EUR 15 000 and a maximum of

32 Most of the market measures supported fruit and vegetables, and milk and dairy producers. European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agri-statistical-factsheet-fi_en.pdf.

33 European Commission, 2019, Factsheet on 2014-2020 Rural Development Programme for Mainland Finland.

34 EAFRD, 2015, Rural Development Programme for Mainland Finland 2014-2020: Measures available for farmers, Presentation Package 3/3.

35 The objective is to maintain an open and cultivated agricultural landscape independently of whether it is used to produce food, raw materials, or renewable energy, or if managed without cultivation. The environmental impact on the soil from agricultural sources, such as surface waters, groundwater and air, shall be reduced, and environmentally friendly production methods shall be promoted.

36 Including investments to improve the working environment, investments in animal welfare, investments in production hygiene and investments in preserving and improving the building culture.

37 EAFRD, 2015, Rural Development Programme for Mainland Finland 2014-2020.



EUR 400 000,³⁸ the farmer might benefit from support, subject to being selected in accordance with the eligibility and selection criteria. The amount of the grant received depends on the level of income to be achieved. The start-up aid for young farmers is shown below in Table 3. In addition, young farmers are entitled to interest rate subsidies, with the maximum amount depending on the value of the facilities or machinery bought.

Table 3: Start-up aid for young farmers – RDP measures available and applicable conditions

Entrepreneurial income (min)	Aid (max)	Interest subsidy (max)	Total (max)
EUR 25 000	EUR 35 000	EUR 30 000	EUR 70 000
EUR 15 000	EUR 10 000	EUR 20 000	EUR 70 000

Source: EAFRD, 2015, Rural Development Programme for Mainland Finland 2014-2020: Measures available for farmers.

The implementation of sub-measure 4.1 has gone rather smoothly and demand is high and has been increasing over the last years. In 2019, for example, there was a continuous applications process in use by the administration allowing farmers a permanent access to resources. By the end of 2019, EUR 550 million had been approved for 9 007 selected applications. Only for a period of 2 years, between 2017 and 2019, the number of supported farmers quadrupled (2 076 in 2017). The overall demand for financing, from all submitted applications (before any administrative check made) totalled EUR 653.8 million, i.e. with EUR 103.7 million more than what was approved.

Similarly, young farmers continue asking for support and by the end of 2019, in total 1 467 applicants with support worth EUR 51.3 million had been approved. Very few applications have been rejected signalling a very good capacity on the side of the beneficiaries to develop business plans (Table 4). At the same time, the programming of resources under this sub-measure seems well balanced towards the needs.

Table 4: Rural Development Programme for Mainland Finland 2014-2020: Implementation data for sub-measures 4.1 and 6.1, by the end of 2019

Sub-measures	Number of all submitted applications under the grant calls	Total support requested by all submitted applications (EUR million)	Number of approved and supported applications under the grant calls	Budget for the approved applications (EUR million)	Number of all submitted applications under the grant calls (EUR million)
Sub-measure 4.1 'Support for Investments in Agricultural Holdings'	10 023	653.8	9 007	550.1	103.7
Sub-measure 6.1 'Business Start-up Aid for Young Farmers'	1 566	54.4	1 467	51.3	3.1

Source: Ministry of Agriculture and Forestry, 2020.

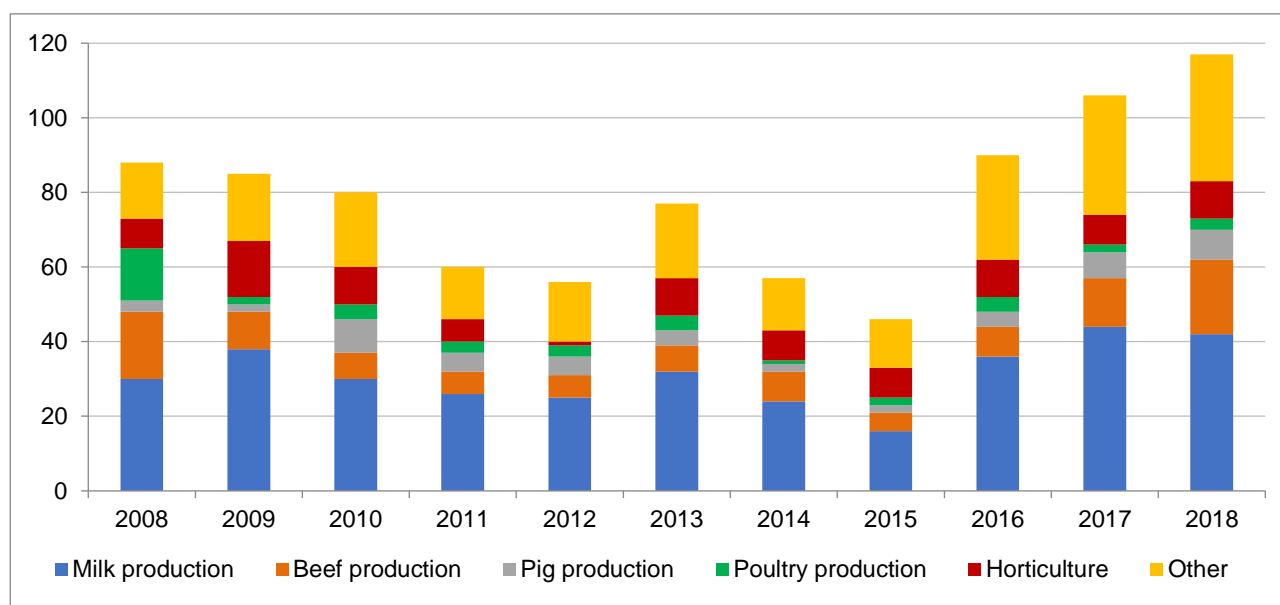
Note: The total number of all applications covers all received applications before any administrative check regarding eligibility or selection criteria have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not allowing for their evaluation, and/or with insufficient value-added, and/or ranked at a place for which the budget under the call is no longer available. Some applications could have been withdrawn.

³⁸ The maximum amount provided is EUR 35 000 if farming operations lead to entrepreneurial income of at least EUR 25 000. The young farmer will receive EUR 10 000 if the income generated is at least EUR 15 000 in terms of total of agricultural production.



In recent years, the dairy sub-sector benefited most from the EAFRD investment grants, followed by the beef sub-sector. These are also the segments that benefit most from subsidies in general, hence also from direct payments and national aid measures. A detailed breakdown of the support per sub-sector (including direct payments and national aid) is presented below in Figure 6. All financial institutions providing finance to the agriculture sector, when computing an applicant's income, take into account if the applicant is benefiting from any public funding measures (when applicable). This means that milk and beef producers, due to their relatively high support levels, would potentially have easier access to finance.

Figure 6: Support levels by agriculture sub-sector in 2008-2018, EUR million



Source: Alho, E., Arovuori, K., Heikkilä, A.-M., Niskanen, O., Väre, M. & Yrjölä, T.: *Financial position of Finnish agriculture*. PTT Working Papers 200. p. 88, 2019.

EAFRD investment aid has been vital in stimulating the investment in Finnish farms. According to farmers' organisations, the investment support makes it possible for farmers to undertake activities and operations that would otherwise not have been undertaken.

A national aid scheme for agriculture complements the 2014-2020 CAP funds. The purpose of the national aid scheme is to complement EU support measures and to secure the preconditions for Finnish agriculture in different production sectors and in different parts of the country.³⁹ The National Aid scheme has a few components. This includes Northern Aid (to maintain the vitality of rural areas in the Northern parts of Finland, and to help safeguard the operating conditions of agriculture and horticulture, and the profitability of production),⁴⁰ National Aid for Southern Finland, and certain other payments.⁴¹

Northern Aid consists of milk production aid and aid programmes based on the number of animals and cultivated area. The scheme also includes aid for greenhouse production, storage aid for horticultural products, wild berries and mushrooms, and age-related payments per head for reindeer. In 2019, the Northern Aid paid totalled around EUR 293 million. National Aid for Southern Finland comprises of milk and beef production, sheep and goat husbandry, and the cultivation of starch potato and vegetables in the open. In 2019, the National Aid for Southern Finland paid totalled around EUR 20 million.⁴²

39 Finland and Sweden have special exemptions from the EU to provide national support in order to secure the preconditions for agricultural production in the northern parts of their countries. For Finland, this area begins in regions north of the 62nd parallel North latitude.

40 Ministry of Agriculture and Forestry in Finland, National Agricultural Aid, 2019.

41 Such as farm relief services.

42 Niemi, J. and Väre, M., 2019, Agriculture and food sector in Finland 2019.



National structural support can be granted for farm investments to increase the efficiency and quality of agricultural production. Support under the scheme can take the form of grant, interest rate subsidies or government-backed guarantees, or a combination of all three. The availability of funds is defined annually in aggregate terms in the budget, based on the implementation plan of the Finnish Agricultural Development Fund and depending on the government's budgetary constraints. Structural support is being disbursed through ELY Centres⁴³.

Interest rate subsidised loans can facilitate investments by new entrants, as well as established farmers. These loans are primarily used to finance production buildings on farms and for the acquisition of real estate and movable property. For new entrants, the maximum maturity granted for an interest rate-subsidised loan is five years. After the five years, the beneficiary must bear the full interest cost. For investment loans of established farms, no maximum maturity exists for the interest rate subsidy, but the subsidy is linked to the maximum eligible maturity of the loan, which is 25 years. The support is provided under the structural aid compartment. In 2018, interest subsidy loans for established farmers totalled EUR 135.7 million, while those for new farmers totalled EUR 67.4 million. Interest rate subsidy costs from subsidised loans totalled EUR 11 million.

Public guarantees can be used as an additional guarantee, but only for the part not covered by other collateral, capital or assets. Collateral security is funded by the Finnish Agricultural Development Fund based on its annual implementation plan and within a legislative limit of EUR 80 million.⁴⁴ In 2018, 51 state guarantees (for loans of EUR 13.2 million) were provided. The average project costs of the EUR 1.2 million.⁴⁵ Farmer organisations said that they appreciate that they can apply for the different national support measures at one place (the ELY Centres) and that they can even do so by only filling one application.

Overall, farmers said that direct payments, investment aid, interest rate subsidies and government-backed guarantees help them to obtain the financing they require to make the investments they need. The availability of the various support measures enhances their demand for finance as investments are incentivised.

A national retirement support is being provided as a subsidy to farmers who permanently leave commercial farming and who hand over the farm (i.e. the land and production facilities) to a close relative. To be eligible, a farmer must have a farm income of at least EUR 12 000.⁴⁶ Young farmers and farmers benefitting from the national early retirement support⁴⁷ particularly appreciate the financial support.

While the current instruments for agriculture finance function well, the tendency of farms to grow in size leads to new challenges for public policy support and the provision of finance. The growing size of investments may mean that the current levels of public policy support will be insufficient in the future. For banks, a decline in public funding, at least in relative terms, raises questions about the viability of the future investments by farmers - according to them, the agriculture sector is unable to generate enough new capital on its own to finance its expansion. Public and private agricultural development funds that invest in agriculture could play a role in tackling this need in the future.

43 National support is being disbursed through 15 Centres for Economic Development, Transport and the Environment (ELY Centres). They manage the central government's implementation and development tasks. In terms of national support, ELY Centres receive applications for support, review them and manage disbursements. Further, they support the establishment, growth and development of small and medium-sized enterprises by providing advisory, training and expert services. ELY Centres are involved in the management and disbursement process of national support to farmers.

44 This national financial instrument functions as a supporting instrument to the RDP. The state guarantee cannot exceed 30% of the total financial envelope for the operation. The maximum amount of State guarantees per farm is limited at EUR 2 500 000. The State guarantee must also be backed by collateral, such as a business mortgage. Source: Alho et al., 2019, Maatalouden asema rahoitusmarkkinoilla, PTT working papers 200, p. 29.

45 Niemi, J. and Väre, M., 2019, Agriculture and food sector in Finland.

46 As of 2018, the national retirement support is not being extended to farmers retiring from 2018 onwards. Farmers retiring before 2018 continue to receive support.

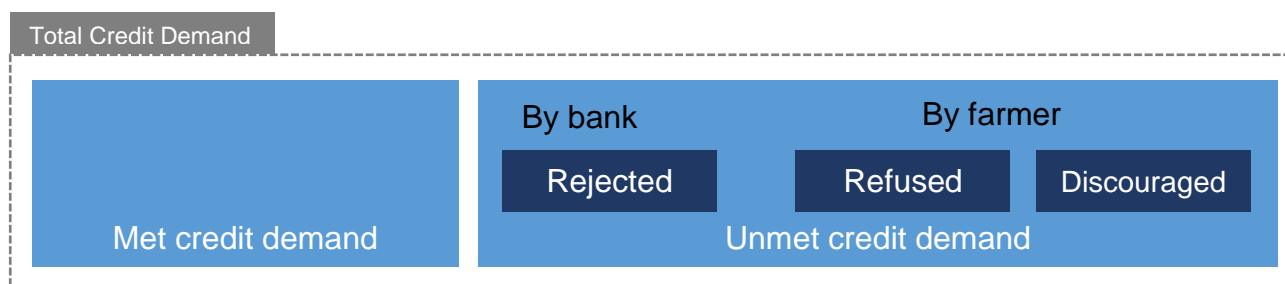
47 Retirement support is provided through national funding only and is being paid to older farmers to accelerate generation changes. Such aid is no longer provided by the CAP/EAFRD in 2014-2020.



2.2.2. Analysis of the demand for finance

The potential total demand for finance combines both met and unmet demand. The met demand consists of the value of all applications for finance that were accepted by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial institution, offers of credit refused by farmers, alongside cases where farmers are discouraged from applying for credit due to an expectation of rejection or refusal (Figure 7).

Figure 7: Schematic overview of the demand side of agriculture sector

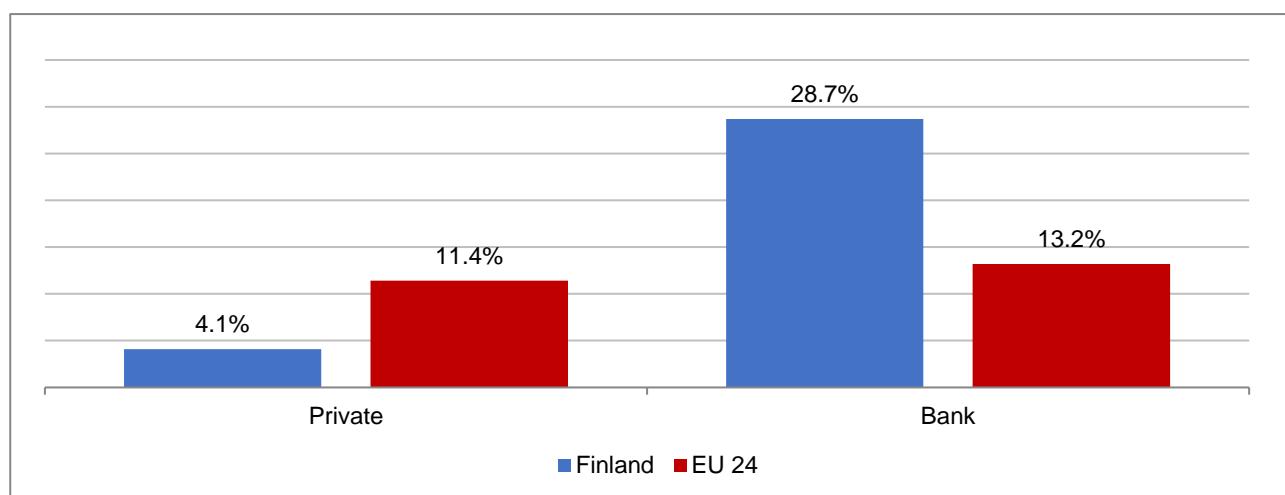


Source: Ecorys, 2019.

Based on the results of the *fi-compass* survey, the unmet demand for the Finnish agriculture sector is estimated at EUR 237 million.

Around 29% of farmers applied for bank loans in Finland in 2019, while 4% sought finance from friends and family (Figure 8). This preference for bank finance was confirmed in interviews, where both the banks and farmers said that private lending is not very common and almost exclusively takes place within the family. Based on *fi-compass* data, the total demand for private finance was estimated to be between EUR 20.7 million and EUR 41.4 million.⁴⁸ These private loans usually lack a fixed repayment plan and are not interest bearing. They are mostly used for working capital needs on a short-term basis.

Figure 8: Finnish farms applying for finance in 2017



Source: *fi-compass* survey.

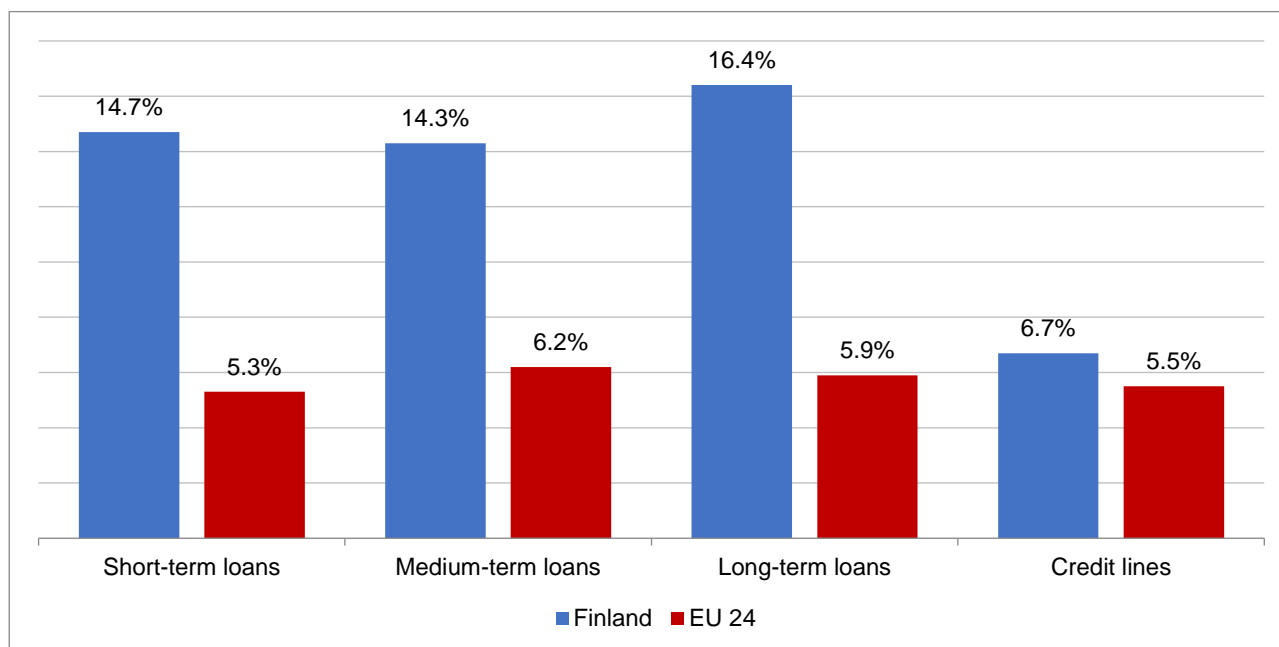
A slight preference for long-term loans can be seen (Figure 9). The demand for bank loans from Finnish farms is higher across all loan maturities compared to the EU 24. Short-term (15%), medium-term (14%) and

⁴⁸ Calculation based on *fi-compass* survey results. The volume of private financing is based on the percentage of *fi-compass* survey respondents saying that they utilise private financing (disaggregated by farm size) multiplied by the assumed volume of private financing (EUR 5 000 and EUR 10 000).



long-term loans (16%) are used considerably more frequently by Finnish farmers than those in the EU 24. This could be partially due to the fact that many Finnish farmers regard overdrafts as undesirable, as it indicates that they are unable to manage their short-term cash flow.

Figure 9: Finnish farms applying for finance in 2017, by financing product



Source: *fi-compass* survey.

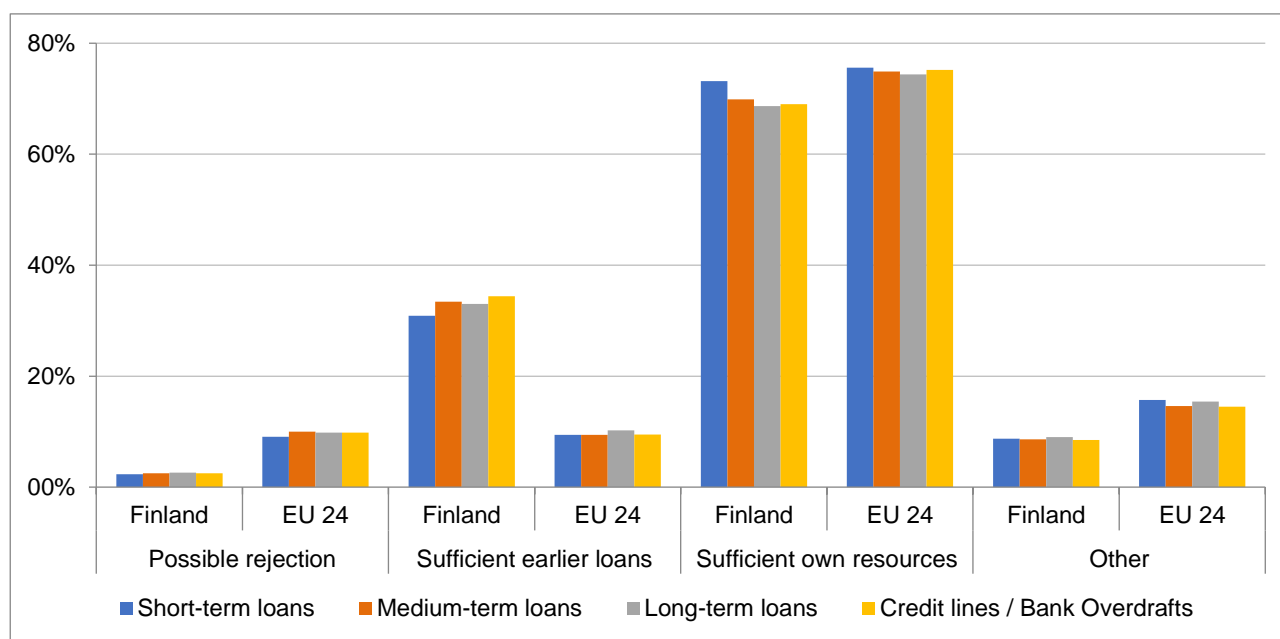
Finnish farmers rarely fear rejection when applying for loans, as substantial advisory services are available to help them prepare their loan applications. According to the *fi-compass* survey, only 2.5% of Finnish farmers did not apply for finance due to a fear of having their application rejected (discouraged applicants). This compares to around 10% for the EU 24 average. The two main reasons listed for not applying were sufficient levels of their own resources or the already available finance from previous loans. These reasons were provided across all loan maturities (Figure 10).

Farmers mentioned that agricultural advisory services support them⁴⁹ in preparing their financial statements, as well as their business planning for the presentation at the banks. Farmers also said that advisors are accessible, even though the regional coverage varies (i.e. less advisory services are available in the North due to the small number of farmers in Lapland).

49 Particularly for livestock and grain farming activities.



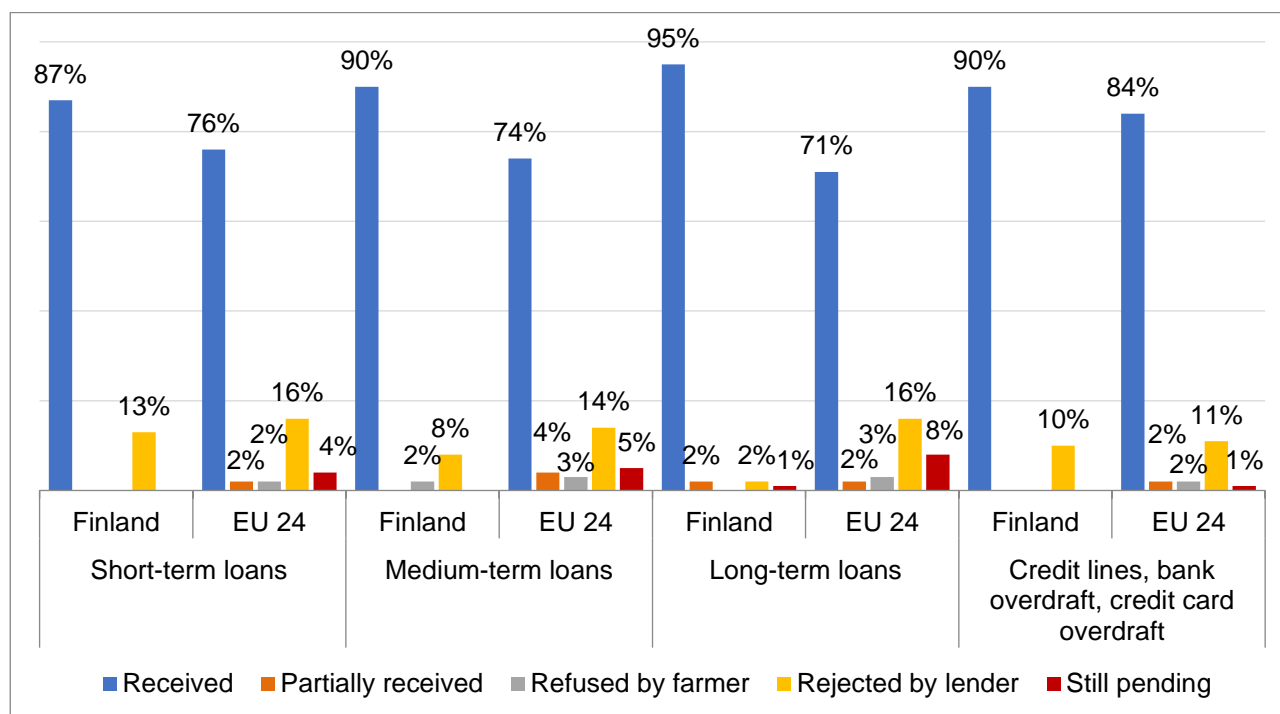
Figure 10: Reasons for not applying for loans in the agriculture sector in 2017



Source: *fi-compass* survey.

The rejection rates for Finnish farmers is low, in particular for long-term loans. Finnish farmers face a rejection rate of only 2% for long-term loans, compared to 16% for the EU 24 (Figure 11:). It is also lower across all loan maturities compared to the EU 24.

Figure 11: Result from applications for finance in the agriculture sector in 2017



Source: *fi-compass* survey.

Finnish farmers are mostly rejected for short-term loans and credit lines. About 13 % of the *fi-compass* survey respondents had their short-term loan applications rejected by the bank, while 10% had their credit line and bank overdraft applications rejected. Interviews with banks indicated that although the agriculture sector



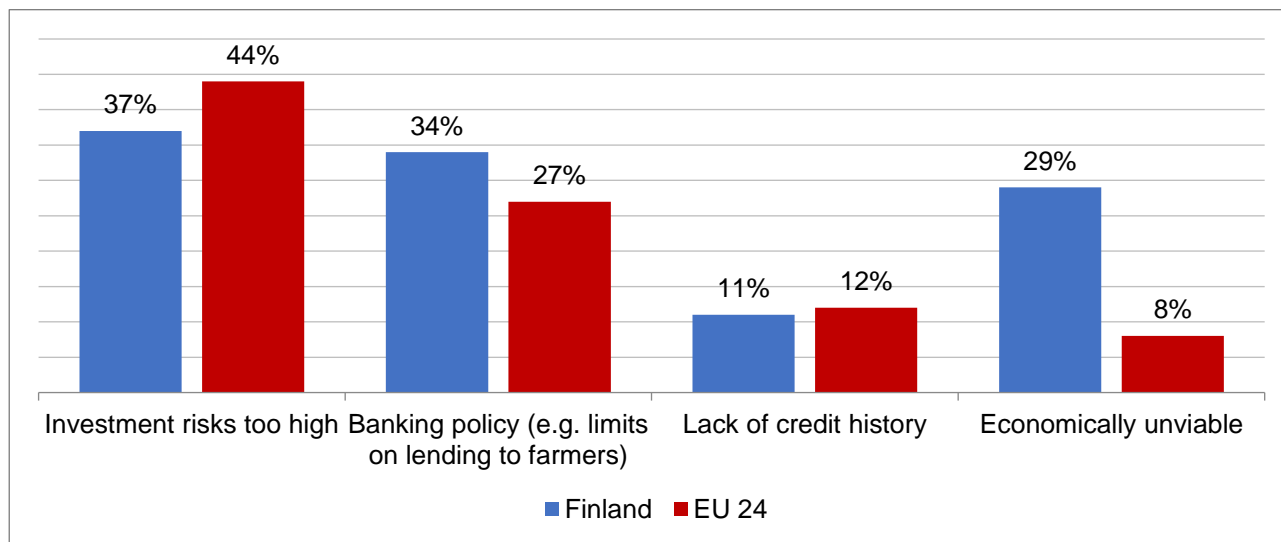
is generally considered sufficiently attractive, the limited overall growth of the sector and the increasing costs of production (see Section 2.2.1), mean that some applicants who are applying for working capital loans are assessed more carefully, as this might be an indicator of potential difficulties related to liquidity and cash-flow management.

For Finnish banks, investment-lending decisions depend not only on the feasibility of the investment, but also on the farmer's management capacity. This is especially the case for medium and large-sized farms. Banks indicated that before the official application process, they analyse the management capacity of the farmer by asking probing questions about past experience, strategy and planning. If the bank's officer believes that the investment is unviable due to, for example, the poor management capacity of the farmer, then they advise the farmer not to officially apply for an investment loan.

Finnish farmers reported that their loan applications are rejected due to their investment risk being considered too high by banks, the bank's restrictive lending policy towards the sector, their farm being deemed unviable, or their lack of credit history (Figure 12). Like for the EU 24, investment risks that are deemed too high is the main reason loan applications in Finland are rejected (37%, compared to 44% for the EU 24). However, economic unviability as a reason for rejection is much higher in Finland (29%) compared to the EU 24 (8%). This difference is likely linked to the limited overall economic growth of the Finnish agriculture sector, as previously outlined above.

Restrictive lending policies by banks towards agriculture is a reason for rejection, was indicated by 34% of the farmers. In interviews, farmers said that four banks dominate the Finnish financial sector and the provision of agriculture finance. These banks can thus be very selective in their client identification and they can afford to strictly follow their risk-taking limits in the different sectors, including agriculture. In such situations, their policies and procedures do not allow them to increase their exposure even if the potential borrower is creditworthy.

Figure 12: Reasons for applications' rejection in the agriculture sector in 2017



Source: *fi-compass* survey.

The banks interviewed reported that loan rejections are often due to an unrealistic business plan. Examples were given of planned investments that were unlikely to generate the planned increase in turnover and thus would make it challenging for the farmer to repay the loan.

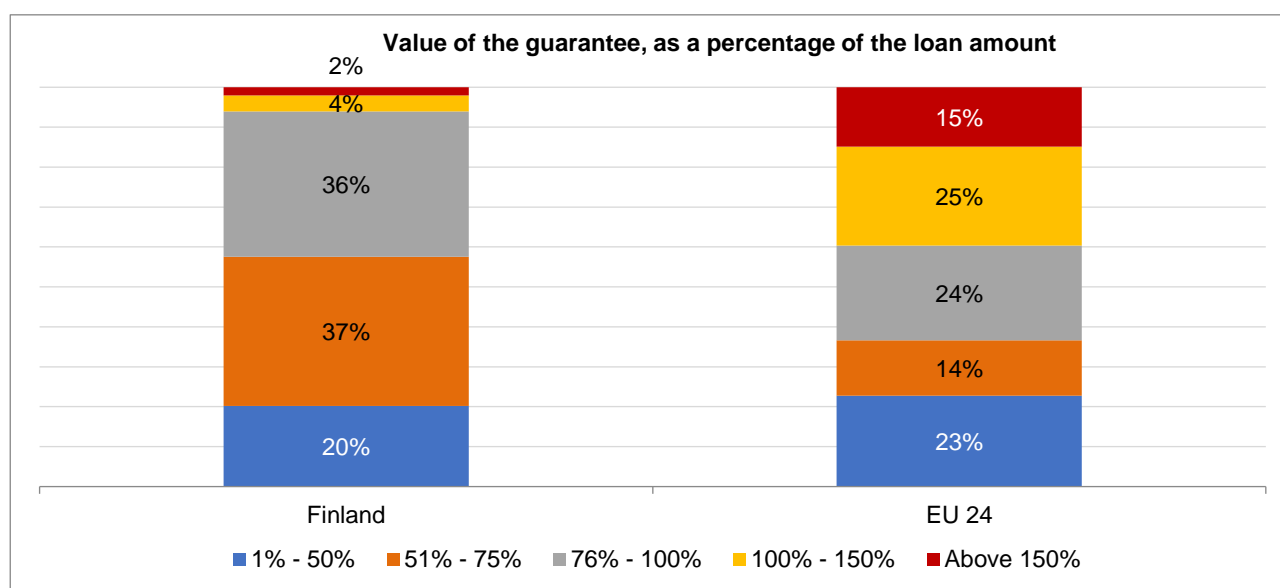
According to the *fi-compass* survey, **a lack of credit history was the reason for rejection for 11% of Finnish respondents.** Banks also outlined that many medium-sized family owned farms, in particular, are unable demonstrate a consistent repayment track record.



Lack of collateral might also be an issue, according to banks. If farmers cannot provide the needed collateral levels or can only provide old assets with limited market value (such as old equipment or machinery), banks tend to refuse the loan applications.

Banks lend against the provision of collateral, with most farmers having to provide collateral which is between 51% and 75% of the loan amount. According to the *fi-compass* survey, the main source of guarantee for Finnish farmers is personal collateral. In total, 50% of the applicants were asked to provide collateral. In 76% of these cases, the collateral provided was personal, compared to 83% for the EU 24 average. According to the survey, 6% of the borrowers were asked for collateral valued at over 100% of the loan amount, which was lower than the EU 24 average of 40% (Figure 13). It was also lower than for Denmark and Sweden, where 19% and 28% of respondents, respectively, had to provide collateral valued over 100% of the loan amount, according to the *fi-compass* survey.

Figure 13: Information related to guarantees requested by farmers, collateral asked, 2017



Source: *fi-compass* survey.

Young farmers and new entrants face particular difficulties. Due to having recently borne high entry costs, their new business is often associated with higher financial risk from the bank's perspective. Further, these farmers also often lack collateral. Overall, this means that they often have limited access to the finance necessary to make the follow-up investments required so that they can benefit from economies of scale.

According to stakeholders, in an environment characterised by decreasing profit margins and higher input costs, farmers could still benefit from additional technical and advisory support⁵⁰ to help them make their businesses more efficient. Currently, dedicated advisory services in this area contribute to maintaining the competitiveness of the sector. The extension service focuses on production, investment or management, but it does not focus on automation and robotisation.⁵¹ In addition, specific management training for farmers that are expanding their enterprise, and that do not have experience in the management of large operations, is also currently not being offered. The inclusion of this could also add value.

Future financing needs of farmers might increase as Finnish farmers put increasing emphasis on the sustainability of production. Agriculture production can have adverse environmental impacts on soil, water systems and the atmosphere, but it can also contribute to maintaining biodiversity and rural landscapes (in addition to food production). In Finland, the production and consumption of organic products is continuously increasing. About 13% of Finnish fields and about 10% of farms are certified as organic.⁵²

⁵⁰ Interviews with farmers' associations and farmers, 2019.

⁵¹ Interviews with farmers' associations and farmers, 2019.

⁵² Niemi, J. and Väre, M., 2019, Agriculture and food sector in Finland.



2.3. Analysis on the supply side of finance to the agriculture sector

This section provides an overview of the financial environment in which the agriculture sector in Finland operates. It describes the main financial products offered, including any currently operating financial instrument targeting agriculture, with national and/or EAFRD resources. The section draws its information from interviews with financial institutions, as well as from national statistics.

An attempt is made to give a description of the general conditions for accessing finance, such as interest rates and requirements for collateral, and the availability of funding for agricultural producers. Potential differences in the availability of financial products across different types of agricultural producers are reviewed and analysed.

Key elements on the supply of finance to the Finnish agriculture sector

- Finnish banks have a range of products adapted to farmers' needs, but the banking landscape is heavily concentrated – the four largest institutions have a market share of 95% in agricultural finance.
- Finnish banks commonly offer working capital and investment finance products; leasing also plays a role in agriculture finance.
- Despite the lack of competition between banks, the lending environment remains quite favourable to farmers, with the average interest rate for agricultural loans decreasing over recent years.
- The total outstanding loan portfolio to the agriculture, forestry and fishery sectors was almost EUR 1.8 billion in 2018.
- The quality of the agricultural loan portfolio is high. Non-performing loans represented only 2% of the outstanding portfolio in 2018. The banks consider animal husbandry as the most reliable sub-sector.
- Finnish banks are interested in financing agriculture, and particularly those farmers that benefit from public support (CAP/EAFRD and national) and have sufficient collateral levels and know-how.
- New entrants are more constrained in access to finance due to their higher level of indebtedness since launching their business. The financing conditions offered by banks are tighter for this specific segment. Young farmers are also more constrained.
- The main limitations of the supply of finance to the Finnish agriculture sector include: (i) banks' limits on lending to specific sub-sectors, (ii) the high concentration of the banking sector, which allows banks to be very selective and risk-averse in choosing their clients, and (iii) banks' preference to invest in established farms, rather than in young farmer and new entrants.

2.3.1. Description of finance environment and funding availability

This analysis is based on data from national statistics and from an overview of, and discussions with, the key financial institutions in Finland who offer financing to the agriculture sector.

2.3.1.1. Finance providers

The Finnish financial market is highly concentrated. The two largest banks are *OP Financial Group*, a domestic cooperative bank, and *Nordea*, a publicly listed company and one of the largest financial operators in the Nordic region (Table 5). *OP Financial Group* has a business loan market share of 40%, while *Nordea* has a share of 30%. The third largest bank, *Danske Bank*, has a market share of 9%.⁵³ The business lending loan portfolio and the relative market shares are presented below in Table 5.

⁵³ Bank of Finland, 2019.

**Table 5:** Business loans provided by the main financial operators in Finland in 2018 and their market share

Financial operator	Business loan stock (EUR million)	Market share (%)
OP Financial Group	21 133	40
Nordea	16 171	30
Danske Bank	4 848	9
Handelsbanken	4 013	8
Municipality Finance	2 863	5
Säästöpankki Group	1 019	2
Ålandsbanken	524	1
Oma Säästöpankki	506	1
Aktia Bank	452	1
POP pankki – Group	379	1
S-Bank	84	0
Hypo	79	0
Others	1 344	3

Source: Bank of Finland 2019.

With regards to agricultural lending in Finland, OP Financial Group is the largest finance provider, supplying two thirds of the market. OP Finance Group had a market share of 67% of all agricultural lending in 2018. This was followed by Nordea and the POP-group (a cooperative), each with a market share of 10%. The fourth largest finance provider is *Säästöpankki* group, which had a market share of 8% in 2018. Other finance providers cover only a minor share of the agricultural finance market (Table 6).

Table 6: Financial operators' market share in agricultural finance in Finland, 2018

Financial operator	Market share (%), agriculture
OP Financial Group	67
Nordea	10
POP Pankki Group	10
Säästöpankki Group	8
Danske Bank	2
S-Bank	2
Aktia Bank	0.4
Handelsbanken	0.3
Others	0.3

Source: Kantar TNS Agri, Maatilojen pankki – ja vakuutus tutkimus 2018.

Both OP Financial Group and Nordea have a strong presence throughout the country. The *POP Pankki* Group and the *Säästöpankki* Group have regional strongholds, especially in the agricultural areas of West Finland, as well as both groups also have operations in the agricultural areas of East Finland. Their operational range (covering the key agricultural regions in Finland) is the main explanatory factor for their strong market share in agriculture.



Some farmers also have access to short-term finance through agri-food companies, as well as agricultural cooperatives. To ensure the supply of high-quality agricultural products to their businesses, agri-food enterprises look for ways to help farmers address their working capital needs. Based on forward contracts, farmers receive working capital loans against the promise of the future delivery of their production (which could also be at a preliminary fixed price).

2.3.1.2. Financial products

Agricultural finance in Finland is based on bank lending that is often complemented by EU and national support. Banks are the only financial institutions that operate in the sector. Business loans to agriculture include long and medium-term investment loans, as well as loans for short-term financing and credit lines. The cost of the loan (interest rate) depends on the clients, their credit history, the purpose of the loan and its maturity. The typical loan product types are detailed below in Table 7.

Table 7: Overview of the financial products offered by Finnish banks to farmers, 2019

	Type of Product	Purpose	Maturity	Interest Rates %
(i)	Working Capital Loan / Credit Line	Working capital	Mostly short-term loans (1.5 years on average) or credit lines (1 year on average)	1-4%
(ii)	Investment Loans	Capital investment	Mostly medium and long-term, some short-term loans	Maximum EURIBOR 6 months + margin ⁵⁴

Source: Bank interviews and banks' websites, 2019.

The two largest agricultural finance providers in Finland finance farmers under their corporate lending activities with highly tailored product features. During interviews, banks stressed that loan amounts, terms, repayment schedules and interest rates depend on the purpose of the loan and the business analysis of the client.

Banks mostly finance physical investments (buildings and equipment) and land purchases. Investments in buildings and equipment by farmers are made with a view of increasing the efficiency of their farm operations. Similar investments are made by new farmers that take over an existing farm. Banks' consider the animal husbandry sub-sector to be the most reliable. Investments in this sub-sector include the renovation and construction of cow stables, piggeries or broiler houses, as well as land acquisition. In crop production, the largest loans are mostly used for the purchase of land, but equipment purchases, such as grain driers, heating plants and silos, are also important.⁵⁵

Leasing (financial and operational) also plays a role in Finland. In 2017,⁵⁶ the whole Finnish leasing market totalled EUR 9.7 billion, of which hire purchases accounted for EUR 4.6 billion. Around 95% of all leasing (EUR 9.2 billion) is for equipment.⁵⁷ The revenue from the rental and leasing of agricultural machinery was estimated to be EUR 6.5 million in 2019.⁵⁸ In Finnish agriculture, the proportion of financed machines to total sold machines (the penetration level) varies from 40% to 65%.⁵⁹ The vast majority of all leasing is through banks, who account for 84% of all transactions. In 2012 there were 21 companies actively involved in financial leasing in Finland, of which eight were credit institutions.⁶⁰

54 S-Bank mentions a margin of 5.99% to 14.99% on their website, source: <https://www.s-pankki.fi/sv/lan-och-krediter/s-lan/>.

55 Interviews with banks.

56 Data for 2018 and 2019 were not available.

57 Santeri Rautio, 2018, Private-label financing of forestry and agriculture equipment in Finland and Estonia.

58 Statista, 2020, Industry revenue of 'rental and leasing of other machinery, equipment' in Finland from 2011 to 2023.

59 Santeri Rautio, 2018, Private-label financing of forestry and agriculture equipment in Finland and Estonia.

60 Statistics Finland, 2012, Financial leasing. Unfortunately, Statistics Finland discontinued these statistics and no new data has been produced by them since 2012

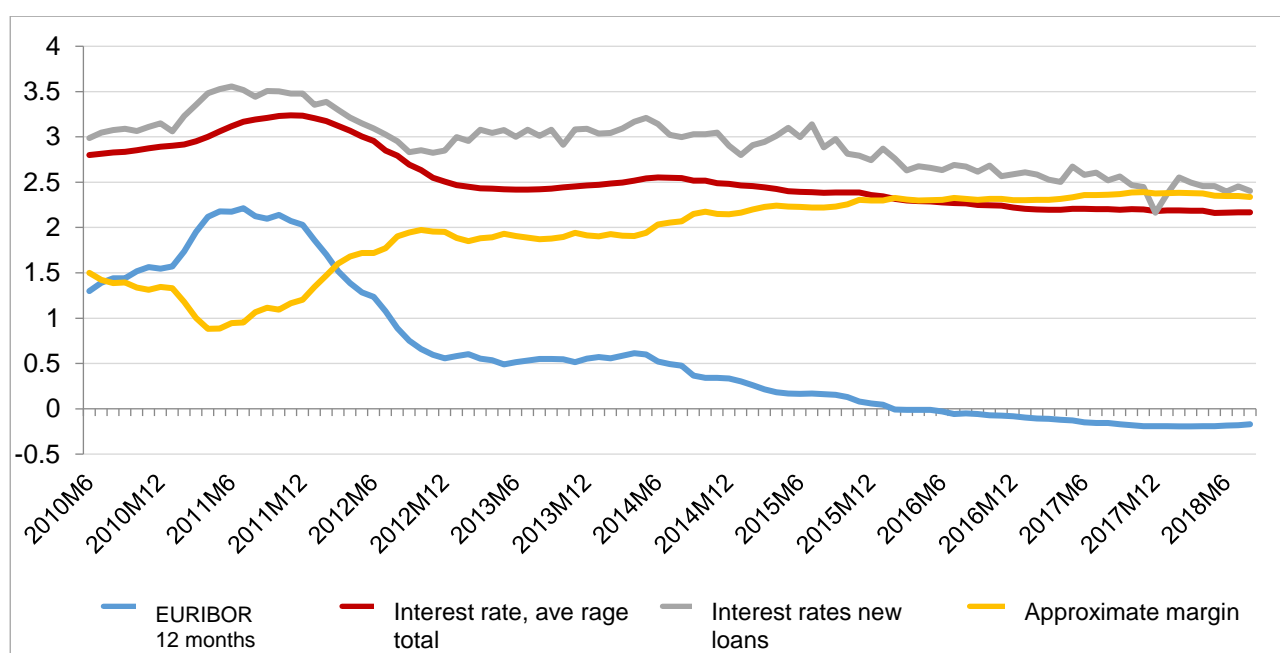


On the EU financing side, there are certain options for financing, such as under COSME, InnovFin or EaSI, but none of them are significant or important to the sector. The government has not set up a financial instrument with EAFRD resources in the 2014-2020 programming period.

2.3.1.3. Description of the financing market

Finnish enterprises are offered lower interest rates than enterprises in other EU 24 countries. The average interest rate on agricultural loans has declined since 2013, in parallel with the reference interest rate (EURIBOR 12 months), while the interest rate on new credit has been slightly higher than the average on the existing loan stock (Figure 14). When compared to the development of the EURIBOR 12 months, the relative share of bank profit margins on agricultural loans has increased. Although the EURIBOR 12 months is the predominant reference rate, other reference interest rates are also used for agricultural financing.⁶¹

Figure 14: Average interest rate of agricultural loans and EURIBOR 12 months, 2010-2018, in %



Source: Alho et al., 2019.

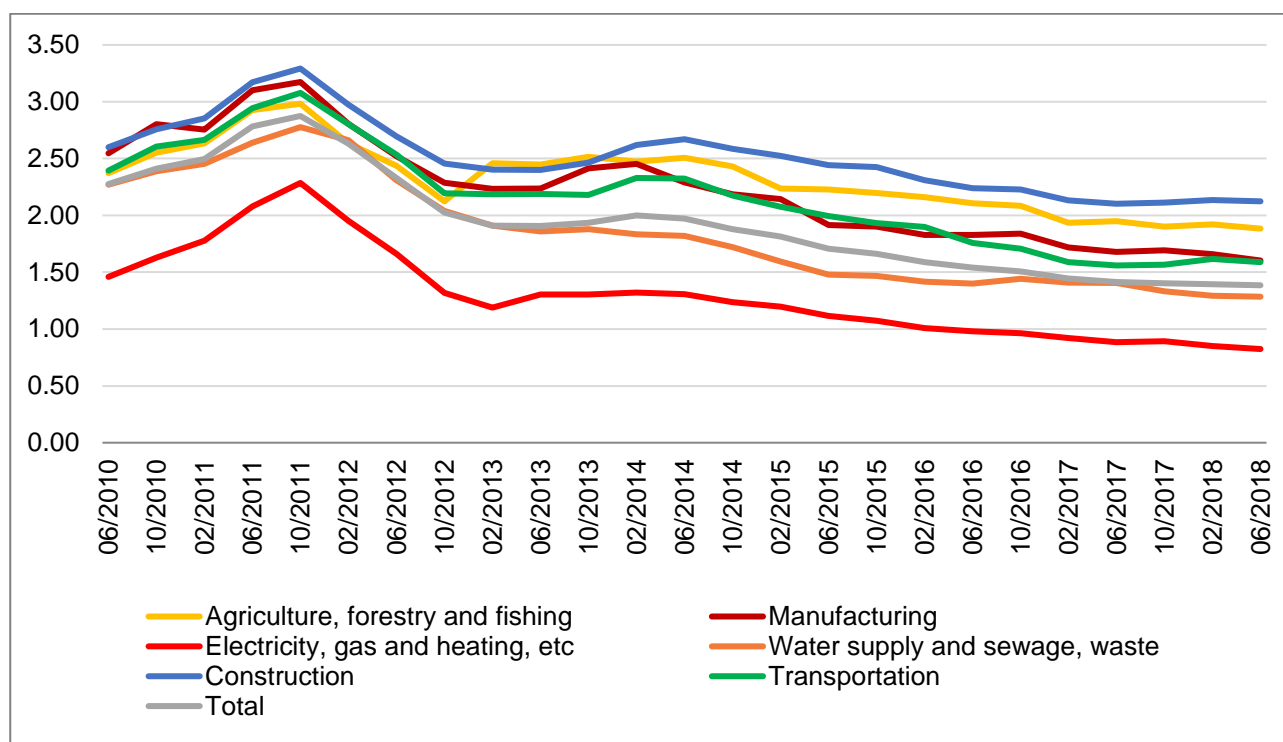
The average interest rate of 2.25% in the agriculture, forestry and fisheries sectors in Finland is higher than in nearly all other economic sectors. This is despite the good risk performance of the agriculture portfolio in recent years. In 2016 and 2017, only the construction and logistics sector had higher average interest rates (Figure 15).⁶² This performance indicates the potential for the creation of a new financial instrument that can reduce the strict policies of banks towards the agriculture sector and help to create more favourable conditions for the sector's future growth and development.

⁶¹ Alho et al., 2019.

⁶² Alho, E., Arovuori, K., Heikkilä, A.-M., Niskanen, O., Väre, M. & Yrjölä, T., 2019, Financial position of Finnish agriculture. PTT Working Papers 200.



Figure 15: Average interest rate of new contracts, 2010-2018, (in %), Finland, 2010-2018



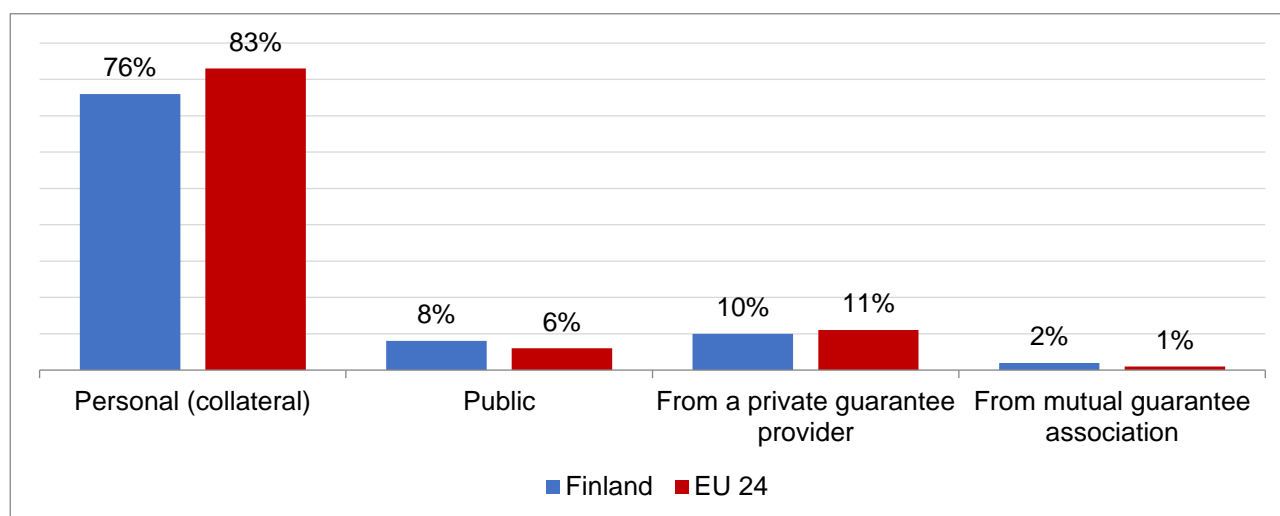
Source: Bank of Finland, 2018.

Finnish banks mainly rely on mortgages as collateral. In interviews banks said that typically they accept land, buildings and forests as collateral for a loan. Depending on the loan amount and the type of borrower (new client or a client with a credit history), they also accept movable assets as collateral. Personal guarantees are sometimes accepted, but they are of minor significance. As previously outlined, banks also accept CAP/EAFRD subsidies (direct payments and/or grants) and the pledge of life insurance claims as collateral. However, their collateral value is relatively low in comparison to mortgages.

Like for the EU 24, personal collateral is the most widely used form of guarantee for agricultural loans in Finland (Figure 16). Based on the *fi-compass* survey, 76% of all loans in Finland were guaranteed by personal surety. Private guarantees were provided for 10% of the borrowers, while 8% used public guarantees. There are no major differences between Finland and the EU 24 in the types of guarantees required.



Figure 16: Information related to guarantees requested by agriculture producers



Source: *fi-compass survey*.

In terms of loan maturity, banks believe that while agricultural clients have the capacity to repay loans earlier, they often prefer longer repayment periods. Banks are interested in having loans repaid as early as possible, to decrease their risks and to avoid farmers using their income for other purposes. Based on the interviews with banks, the optimal average maturity for investment loans should be between 10-12 years. Currently, it is more than 15 years as clients prefer to have a high financial safety cushion.

Loans to small-sized farms tend to have longer maturities than those to large-sized farms. Small-sized farms often have only one or two agricultural activities, and thus only have income for a couple of months during the year. Large corporate holdings, in contrast, are involved in numerous agricultural activities and thus have more frequent income throughout the year. Hence, they have shorter repayment periods as they can repay loans earlier or make repayments more frequently.⁶³

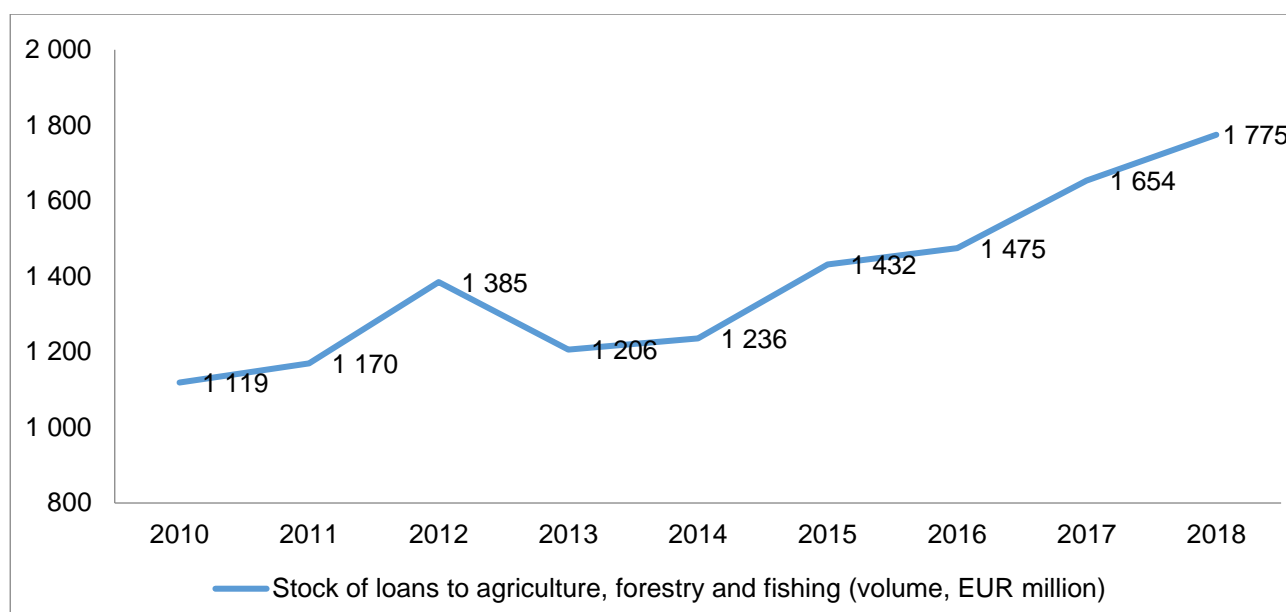
⁶³ Alho, E., Aroviuri, K., Heikkilä, A.-M., Niskanen, O., Väre, M. & Yrjölä, T., 2019. Financial position of Finnish agriculture. PTT Working Papers 200.



2.3.2. Analysis of the supply of finance

The outstanding portfolio of loans to the agriculture, forestry and fishing sectors in Finland was close to EUR 1.8 billion in 2018 (Figure 17). The amount has been increasing steadily since 2013,⁶⁴ which demonstrates the financial sector's interest in agriculture. The vast majority of the outstanding loans relate to the agriculture sector. In interviews, banks estimated that the forestry sub-sector accounted for between 10% and 15% of the outstanding portfolio, while fishing only played a minor role.

Figure 17: Outstanding loan portfolio to agriculture, forestry and fishing, 2010-2018, EUR million



Source: National Bank of Finland, 2019.

The average family farm in Finland has EUR 80 000 of debt, while corporate agricultural operators have an average of EUR 800 000 of debt, according to a recent study on the financial position of Finnish agricultural enterprises.⁶⁵ Despite measuring different metrics, this is roughly in line with the FADN figures on the assets and liabilities of farms, where farms with a Standard Output⁶⁶ (SO) of under EUR 100 000 (typically family farms) had total liabilities of around EUR 80 000, while those above EUR 100 000 in economic size (typically corporate farms) had total liabilities of around EUR 675 000.⁶⁷ In general terms, the debt levels of farmers are considered by banks manageable as they have high equity levels. The largest Finnish farms have about EUR 820 000 in equity. Small farms have about EUR 170 000 in equity.⁶⁸

The average amount of loans to the sector has been increasing, due in part to new loan purposes. Progressively, enterprises are investing in enlarging the size of their farm. Instead of financing the acquisition of an individual field plot, loans are increasingly being granted for the purchase of whole farms. Furthermore, for farms specialised in animal husbandry, the size of physical facilities has also been growing. For banks, this means that if the number of agricultural clients declines, the volume of agricultural financing should remain at current levels, and that if the reliance on credit from individual farms rises, the financing will be more concentrated on a smaller group of farmers. Since financed investments are expected to increase, and

⁶⁴ National Bank of Finland, 2019.

⁶⁵ Alho, E., Aroviuri, K., Heikkilä, A.-M., Niskanen, O., Väre, M. & Yrjölä, T., 2019, Financial position of Finnish agriculture. PTT Working Papers 200.

⁶⁶ The standard output (SO) of an agricultural product (crop or livestock) is the average monetary value of the agriculture output at farm-gate price in Euro.

⁶⁷ EC, FADN, 2017.

⁶⁸ Source: Own calculation based on FADN data.



because it is the largest farms that are growing the most in size and operations, banks believe that farms will increase their level of assets over the long-run.

The need for short-term liquidity loans is increasing over time. This is due to the shifts taking place in agricultural markets and the declining profitability of farming in recent years. Working capital loans are available to Finnish farmers and nationally financed public guarantees have also been available for short-term liquidity loans since 2017, as outlined above.⁶⁹ Overall, the banks' role in ensuring typical business financing, such as seasonal and short-term credit, has become more prominent. At the same time, the financing of agricultural machinery and equipment is increasingly being transferred from banks to their leasing companies. In addition, banks supply finance for maintenance expenses across all farms types and production segments.

Finnish banks see agriculture as an important and attractive sector, particularly for those farmers that benefit from public (CAP/EAFRD and national) support.⁷⁰ In general, according to banks, sound and realistic investments are financed. The farmer's professional competencies to implement the investment and to oversee their operations are a defining factor in credit decisions. As already mentioned, banks believe that the average farm size will become much larger, and this will require higher management capacity and technical knowledge.

Banks have a sound understanding of agricultural finance and are experienced in supporting the sector. Interviews with the banks suggest that they have the specific tools necessary to understand the cash flow cycles of different agricultural operations, including for different crops, and hence repayment capacity, and for the cycles of horticulture and field crops. Reference was also made to the specific tools supporting the benchmarking of farms.

Policy instruments and public risk sharing (such as guarantees) are important in overcoming issues related to insufficient collateral, according to interviews with banks. This is particularly relevant to young farmers and new entrants who do not have sufficient capacity and collateral to service loans without support.

Banks' portfolio concentration limits make it difficult to increase their exposure to the sector. Banks mentioned that in order to avoid the concentration of risk to one sector, they need to ensure that they have a well-diversified portfolio. Hence, not all banks can further increase their outreach to farmers.

Banks prefer to finance established businesses, rather than new entrants. This is because new entrants have recently borne the costs of entering the sector and hence have reduced repayment capacity and opportunities for investment in the early years of their business. Since the average loan size taken to finance generational change has increased significantly in recent years, banks have been forced to restrain from financing investments during the early years of operation, as this would result in an unsustainable level of debt for new entrants. As discussed (see Section 2.2.1), this may prevent new entrants from expanding their farming operations and from benefitting from increased economies of scale.

69 Alho et al. 2019.

70 Focus group interviews and bank interviews.



2.4. Financing gap in the agriculture sector

This section presents an assessment of the financing gap in the Finnish agriculture sector, broken down by farm-size and financial product.

Key elements of the financing gap in the Finnish agriculture sector

- The total financing gap for the Finnish agriculture sector is estimated between EUR 47 million and EUR 162 million.
- The largest share of the financing gap relates to medium-sized farms⁷¹.
- The gap is highest for long-term loans and to a lesser extent medium-term loans⁷².
- The main reasons why farmers are rejected loans relate to the economic viability of the farm and the management skills of farmers, as well as a lack of sufficient collateral.
- The supply of finance is constrained due to limited competition on the agriculture financing market and the limit of banks in terms of loan portfolio concentration in one sector.
- Young farmers and new entrants are particularly constrained in their access to finance, as they often have outstanding debts and lack sufficient levels of collateral.

This section presents an estimate of the total value of unmet financing needs of financially viable agricultural enterprises, defined as financing gap, for 2017. The estimate is calculated by multiplying the total number of farms in the financing market by the proportion of financially viable farms reporting unmet demand for finance multiplied, in turn, by the average obtained loan value to farms.

$$\text{Financing gap} = \text{Number of farms} \times \text{percentage of financially viable farms with unmet demand} \times \text{average loan volume}$$

All the calculations are based on the results of the *fi-compass* survey for Finland's farms and statistics from Eurostat (see A.4 for more information). The methodology used for calculating the gap is described in Annex A.3.

The financing gap arises from unmet financing demand from economically viable farms⁷³. The unmet demand for finance includes:

- lending applied for but not obtained, or
- a lending offer refused by the potential borrower as well as
- lending not applied for due to expected rejection.

For the purpose of this study, 'turnover growth' is used as a proxy of farm viability. In particular, two different criteria for viability are used, which lead to the calculation of a range for the financing gap between an upper and a lower bound:

- The **lower bound** gap is calculated under the hypothesis that only enterprises which reported a stable (non-negative) turnover growth and no cost increase in the previous year can be considered as viable;
- The **upper bound** gap is calculated under the hypothesis that all enterprises which reported a stable (non-negative) turnover growth can be considered as viable.

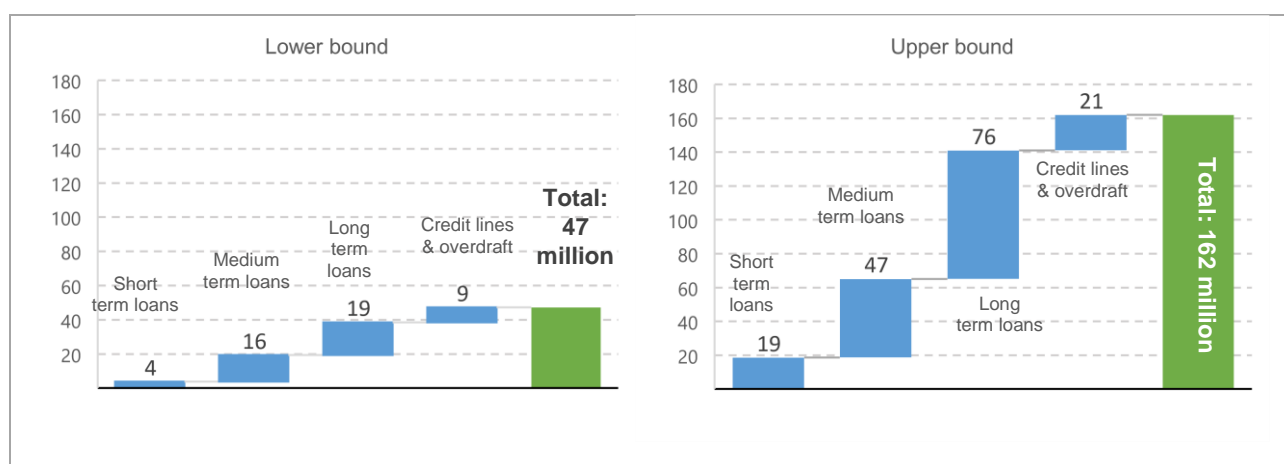
⁷¹ Medium-sized defined as 20-100 ha.

⁷² Short-term loans defined as <18 months, medium-term as 18 months – 5 years, long-term loans as >5 years maturities.

⁷³ The financing gap presented in this section is different from the total unmet demand presented in Section 2.2.2. In the quantification of the total unmet demand, all the enterprises in the population applying for finance are considered independent from their economic viability.



Figure 18: Financing gap by product in the agriculture sector, 2017, EUR million



Source: *fi-compass* survey.

The total financial gap for the Finnish agriculture sector is between EUR 47 million and EUR 162 million (Figure 18 and Table 8). The unmet financing needs are concentrated in specific segments of the sector, with the financing gap largest for medium-sized farms. The type of loans for which the gap is largest are long-term loans. However, some significant constraints exist also with reference to short-term loans and credit lines. Based on the *fi-compass* survey in fact, these products show the highest rejection rates, although this translates into a lower financing gap due to the lower average amount of short-term products.

Table 8: Financing gap by farm size in the agriculture sector, 2017, EUR million

		Total	Short-term Loan	Medium-term Loans	Long-term Loans	Credit lines/ bank overdraft
Upper bound	Small-sized farms	24.8	2.3	7.8	12.4	2.3
	Medium-sized farms	91.7	10.2	25.7	46.7	9.1
	Large-sized farms	45.6	6.0	13.1	16.8	9.6
	Total	162.0	18.5	46.6	75.9	21.0
Lower bound	Small-sized farms	7.2	0.5	2.6	3.1	1.0
	Medium-sized farms	26.2	2.1	8.6	11.8	3.7
	Large-sized farms	13.8	1.2	4.4	4.2	4.0
	Total	47.2	3.7	15.6	19.2	8.7

Source: Calculation based on results from the *fi-compass* survey.

Overall, the gap identified for Finland is relatively low compared to the overall size of the market. Still, it is likely that some viable farms do not have access to finance. This is caused by general issues related to the economic viability of farms, as the growth of the sector has been limited over recent years. As mentioned above, banks also question the management capacity and skills of some farm managers, which results in a rejection of the applications for finance.



On the supply side, banks have limits in terms of the concentration of their agricultural loan portfolio, potentially explaining some rejections of loan applications. Sometimes banks policies and targets do not allow them to increase their exposure to the sector, even if the potential borrower is creditworthy. Banks can also be very selective in their client base, as the supply of finance to agriculture is mainly provided by only four banks.

Young farmers represent a considerable part of the financing gap. About 20% of the financing gap might be attributable to them. This is caused by their lack of valuable assets that can be used as collateral. In addition, many young farmers already have high levels of debt from previously borrowing to take over an existing farm. This therefore limits their capacity to take on additional debt.

The financing gap for small-sized farms is relatively limited. Small farms in Finland are often operated part-time and specialised in crop production. This means that farmers in this segment usually only make modest investments that are funded with their own capital and assets, including forestry income, and so they only borrow small amounts, whereby the gap is limited.



2.5. Conclusions

Investments in the Finnish agriculture sector are on a substantially higher level than for the EU 28, but they have decreased in recent years, following a 2014 peak. This has coincided with lower agricultural incomes. In 2018, investments in fixed assets accounted for 87% of the GVA in agriculture.

Across sub-sectors, most investments are made in machinery. Horticulture farmers have also invested in greenhouses, while livestock farmers have required finance for the purchase land. Working capital requirements are large across the different sub-sectors as farmers need funding to cover their daily operating expenses.

Direct payments and investment subsidies from the CAP and national sources stimulate investments and support farmers' access to finance. Banks accept direct payments as collateral (for working capital loans) and are more open to provide finance if the proposed investment also benefits from RPD investment grants.

The agricultural finance sector in Finland appears to be characterised by high allocative efficiency. Banks are interested in financing the sector and they are competent in doing so, as evidenced by the high quality of their loan portfolio. As farmers' investment decisions tend to be grounded on sound business plans, banks are willing to finance them. The outstanding loan portfolio to agriculture, forestry and fishery has been growing constantly. While the Finnish banking landscape is concentrated, the lending environment to farmers remains quite favourable and interest rates are low.

Nevertheless, a financing gap of between EUR 47 million and EUR 162 million was identified for the Finnish agriculture sector. It is mainly medium-sized farms who face difficulties accessing finance and the gap is concentrated on medium and long-term investment lending. However, some constraints exist also with reference to short-term loans and credit lines, which are rejected by banks more often than long-term loans, although this translates into a lower financing gap due to their lower average amount. Even though the overall gap is low compared to the EU 24, access to finance for some viable farming enterprises in Finland might still be a challenge.

Loan rejections are due to investment risks that are considered too high by banks or because the farm is seen as being economically unviable. The small margins and profits of Finnish farmers are also a reason for loan rejections, as this increases banks' risk aversion. Limited competition on the agriculture finance market is also a reason for rejection, as banks can be selective in choosing their clients. Furthermore, banks limit their exposure to specific sectors in order to avoid the concentration of risk, which may stop some viable farms from accessing finance even though they are considered creditworthy.

Young farmers sometimes face difficulties in obtaining the finance they require and in undertaking investments. These farmers seek to grow from small or medium-scale operations to large scale-operations, in order to benefit from economies of scale and to thus increase their competitiveness. As they often already have high levels of debt from previously borrowing to take over an existing farms, their capacity to take on additional debt is limited.

Farmers would benefit from additional public intervention. Due to the limits of the banking policy and the growing amount of investments, the current levels of public policy support may be insufficient in the future.

The following recommendations for further actions related to financial instruments, including under the EAFRD, could be considered in order to increase Finnish farmers' access to finance:

- Based on the analysis, young farmers with ambitious investment projects face substantial obstacles in accessing finance. A financial instrument providing risk coverage to financial institutions, in the form of a guarantee or a loan risk-sharing fund might increase young farmer's probability to obtain the financial resources they need. The opportunities offered by the new CAP legal framework, for example related to the eligibility of the purchase of land for young farmers and the easier combination of grant, financial instruments and interest rate subsidies, as well as stand-alone working capital support, might provide further help.



- The use of financial instrument could be considered also for the wider segment of medium-sized enterprises, which sometimes face obstacles in accessing finance. This segment represents the largest farm enterprise group in Finland and is the one which can lead the development of the sector in the future. Considering that the interest rates faced by farmers are relatively high, a risk-sharing loan instrument might be considered, as it would combine risk coverage for banks with a substantial reduction of interest rates.
- The set-up of one or more instruments, with the launch of competitive procedures to select the partner financial institutions, might stimulate the interest of new banks to operate in the sector, reducing market concentration.



3. PART II: AGRI-FOOD SECTOR

3.1. Market analysis

Key elements on the Finnish agri-food sector

- The Finnish agri-food sector is the fourth largest industrial sector in the country, after the metal, chemical and forest industries (in terms of output and value added).
- Turnover in the food industry was EUR 10.7 billion in 2018, and it has been stable in recent years.
- GVA of the food and beverages manufacturing sector was EUR 2.5 billion in 2017. The main sub-sectors are dairy and meat processing, which together account for 43% of the sector's turnover.
- There were 1 749 enterprises in the Finnish food and beverages industries in 2017, the vast majority of which were micro-enterprises.
- The agri-food sector accounts for 4% of the Finnish work force, with a total of 106 400 direct and indirect workers.
- Finnish agri-food exports were valued at EUR 1.3 billion in 2018, of which 40% went to the neighbouring countries of Sweden, Estonia and Russia.
- The government aims to double food exports by 2025.

The Finnish agri-food sector is an important part of the national economy. Agri-food is the largest manufacturer of consumer goods in the country and, measured by the value of production, the fourth largest industrial sector, after the metal, chemical and forest industries. Companies in the sector employ 37 600 people directly and 68 800 people indirectly, for a total of 106 400 people, which is over 4% of Finland's total active population.

The food industry had a turnover of EUR 10.7 billion in 2018 (Table 9). While slightly higher than 2016-2017 levels, turnover in 2018 was lower than 2013-2015 levels. The value added for food and beverage manufacturing was EUR 2.5 million in 2017. Around 43% of this was from the dairy and meat processing sub-sectors, which had a total indirect value added of EUR 6.1 billion. The value added by the entire food supply chain was over EUR 15 billion in 2017, and accounted for 9% of the total value added in Finland.⁷⁴

Table 9: Value added and turnover of manufacturer of food and beverage in Finland, 2013-2018, EUR billion

	2013	2014	2015	2016	2017	2018
Value added for food and beverages manufacturing	2.3	2.3	2.4	1.5	2.5	-
Turnover for food and beverages manufacturing	11.2	11.15	10.9	10.7	10.5	10.7

Source: Eurostat – Structural Business Statistics, 2019.

The Finnish agri-food industry is highly polarised, with a relatively small number of large operators and a high number of small enterprises. Of the total 1 749 companies operating in the food and beverages manufacturing sector in 2017, only 1% (18) of these are large enterprises (above 250 employees). However, these large enterprises generate 65% of the industry's total turnover. From the remaining 1 731 enterprises, 77% are micro-enterprises (less than 10 employees), 17% are small enterprises (less than 50 employees) and the remaining 6% are medium-sized enterprises with between 50 and 250 employees.⁷⁵

The two largest retail chains (S Group and Kesko) have a market share of over 90%. The Finnish retail sector has strongly consolidated over the past two decades, which explains the current concentration. S-Group

⁷⁴ Source: Research strategy for the food industry 2018-2025, Finnish Food and Drink Industries' Federation.

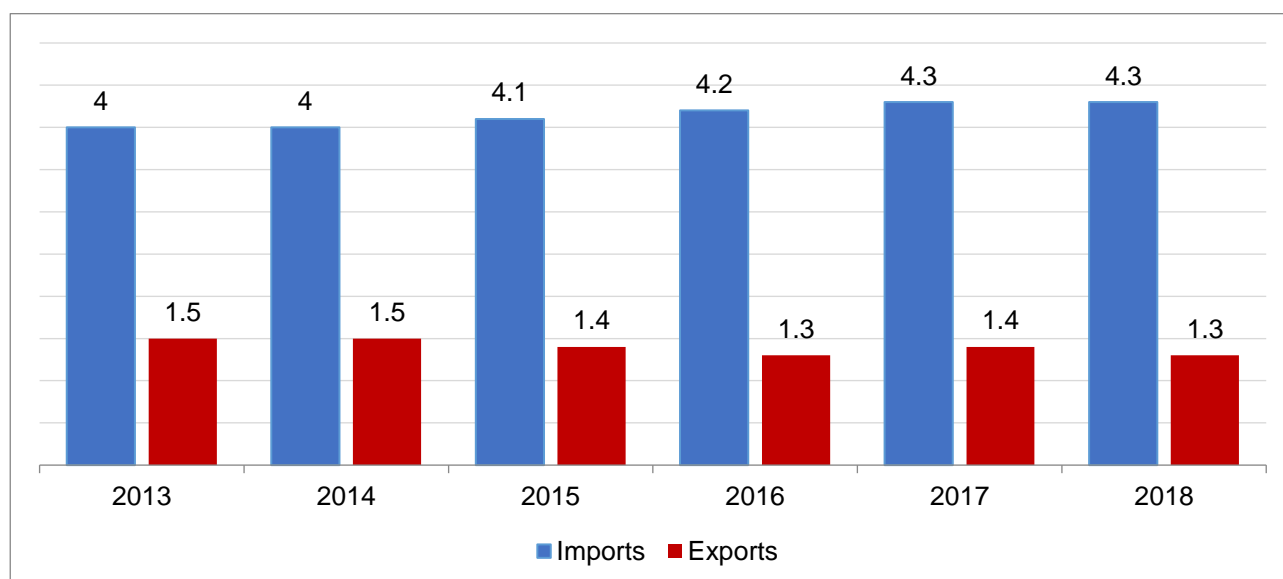
⁷⁵ Eurostat, 2020, Annual enterprise statistics for special aggregates of activities (NACE Rev. 2).



has been expanding particularly strong since 2005, and its lead over K-Group increased to more than 13 percentage points in 2015. K-Group's market share amounted to 35.8% in 2018 (narrowing the gap with S-Group to 10 percentage points). This was caused by the acquisition of *Suomen Lähikauppa* by K-Group in April 2016. Lidl has grown steadily in recent years. In 2018, the German chain reached a market share of 9.6%. The three largest chains strengthened their positions at the expense of smaller local chains and other retailers, whose market share dropped to 7.9% in 2018.⁷⁶ Online food sales are still marginal in Finland, with only a 0.3% share of total sales. Hence, the food and beverages industries have limited market power in the value chain.

Food exports show a decreasing trend. After decreasing for several years due to the Russian embargo (from 2014 onwards), food exports increased in 2017 before falling again in 2018 (Figure 19). In 2018, Finnish agri-food exports were valued at EUR 1.3 billion, of which 40% went to the neighbouring countries of Sweden, Estonia and Russia. The main export items were dairy products, meat and cereals. Compared to 2016, the value of food exports were around 5% high in 2017. The imports of food and beverages have increased slightly over the last six years. In 2018, import levels were almost four times higher than export levels.

Figure 19: Finnish exports and imports of food and beverage products, 2013-2018, EUR billion⁷⁷



Source: Statistics Finland, 2019.

The government intends to double food exports by 2025, particularly to other Nordic countries but also to Germany and East Asia.⁷⁸ Currently, the majority of Finnish food production is consumed on the domestic market, with only a small share of companies focusing on exports. The government's food policy report, Food 2030,⁷⁹ set nationwide goals to support the growth potential and profitability of the food industry and to enhance sustainable food production in Finland. One of the objectives of the campaign is to double exports by 2025. According to the report, food made from high-quality domestic produce will be Finland's strength in the international market. Food innovation and specialty products, tailored to target markets, will play a key role in efforts to increase the value of food exports.

⁷⁶ Jyrki Niemi and Minna Väre, 2019, Agriculture and food sector in Finland.

⁷⁷ This includes beverages; animal, vegetable oil, fat; food and live animals; live animals; meat and meat preparations; dairy products and birds' eggs; cereals and cereal preparations; vegetables and fruit; sugars, sugar preparations and honey; coffee, tea, cocoa, spices; feeding stuff for animals; miscellaneous edible products and preparations.

⁷⁸ As indicated in the 'Food from Finland program'.

⁷⁹ https://mmm.fi/documents/1410837/1923148/lopullinen03032017ruoka2030_en.pdf/d7e44e69-7993-4d47-a5ba-58c393bbac28.



3.2. Analysis on the demand side of finance to the agri-food sector

This section describes the drivers of demand for finance in the agri-food sector and analyses the met and unmet demand. It seeks to identify the main reasons for agri-food enterprises to request financing and the agri-food sub-sectors showing the largest need for finance. The section also provides an analysis of the type of enterprises, which face more constraints in accessing credit. The examination of the demand for agri-food finance is based on the findings from the Agri-food survey results of 50 Finnish firms, as well as interviews with key stakeholders in the agri-food sector, combined with national statistics.

Key elements on finance demand from the Finnish agri-food sector

- In 2018, the gross investment in tangible assets was estimated at just over EUR 400 million.
- Investments of Finnish agri-food enterprises have increased in the last years, with mostly large-sized enterprises investing.
- Finnish companies invest mainly in capacity expansion, inventories and working capital, product development and hiring and training employees.
- Capacity expansion has been mostly undertaken by the following sub-sectors: bakeries, dairies and slaughterhouses.
- The main difficulties faced by agri-food enterprises in Finland are related to access to qualified work force, high cost of production, access to market and low purchase prices of their products.
- Own funds have been the most important source of finance for Finnish agri-food enterprises, but the use of bank loans is higher than for the EU 24 according to the Agri-food survey.
- Companies in the Finnish food industry are rarely discouraged from applying for finance and experience fewer credit rejections than the EU average.
- Specific difficulties in access to finance exist for start-ups.
- The unmet demand for finance is very low, estimated to be EUR 3.9 million for the agri-food sector.
- Some constraints have been identified on the demand side of the market, related to: (i) too high business risk perceived by banks, (ii) absence of collateral, and (iii) insufficient levels of own equity and business planning competencies, in particularly for start-ups.

3.2.1. Drivers of total demand for finance

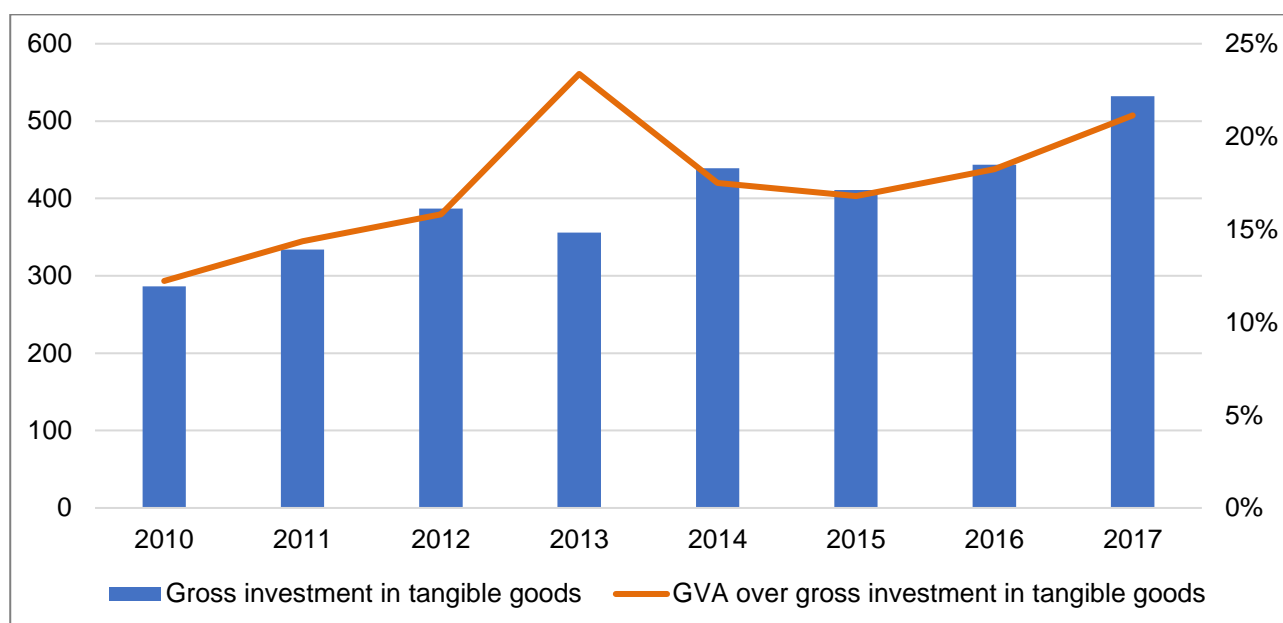
Gross investments in tangible goods by Finnish agri-food enterprises have grown in recent years. They increased from below EUR 300 million in 2010 to just over EUR 400 million in 2018, following a peak of around EUR 530 million in 2017 (Figure 20). Investment over GVA has been increasing since 2015, after dropping sharply from a 2013 peak.⁸⁰

The Finnish agri-food sector has developed steadily throughout the years, with the overall structure of the sector, in terms of enterprise size and business environment, remaining stable. During interviews, agri-food enterprises and food associations said that while companies are still investing in maintenance and development, the overall investment volumes for innovation have not been increasing.

⁸⁰ Note, this 2013 peak was due to the very low GVA of Finnish food and beverage producers in 2013 (GVA was only 60% of the previous year's level).



Figure 20: Gross investments in tangible goods of Finnish food and beverage producers and GVA over gross investment in tangible goods, 2010-2017, EUR million



Source: Eurostat – Structural Business Statistics, 2019.

Investment needs vary between sub-sectors. For the food manufacturing sub-sector, two thirds of all investments are made by large-sized enterprises.⁸¹ Large-sized enterprises also own 84% of the total fixed assets in the sector. The financial position of these large-sized firms is relatively strong, with an equity ratio of 52% and a credit demand of EUR 3.8 billion, which accounts for 77% of the total credit to the sub-sector (Table 10). These companies usually secure their funding through international capital markets and domestic and international investors. Because they are unlikely to experience constraints in their access to finance, they are not a focus of this report.

While the financial position of SMEs in the agri-food sector is weaker than that of large-sized enterprises, their position is far from critical. In 2017, there were 1 559 of small and medium-sized enterprises in the sector, with an average equity ratio of 42.3%.⁸² While these enterprises accounted for 35% of the total turnover in the industry, but only 16% of the total assets. One third of the total net investments in the food manufacturing sub-sector are made by SMEs (Table 10).

⁸¹ Statistics Finland, 2019.

⁸² Ibid.

**Table 10:** Financial indicators of Finnish food manufacturing industry in 2017

Indicator	All enterprises	SMEs	Large-sized enterprises
Number of enterprises	1 610	1 559	51
Turnover (EUR million)	9 235	3 253	5 982
Fixed assets total (EUR million)	5 881	966	4 914
Net investments in tangible assets (EUR million)	377	127	250
Equity ratio, %	50.0	42.3	51.9

Source: Statistics Finland, 2019.

The largest Finnish food manufacturer produce meat products (Table 11). The largest enterprise by turnover, *HKScan Oyj*, is part of a group of enterprises focussing on the Finnish, Swedish, Danish and Baltic markets. It produces, markets, and sells pork, beef, poultry, meat products and ready-made meals through various brands (such as *HK*, *Kariniemen* and *Via*). The second largest food manufacturer is *Apetit Oyj*'s. Its business areas include food solutions, oilseed products and grain trade. They have embarked on the healthy food trend and promote vegetables by offering healthy and tasty food solutions. The third largest enterprise is *Raisio*, which is specialised in healthy and responsibly produced food and fish feeds.

Table 11: Turnover for the 10 largest Finnish companies manufacturing food products in Finland for year 2018, EUR million

Company, subsidiaries included	Turnover EUR million
HKScan Oyj	1 808
Apetit Oyj	314
Raisio Oyj	306.8
Suomen Sokeri Oy	120.8
Sucros Oy	95.9
Hätälä Oy	88.9
Polarica Oy	42.4
Satarehu Oy	30.5
Lunden Ab Jalostaja, Oy	29.9
Kinnusen Mylly Oy	29.5

Source: Largest Companies database downloaded on 30 December 2019.⁸³

Demand for finance in the Finnish agri-food sector is largely driven by:

- the need to expand capacity;
- inventory and working capital needs;
- the need to develop new products, and

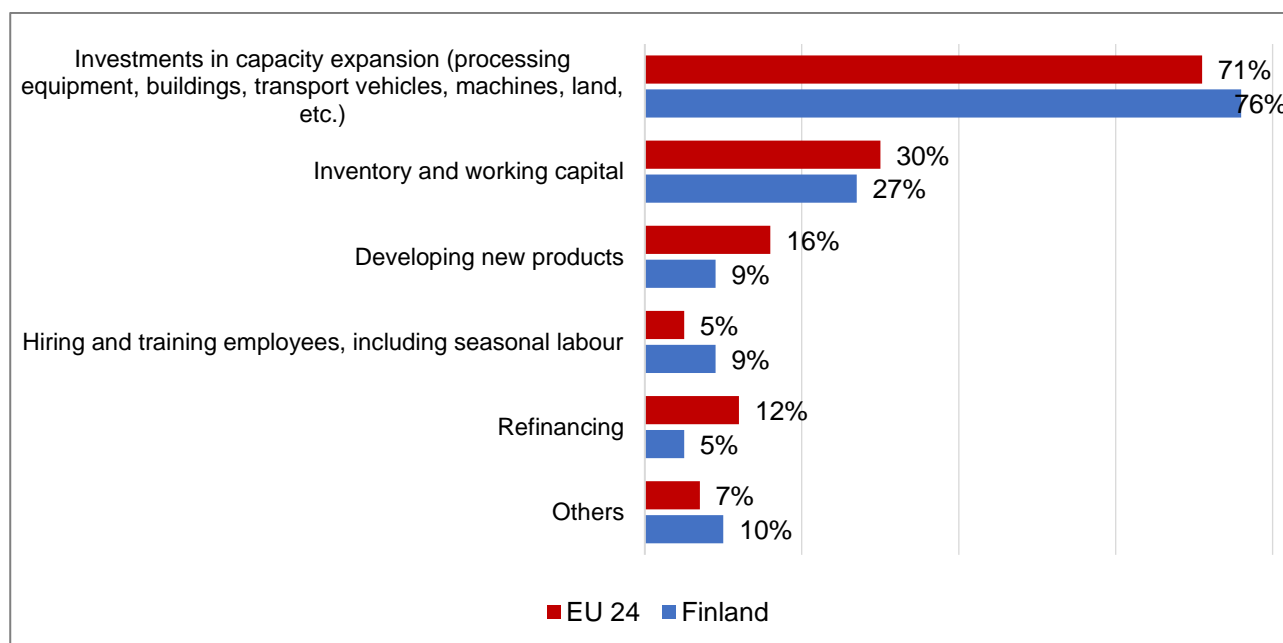
⁸³ Largest Companies database downloaded on 30 December 2019, <http://www.largestcompanies.com/toplists/finland/largest-companies-by-turnover/industry/manufacture-of-food-products>.



- the hiring and training of employees.

According to the Agri-food survey, 71% of the respondents required finance for investments, 27% for inventory and working capital, 9% for product development and the hiring of new employees, and 5% for refinancing (Figure 21). Compared to the EU 24, one notable difference for Finland relates to the share of respondents seeking finance for product development. The level in Finland (9%) is half the EU 24 average, which may point to a lack of innovation in the Finnish agri-food sector. On the other hand, the share of Finnish companies in need of finance for the hiring and training of employees was 4 percentage points higher than the EU 24 average, which indicates a rather specific need that was not observed across the EU 24.

Figure 21: Purpose of bank loans in the agri-food sector in 2018



Source: Agri-food survey.

Capacity expansion mostly included investments into highly automated equipment, particularly for bakeries, dairies and slaughterhouses. For bakeries, the equipment includes machines that can manufacture a Finnish type of flat bread without much manual input required (for example, through automated dough cutting and piece weighting). Food industry representatives mentioned that gluten-free bread and bakery products are becoming increasingly popular in Finland. Equipment that can handle non-gluten dough is becoming increasingly relevant and has already been invested in. For dairies, investments in automation have been pursued in, for example, equipment for the automated dosing and salting of meat. Meat manufacturers have invested in machinery that would allow them to expand their product offering. For example, some mentioned that they had invested into slicing meat facilities aimed to increase the quality of the sliced meat (without having to add phosphate to absorb fluid from the meat or to make it more tender).

Increased technological innovation has helped to improve the cost efficiency of production and the real-time control of production processes. It has supported agri-food enterprises in manufacturing standardised and traceable products, strengthening the efficiency of food production, and improving the management of the product and supply chains. Agri-food enterprises mentioned that, for example, investments in new packaging materials and methods helped to extend the shelf life of berries and vegetables.

In order to cover their operational expenses, agri-food enterprises demand working capital. Agri-food enterprises said that a working capital loan is typically needed to finance the production of a product (including the purchase of raw materials). The loan is then repaid when the goods have been sold and paid for. Typically, working capital loans are being repaid within 1.5 years.



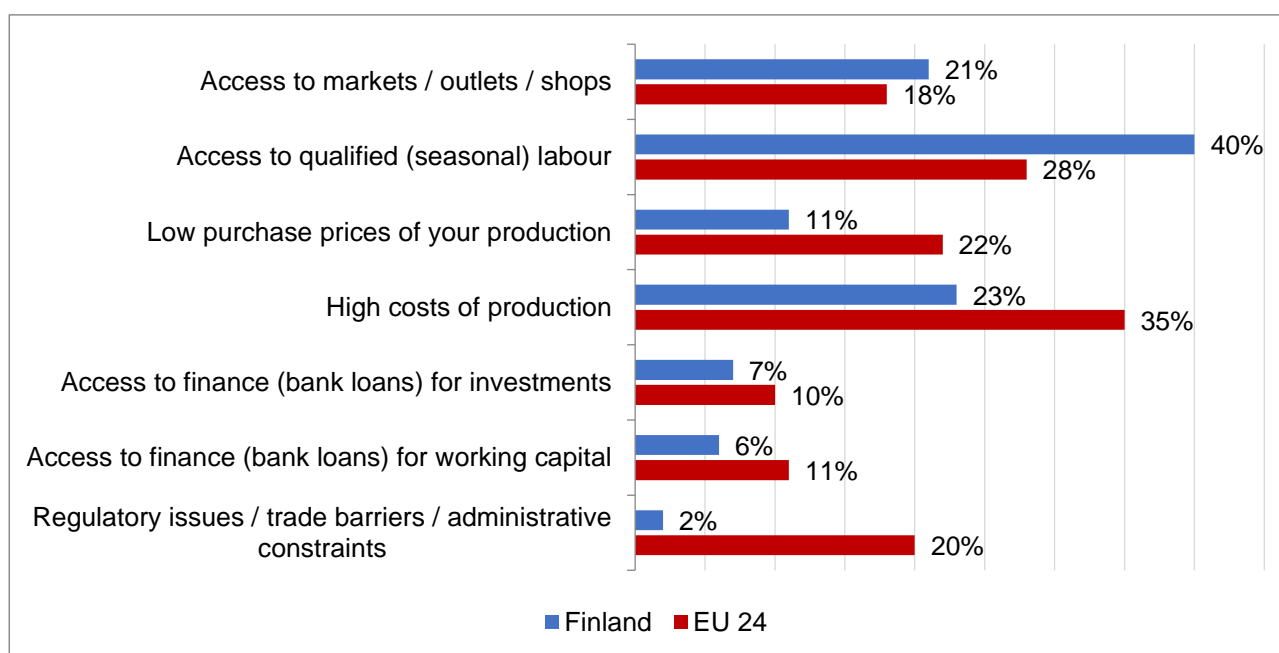
Agri-food enterprises also invested in the development of new products, largely to generate higher levels of value addition. The Finnish grain traders interviewed mentioned that there is a need to invest in this area, as every year Finland exports around 300 million kg of oats, and the value of these exports could be three to five times higher if they were exported as traditional milling products. Furthermore, for snacks, biscuits, bars, and other innovative products, margins are even larger.⁸⁴

Finnish agri-food enterprises invest in the training of their staff, including seasonal labour. One of the core areas in this regard is food hygiene. Food industry associations mentioned that, by law, Finnish agri-food enterprises need to be able to show that their staff have hygiene competences. Some enterprises have also invested in the so-called 'Hygiene Passports',⁸⁵ which verify the hygiene proficiency of staff that work in the sector and who handle unpacked, perishable food.

A need for more sustainable production practices in the sector was underlined in interviews with agri-food enterprises. This need is driven by consumer demand for strengthened animal welfare practices throughout the supply chain. Agri-food enterprises need to reorganise and adjust their supply chain management and sourcing practices to respond to these changes. In some cases, this will require major structural changes in the process of production (for example, in the slaughtering of animals).

Access to finance is less of a problem for Finnish agri-food companies than for the EU 24. According to the Agri-food survey, Finnish firms are less challenged in accessing both investment and working capital finance compared to the average EU 24 firm (Figure 22). Only 7% of respondents in Finland mentioned access to long-term finance was a challenge. The number of respondents facing difficulties in receiving working capital finance was even lower, at 6%. Interviews with agri-food enterprises confirmed that access to finance is not constrained. For the loans that are not approved, the main reason is related to the enterprise's deficiency of investment planning competencies, rather than the bank's ability to provide finance.⁸⁶

Figure 22: Difficulties experienced by the Finnish agri-food enterprises in 2018



Source: Agri-food survey.

Issues related to access to qualified work force, including seasonal labour, were mentioned as a key problem by Finnish agri-food enterprises and as an obstacle for almost half of the enterprises in the sector

⁸⁴ Luke, Finnish agriculture and food sector 2016/17.

⁸⁵ According to Food Act 23/2006 section 27 subsection 3, Source: https://www.finlex.fi/en/laki/kaannokset/2006/en20060023_20110352.pdf.

⁸⁶ Interviews with Finnish agri-food enterprises, 2019.



(40%, Figure 22). Despite the increasing level of automation in food manufacturing, the use of labour is still significant. This is particularly the case in meat cutting, even with state-of-the-art facilities. Enterprises find it challenging to find qualified people that want to work in the sector, as workers are not considered well-paid. High production costs also pose a significant challenge to Finnish agri-food enterprises (23%), despite being significantly lower than the EU 24 average.

With the Russian trade embargo, Finnish agri-food enterprises lost an important market for their produce. During interviews, Finnish agri-food enterprises mentioned that because this important market is currently not available for some food segments, they need to find other/new markets. Russia has been the key destination for Finnish food exports, accounting for around 26%-28% of exports over the 2009-2014 period. By the end of 2017, the number had fallen to 8%.⁸⁷ Food industry associations have pointed out that the Finnish public authorities are trying to reach an agreement with new export markets outside the EU. There is a strong focus on East Asia, including Japan, China as well as South Korea.

Policy measures exist to improve Finnish agri-food enterprises' access to finance. The EAFRD supports Finnish agri-food enterprises through the RDP sub-measure 4.2 'Support for investments in processing/marketing and development of agricultural products'. The overall objective of the RDP is to support 500 companies during the 2014-2020 programming period. Most of the enterprises which have received support are large-sized companies that focus on the processing and preservation of berries and fruits. This was followed by enterprises in the dairy and meat and poultry processing sub-sectors. Achieving the programme's overall objective would require around 40% of all companies operating in the Finnish food manufacturing sub-sector to utilise these support measures.

The agri-food sector can benefit from the EAFRD support under measure 4.2 of the RDPs. By the end of 2019, 477 processors had been approved grants for their investment projects, with aid amounting to EUR 73.2 million (Table 12). Taking into account the requirement for beneficiaries to contribute with their own private resources, total investments in the agri-food sector supported from the CAP reached more than EUR 140 million by the end of 2019. Like for other measures, the non-approval rate of applications is very low, demonstrating a very good skill level for the preparation of business proposals and sharing the required information to allow for the proper data assessment by the public administration.

Table 12: Finland Mainland RDP 2014-2020: Financial data for sub-measure 4.2, by the end of 2019

Sub-measure	Number of all submitted applications under the grant calls	Total support requested by all submitted applications (EUR million)	Number of approved and supported applications under the grant calls	Budget for the approved applications (EUR million)	Number of all submitted applications under the grant calls (EUR million)
4.2 Support for investments in processing/marketing and/or development of agricultural products	508	76.4	477	73.2	3.2

Source: Ministry of Agriculture and Forestry, 2020.

Note: The total number of applications covers all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not allowing for their evaluation, and/or with insufficient value-added, and/or ranked at a place for which the budget under the call was no longer available. Some applications could have been withdrawn.

⁸⁷ Some food products have turned out to be irreplaceable and were thus excluded from the Russian embargo. This includes some cheeses and other dairy products. Source: Niemi, Jyrki: Finnish food exports to Russia down more than 70%, 2017, <https://www.luke.fi/en/news/finnish-food-exports-russia-70-percent/>.



The agri-food enterprises interviewed also suggested that part of the current support measures targeted to rural development could be replaced with new financial instruments, especially for the funding of agri-food enterprises located in rural areas.

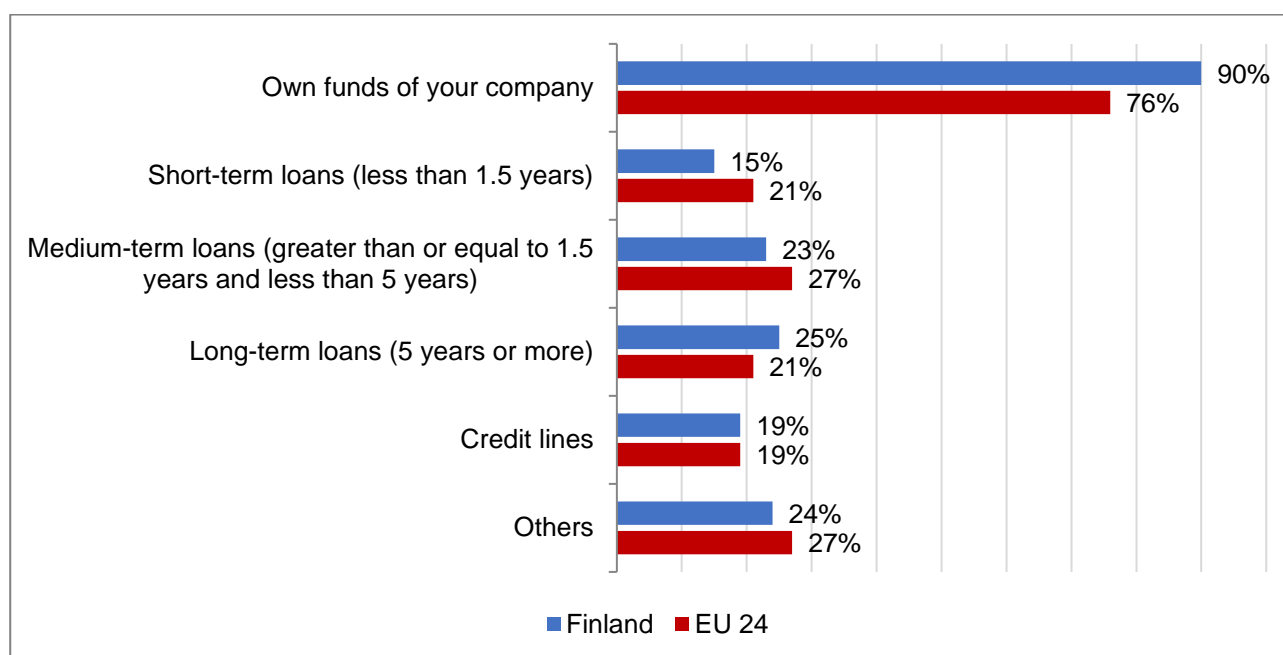
3.2.2. Analysis of the demand for finance

The potential total demand for finance combines both met and unmet demand. The met demand consists of the value of all applications for finance, which were accepted by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial institution, offers of credit refused by agri-food enterprises, alongside cases where agri-food companies are discouraged from applying for credit due to an expectation of rejection or refusal.

Based on the Agri-food survey, the unmet demand for the Finnish agri-food sector was estimated at EUR 3.9 million.

Own funds have been the most important source of finance for Finnish agri-food enterprises. According to the Agri-food survey, own funds the most important source of finance for 90% of enterprises (Figure 23). This is noticeably higher than the EU 24 average figure of 76%. Finnish enterprises stated that long-term loans (25%) and medium-term loans (23%) were other important sources of finance. These results were supported in interviews with agri-food enterprises, who confirming that they use their own funds for smaller investments and bank loans for larger investments.⁸⁸

Figure 23: Most important financing instruments to agri-food enterprises in 2018



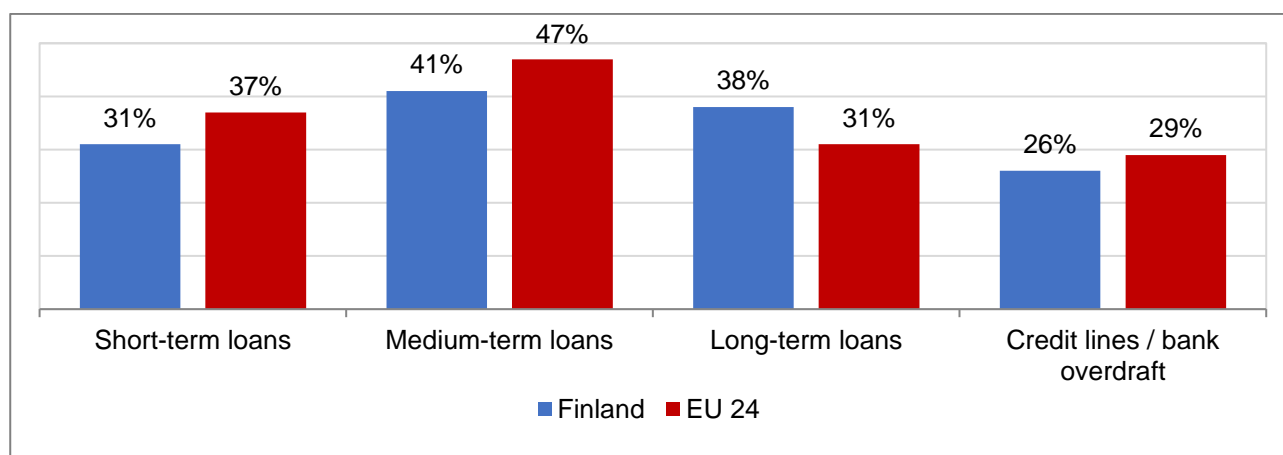
Source: Agri-food survey.

Despite the importance given to own resources, a large share of Finnish agri-food enterprises applied for finance across all loan maturities. The majority of respondents applied for medium and long-term financing, with around 40% of Finnish companies having applied for medium-term maturity loans in 2018 (Figure 24). The distribution of maturities follows what should be expected given the key drivers of finance demand in the agri-food sector (i.e. mainly capacity expansion and innovation). It is unsurprising that there is less demand for working capital finance, given that Finnish agri-food enterprises are often able to use their own funds to cover these needs, as mentioned above.

⁸⁸ Interviews with agri-food enterprises, 2019.



Figure 24: Finnish agri-food enterprises applying for finance in 2018, by financing product

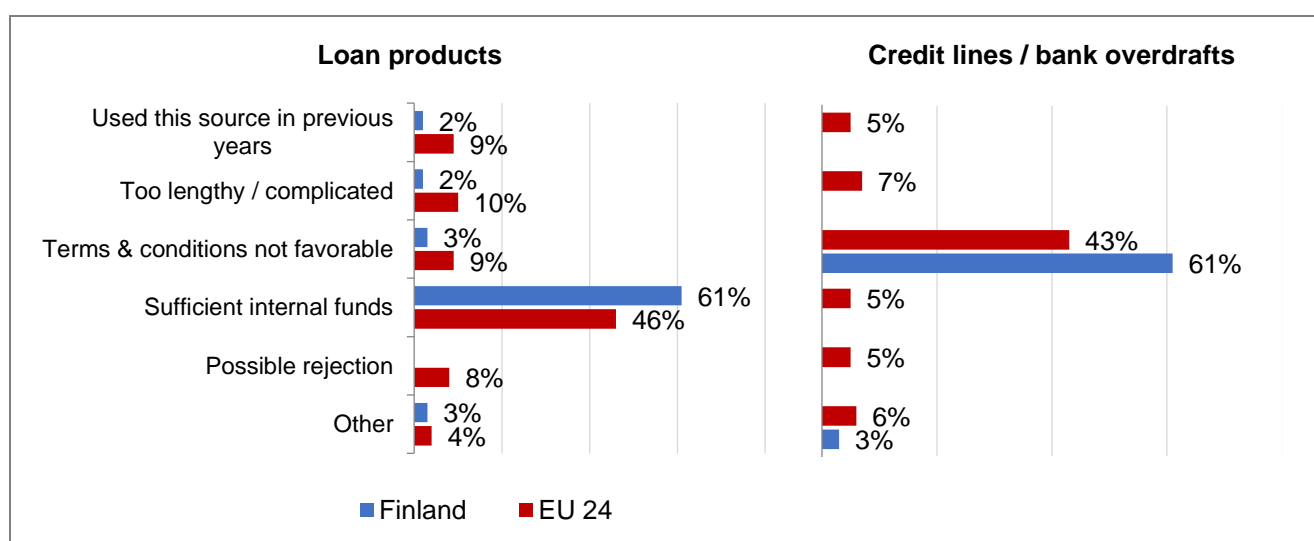


Source: Agri-food survey.

Interviews with banks and agri-food enterprises confirmed that the standard loan application size for short-term loans ranges from around EUR 165 000 for small-sized firms to approximately EUR 9 million for large-sized firms. The application size for long-term loans ranges from around EUR 600 000 for small-sized firms to EUR 15 million for larger firms. Sometimes, loans of up to EUR 33 million have been granted. The loan amounts for other maturities lie somewhere between these two ranges.

None of the respondents to the Agri-food survey mentioned that they fear rejection, which indicates that banks and agri-food enterprises have a good relationship (Figure 25). More than 60% of the respondents did not apply for loans of any maturity due to sufficient own funds of the company. All the other reasons included in the agri-food survey seem to have a rather limited impact in Finland. In interviews, many Finnish agri-food enterprises said that they base their investment strategy on the prudence principle. This means that they delay investment decisions to accumulate own capital that can be used to cover their working capital needs. Some agri-food enterprises mentioned that the loan application process is overly complicated. While some agri-food enterprises mentioned that they would have appreciated better loan conditions (e.g. longer loan maturity, lower interest rate), the lack of such conditions was not a reason for declining a loan offer.⁸⁹

Figure 25: Reasons for not applying for loans in the agri-food sector in 2018



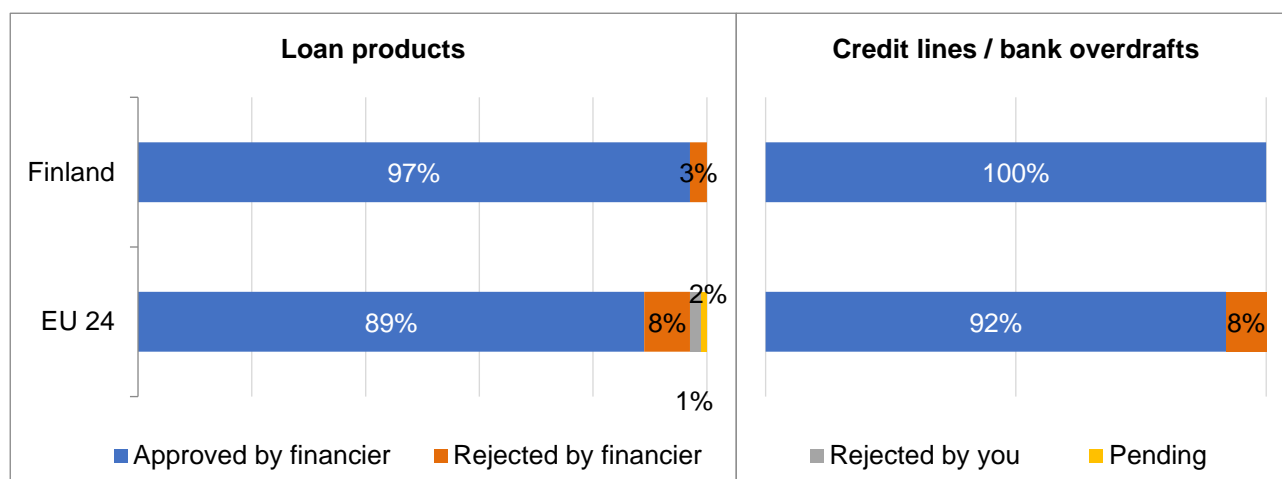
Source: Agri-food survey.

89 Interviews with agri-food enterprises, 2019.



Banks' rejection rates are low in Finland. No rejections were recorded for credit lines/bank overdraft applications, while a rate of 3% was recorded for other bank products (Figure 26). This compares to rejection rates of 8% for both products for the EU 24. Agri-food enterprises confirmed these low rejection rates and pointed out that this is also because small-sized companies are able to utilise support measures from the RDP. Innovation is supported with innovation vouchers of up to EUR 4 000 plus VAT,⁹⁰ and the first round of funding is well provided. The low rejection rates are also in line with the findings of the most recent SAFE survey, which found that 19% of all Finnish SMEs applied for a bank loan in the past 6 months and that, of those, 82% received the full amount, 6% received 75% or more of the full amount, and only 5% were rejected. Overall, the access to finance of Finnish agri-food companies is far less constrained than the EU 24 average.

Figure 26: Results from loan applications in the agri-food sector in 2018



Source: Agri-food survey.

Loan applications by Finnish agri-food enterprises are mostly rejected when banks consider the business risk to be too high. The high risk that banks associate with some enterprises is also related with the absence or insufficient levels of collateral. The latter is a regular issue for start-ups, but also more in general for companies operating with assets of low value (see section 3.3.2). While banks have highlighted that the key factors in the loan application analysis are the cash flows and repayment capacity of the borrower, start-ups are also rejected because they lack an own capital contribution for the investment, provide unrealistic project plans, or apply for loans with a maturity that banks consider too long.

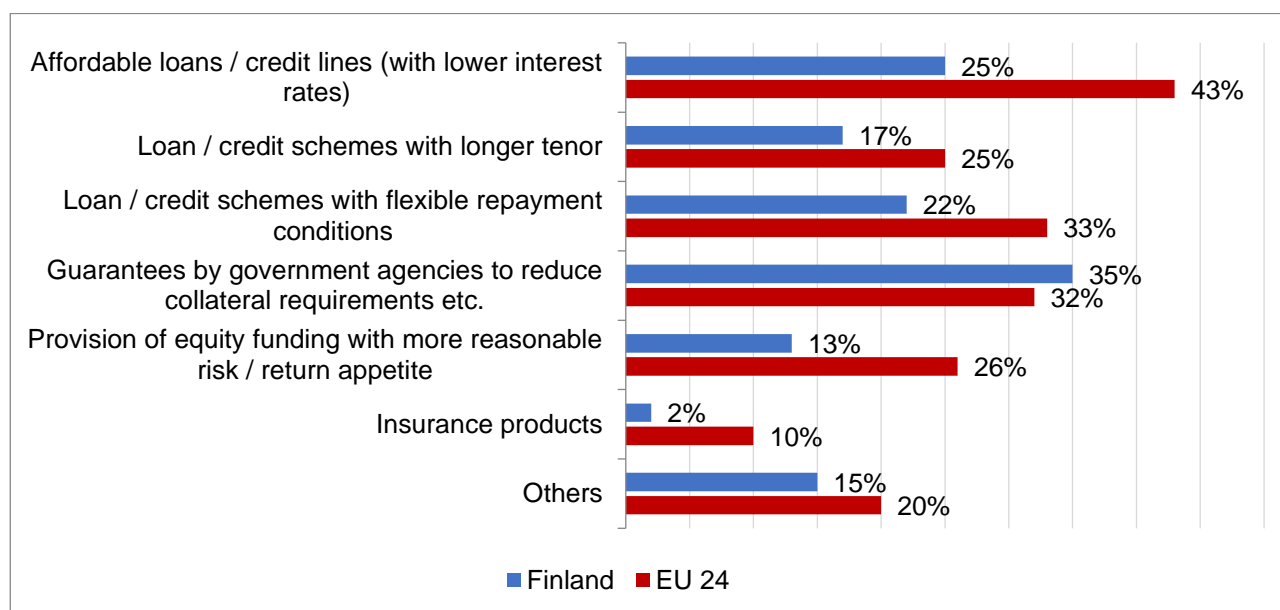
To address the difficulties related to accessing finance, Finnish agri-food enterprises mostly demand public guarantees. Given that access to finance does not seem to be a key concern for Finnish agri-food enterprises, the demand for improved terms and conditions of financial products is well below EU 24 levels (Figure 27). Only 25% of respondents mentioned that affordable financial products would help them, compared to 43% in the EU 24. Additionally, loans with longer maturities or more flexible repayment schemes were only mentioned by 17% and 22%, respectively, of Finnish enterprises, compared to 25% and 33% for the EU 24. The demand for guarantees to reduce collateral requirements, however, is slightly higher for Finnish agri-food enterprises. This view is shared by Finnish banks, who believe that public guarantees would allow them to increase their lending to the sector (see Section 3.3.1.3 for more details). Furthermore, agri-food enterprises also expressed concerns that mature enterprises with low asset levels may face difficulties in accessing

90 In Finland, innovation vouchers are mostly provided by Business Finland. The innovation voucher is intended for SMEs engaged in well-established business, who have a new product or service idea with international growth potential, and for which the company needs external expertise. The innovation voucher aims to find new opportunities for businesses, to support business growth and to encourage new businesses to innovate. The innovation voucher requires EUR 1 000 plus VAT co-financing from the enterprise. For more details, please see: <https://www.businessfinland.fi/en/for-finnish-customers/services/funding/research-and-development/innovation-voucher/>.



finance for investments, despite having a strong liquidity position. In this regard, properly designed guarantees would help them to meet collateral requirements.⁹¹

Figure 27: Solutions to reduce difficulties in accessing finance, 2018

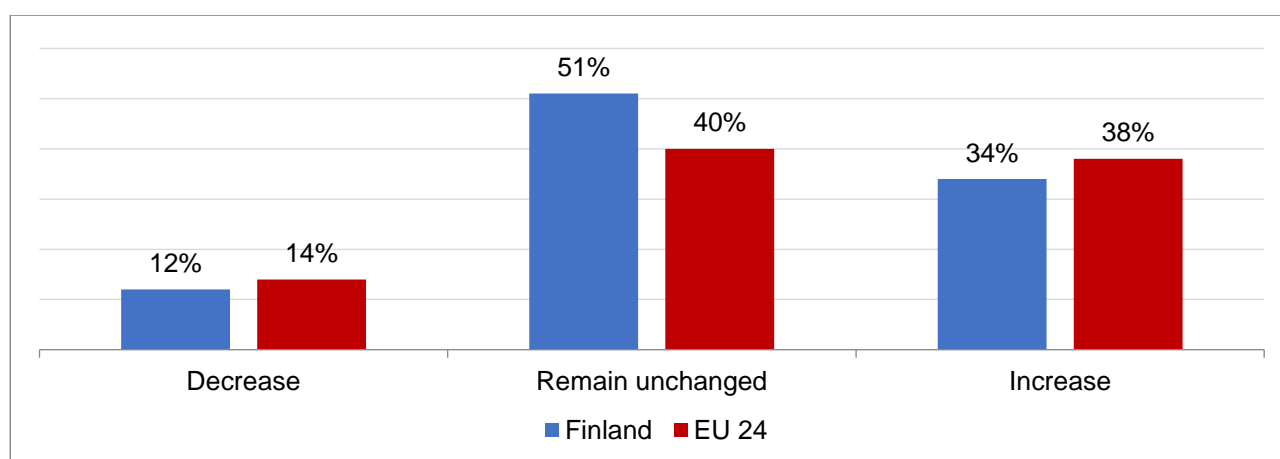


Source: Agri-food survey.

The demand for finance by Finnish agri-food enterprises is expected to remain stable in the short-term.

Around half of the Agri-food survey respondents do not anticipate a change in their financial needs over the next two to three years. One third (34%) expect an increase while 12% expect a decrease. These shares differ slightly from those reported by the EU 24 average, underlining the higher stability of the Finnish agri-food sector (Figure 28).

Figure 28: Agri-food companies' expectations on future financing needs, 2018



Source: Agri-food survey.

91 Interviews with agri-food enterprises, 2019.



3.3. Analysis on the supply side of finance to the agri-food sector

This section provides an overview of the financial environment in which the agri-food sector in Finland operates. It describes the main available financial products, including any currently operating financial instrument targeting the agri-food sector, with national and/or EAFRD resources. The section draws its information from interviews with financial institutions, as well as from national statistics.

An attempt is made to give a description of the general conditions for accessing finance, such as interest rates and requirements for collateral, and the availability of funding for agri-food enterprises. Potential differences in availability of financial products across different types of agri-food enterprises are reviewed and analysed.

Key elements on the supply of finance to the Finnish agri-food sector

- Finnish agri-food enterprises are served by a fairly concentrated finance sector, made up of a few large banks, a number of smaller banks, and government-based organisations and cooperatives.
- Financing to the agri-food sector is based on the usual finance products offered to Finnish businesses.
- Enterprises, especially medium and large-sized enterprises, utilise standard instruments in both short and long-term financing.
- Public support also exists for micro, small and medium-sized enterprises, including dedicated support for start-ups.
- Overall, the level of non-performing loans are low (1.5%).
- The average interest rate on new loans to enterprises in the manufacturing sector was 1.47% in 2018.
- Outstanding loans for the manufacturing of food, beverages and tobacco products were almost EUR 1.2 billion in 2018.
- The Finnish financial sector is sound overall. Banks are interested in financing the agri-food sector, with lending to the sector reaching a peak in 2018.
- Constraints on the supply side mainly relate to a lack of collateral, in particular for small-sized enterprises.
- According to banks, the market is also limited by the prudent approach of agri-food enterprises, which tend to refrain from applying for finance. Banks believe that Finnish enterprises should invest more in innovation.

3.3.1. Description of finance environment and funding availability

3.3.1.1. Finance providers

The Finnish finance sector has been relatively stable in recent years. The market is concentrated around a few large banks and a number of smaller operators, which have regional or local significance that is higher than their actual national market share.

Food manufacturing enterprises are able to utilise public and government-based funding, including grants from the 2014-2020 RDP, but also business promotion tools, including innovation funding, grants and collateral from government-based organisations such as *Business Finland*, *Finnvera* and *Tesi*. Even so, no specific data on the uptake by the agri-food sector of these tools has been obtained, signalling that the potential uptake may be low. However, the below information serves to contextualise the Finnish support landscape overall, including the possible measures also available for the agri-food sector:

- **Business Finland** was created in January 2018 by the merger of *Finpro*, which offered services for internationalisation, investments and tourism promotion, and *Tekes*, which offered funding for innovation activities. It is the Finnish government organisation for innovation funding and trade, travel and investment promotion. Its aim is to develop Finland to be the most attractive and competitive innovation environment, so companies are able to grow, change, and succeed.⁹²

92 Business Finland, 2019, Business Finland: Results and Impact 2018.



- **Finnvera** provides financing for the start-up, growth and internationalisation of Finnish enterprises (including the agri-food sector) and guarantees against risks arising from exports. Finnvera is a specialised financing company owned by the Finnish State and it is the official Export Credit Agency of Finland. It targets enterprises that are in a transformation stage and have the potential to become a successful business. In 2019, it had 25 000 clients, of which 89% were micro-enterprises, 11% were SMEs and mid-caps and 0.6% were large-sized enterprises.⁹³
- **Tesi** is a government-owned venture capital and private equity company that also operates in food manufacturing. It invests in companies during their growth and expansion stages, as well as in Mergers and Acquisitions (M&A).⁹⁴ Tesi invests on the same terms with private investors. After the investment, Tesi participates in the company's business development alongside the private co-investors, mainly via board activities and strategy work.⁹⁵

Transactions through cooperatives have a long history and strong roots in the Finnish agricultural and agri-food markets, with cooperatives having provided equity to many Finnish agri-food enterprises.⁹⁶

The largest Finnish food manufactures in the meat, milk and dairy sub-sectors have their origins in cooperatives, and are owned and controlled via cooperatives to this day.

Banks provide their services to the agri-food sector, just as they do to other sectors of the Finnish economy. The two largest banks are OP Financial Group, a domestic cooperative, and Nordea, a publicly listed company and one of the largest financial operators in the Nordic countries. OP Finance Group has a market share of 40% and Nordea of 30%.⁹⁷ Other larger operators are Denmark-based Danske Bank and Sweden-based Handelsbanken, with market shares of 9% and 8%, respectively. Other operators play a minor role in the provision of business loans or only operate in the public sector, for example by providing financing to Municipalities (Table 13).

Table 13: Overview of financial operators business loans share in Finland, 2018

Financial operator	Business loan portfolio (EUR billion)	Market share (%)
<i>OP Financial Group</i>	21.1	40
<i>Nordea</i>	16.2	30
<i>Danske Bank</i>	4.8	9
<i>Handelsbanken</i>	4.0	8
<i>Municipality Finance</i>	2.9	5
<i>Säästöpankki Group</i>	1.0	2
<i>Aktia Bank</i>	0.5	1
<i>POP Pankki – Group</i>	0.4	1
<i>Ålandsbanken</i>	0.6	1
<i>Oma Säästöpankki</i>	0.6	1
<i>Others</i>	1.3	2

Source: Bank of Finland, 2019.

⁹³ Finnvera, 2019, Finnvera Group Half-year Report H1/2019, 1 January-30 June 2019.

⁹⁴ Industrial investments are mainly focused on financing industrial companies, industrial investments and mergers & acquisitions. Industrial investments are closely aligned with Finland's interests and are used to finance companies with industrial operations as well as investments in new plants, new equipment and expansion projects. Financing packages for M&As are often created to build larger and internationally stronger corporate entities.

⁹⁵ Tesi, 2019, Tesi's Performance and Results 2018, Creating impact and profit.

⁹⁶ Alho, 2019.

⁹⁷ The banks interviewed did not want to disclose their share in agri-food given concerns over commercial strategies.



3.3.1.2. Financial products

The agri-food companies rely on the standard financial products offered by banks to corporate clients, as there are no specific products that target the sector. This is especially the case for large and medium-sized enterprises that utilise standard corporate products for short and long-term financing, including investment lending, public offerings,⁹⁸ hybrid loans, and different forms of venture capital and private equity.

The terms and conditions for working capital and investment loans are highly tailored and depend on the financial standing and credit history of an individual company, as well as the loan purpose. On an aggregate level, the product features outlined in the table below are offered by Finnish banks, including to the agri-food sector.

Table 14: Product features of Finnish banks

	Loan amount	Collateral	Price	Loan duration	Repayment schedule
Working capital loan, credit line or overdraft (mostly used for input purchases or to smooth liquidity shortages)	Depends on needs.	Movable and fixed assets.	Negotiable, with the EURIBOR 12-month often being the reference rate.	Between 12 and 36 months.	Depends on the purpose of the loan and repayment capacity of the company.
Investment loan (mostly used to purchase fixed assets)	Starting from EUR 10 000, depends on the investment to be pursued and the company's repayment capacity.	Required for such a loan (immovable assets) and the quality and quantity of collateral also has an influence on the loan amount provided.	Negotiable, often interest rates consist of the reference rate and a margin specific to the loan; amongst others the EURIBOR 12-month is used as a reference.	Largely depends on investment and needs of the borrower.	Depends on the investment and repayment capacity (can be equal instalments, equal payments or fixed equal payments)

Source: Interviews with banks and banks' websites, 2019.

For an investment loan, a business plan has to be submitted for evaluation and assessment before the bank makes any decision.

Public measures also exist that act as a catalyst for private investments for SMEs to help them develop their businesses. No detailed data on the uptake of those measures in the agri-food sector could be obtained. This might point to a low uptake. The following support tools are in particular available:

- **Business Finland** provides growth and innovation funding using innovation vouchers, i.e. innovation funding for capital investments. The funding granted is under general de minimis aid rules, where the total amount of support to one enterprise does not exceed EUR 200 000 for the current and two previous financial years of the period concerned. The financial support is intended for the purchase of expert services for innovation activities. Innovation activities refer to all measures employed by the company to develop its products, services or processes, or to acquire new knowledge and competencies. The aid cannot be used to cover company salaries, travel, materials, tools, rent or equipment purchase costs. Business Finland also provides funding for Young Innovative Companies. The maximum amount of Business Finland funding amounts up to EUR 1.25 million, of which a maximum of EUR 500 000 may be provided as a grant, and EUR 750 000 as a loan. Business Finland funds 75% of the eligible project costs.

⁹⁸ Sale of equity shares or other financial instruments to the public in order to raise capital.



- Among **Finnvera's** core products for SMEs is the Finnvera Loan. SMEs are eligible and they can use the loan to invest in domestic construction, machinery and equipment investments, energy and environment projects, working capital needs, and various ownership arrangements. The loan is usually a co-funding arrangement of a minimum of EUR 30 000. The loan duration is 3 to 15 years, depending on the character and the size of the investment.
Finnvera also offers three guarantee products: one is specifically designed for SMEs and another one for start-ups. Both offer a guarantee coverage of 80%.
- **Tesi** provides venture capital, growth capital as well as industrial investment mentioned above. Typically, the co-investors are Finnish and international venture capital and private equity investors, pension funds, industrial investors and private investors.

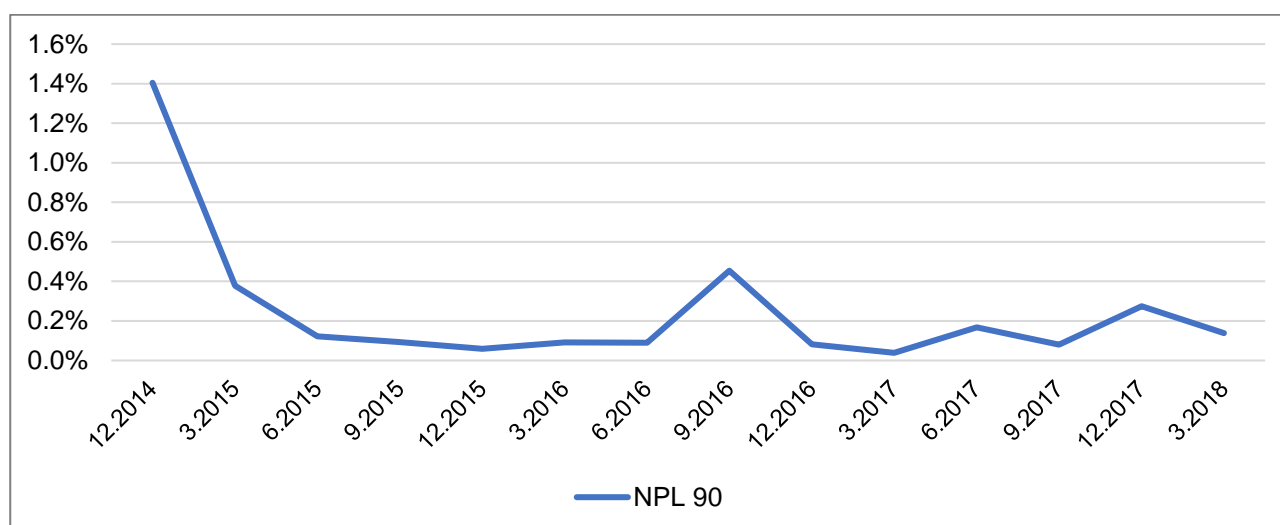
Finally, agri-food companies may also benefit from partially guaranteed loans under the EU-funded COSME and InnovFin programmes. As of the end of 2018, there was little participation from Finnish agri-food enterprises in either program. The Finnish government has not created a financial instrument under the EAFRD to help the development of the agri-food sector.

3.3.1.3. Description of the financing market

The interest rate levels observed in new lending indicate that the manufacturing sector in general enjoys below average rates. The average interest rate in manufacturing was 1.47 % in September 2018 and has been below 2% since 2016 (Figure 15).

The share of non-performing loans (NPLs)⁹⁹ to manufacturers of food, beverages and tobacco products is very low and it has remained relatively constant throughout recent years, reaching 0.1% of loans to the sector in March 2018 (Figure 29).

Figure 29: Share NPL of loans provided to manufacturers of food, beverage and tobacco products, 2014-2018



Source: Bank of Finland, 2019.

These very low levels have been maintained over the last 4 years. This has contributed to the good overall cost-to-income ratio of Finnish banks. This has been complemented by efficiency gains, for example through the digitalisation of payment systems and business practices.¹⁰⁰

While the Finnish banking systems continues to be assessed as sound, profitability in the last two years has decreased slightly given the small spread between lending and deposit interest rates. In addition, Finnish

⁹⁹ Failed or defaulted loans are bank assets for which the bank has identified a decrease in value of more than 50% or if the debtor is in default of more than 90 days.

¹⁰⁰ IMF, 2020, Finland: 2019 Article IV Staff consultation – Pres Release; and Staff Report.



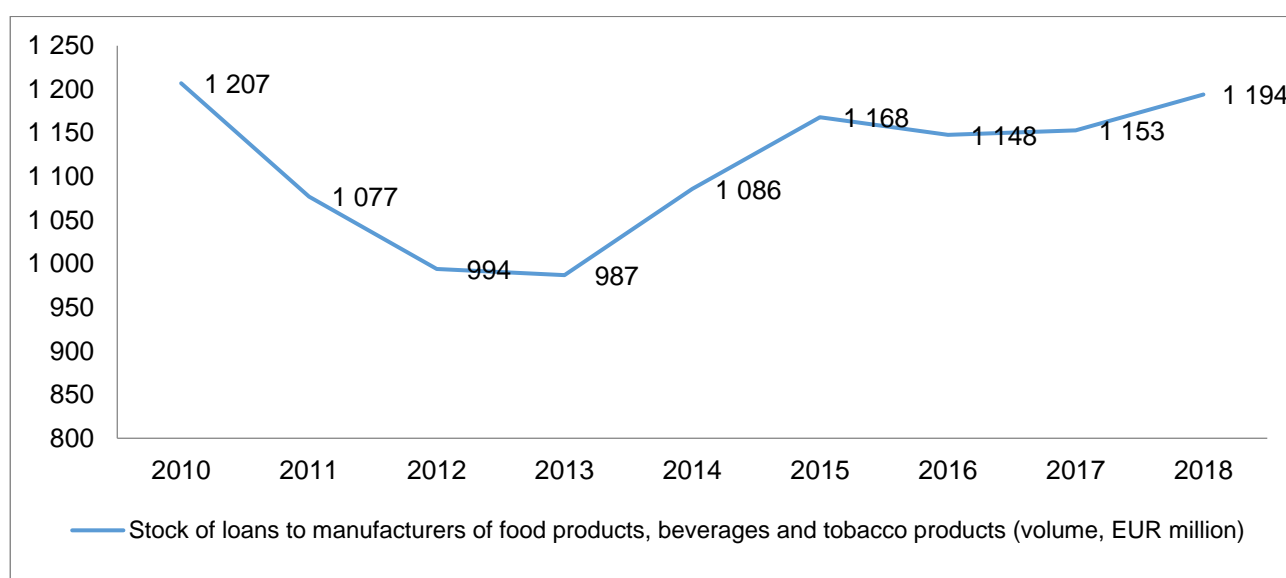
banks have invested in IT-systems to further promote digitalisation.¹⁰¹ Furthermore, Nordea's decision to move their headquarters from Sweden to Finland (October 2018) has significantly increased the size of the Finnish banking sector – to around 4 times of the GDP.¹⁰² This requires strengthened supervision measures and a better crisis preparedness framework.

Moreover, debts of Finnish households have been increasing, causing potential repayment challenges for borrowers. This is being caused by rising consumer credit and housing company loans. Given that over half of bank lending is directed to real estate (including construction and housing corporations), and with loans carrying variable interest rates, a crisis for the housing segment might have consequences for the entire financial sector.

3.3.2. Analysis of the supply of finance

The total outstanding loans portfolio to food, beverages and tobacco producers was almost EUR 1.2 billion in 2018 (Figure 30). In terms of the funds being made available to these producers, they are the fourth most important category within manufacturing. The level of outstanding loans has remained relatively constant in recent years, showing slight increases. In 2018, for example the total outstanding loans portfolio reached an all-time high for the last 7 years.

Figure 30: Outstanding loans to manufacturers of food products, beverages and tobacco¹⁰³ products, 2010-2018, EUR million



Source: Bank of Finland, 2019.

Based on the survey results and bank interviews conducted for the purpose of this study, it can be concluded that **the agri-food sector has good opportunities in the financial markets. Financing institutions are ready to provide funding, especially to investments related to development and innovation, though they regard Finnish agri-food companies as overly risk averse.**

However, some borrowers lack adequate collateral and this makes it challenging for banks to lend. Throughout interviews, banks mentioned that agri-food enterprises sometimes lack the quantity and quality of collateral needed to secure loans. This is especially the case for small scale enterprises. All clients that are interested in obtaining a loan need to be able to provide collateral. Still, banks stressed that when making a

¹⁰¹ IMF, 2020, Finland: 2019 Article IV Staff consultation – Pres Release; and Staff Report.

¹⁰² The amount of deposits to be covered by the Finnish deposit guarantee scheme has also increased from EUR 51 billion to around EUR 127 billion.

¹⁰³ Tobacco falls outside the scope of this study. It is believed that the share of tobacco in the statistics is small, given that tobacco is not a key agricultural crop in Finland.



decision on a loan application they mostly base it on cash flow (as cash is the main source of loan repayment) and the provision of sufficient collateral is not the only indicator for the provision of a loan.

According to banks, **mature companies, including agri-food enterprises, seeking expansion may face finance constraints, if the value of their own assets is low.** Strong cash flows or a profitable business model does not help in solving collateral constraints. For these companies, public financial instruments and an expansion of the public guarantee system are essential to secure funding for investments. The availability of such public tools is all more critical when companies are making their first larger investments. When they have established themselves to an extent that they have more own assets on their balance sheets, getting finance from the markets becomes significantly more straightforward.

Innovation is needed to increase the value addition in the Finnish agri-food supply chain. Based on the Agri-food survey results, Finnish companies seek finance for innovation less than the EU 24 company, on average. Banks and some agri-food enterprises themselves have expressed the view that the agri-food sector needs to foster innovative practices and product development. While this will increase the risk to agri-food companies, it could be borne through both private and public funding, especially when the investments lead to more environmental and resilient products and production practices.

The importance of environmental and climate investments is increasing. From a financial institution's point of view, while most environmental investments must be privately funded at present, their outcome is a public benefit that may stretch far into the future. As an example, an investment in improved water efficiency (such as installing water recovery and recirculation systems) may have significant public payoff in terms of reduced water usage, but the actual monetary benefit does not materialise any time soon. As a result, this type of investment may be challenging for a bank to finance. A public financial instrument providing risk sharing products could help to foster these environmental investments.

Investments in the maintenance and development of the rural infrastructure are needed, and such investment is typically government-funded. To foster investment in rural infrastructure, new instruments and financial models that involve the private sector could be explored.



3.4. Financing gap in the agri-food sector

This section presents an assessment of the financing gap in the Finnish agri-food sector, broken down by firm size and financial product.

Key elements on the financial gap in the Finnish agri-food sector

- No financing gap was found for the Finnish agri-food sector, based on the agri-food survey results.
- Nevertheless, constraints in terms of access to finance exist, particularly for start-ups due to their lack of collateral and absence of sufficient own equity.
- Lack of collateral might also constraint access to finance for mature enterprises seeking expansion, if the current value of their assets is low.

This section presents an estimate of the total volume of unmet financing needs of financially viable agri-food enterprises, defined as financing gap, for 2018. The estimate is calculated by multiplying the total number of firms by the proportion of financially viable firms reporting unmet demand for finance multiplied, in turn, by the average obtained loan value to firms.

$$\text{Financing gap} = \text{Number of firms} \times \text{percentage of firms that are both financially viable and have unmet demand} \times \text{average loan volume}$$

All the calculations are based on the results of the Agri-food survey for Finnish firms (see Annex A.5 for more information). The methodology used for calculating the gap is the same as the methodology used for the agriculture sector (see Annex A.3).

The financing gap arises from unmet financing demand from economically viable firms¹⁰⁴. As explained in section 2.2, the unmet demand for finance includes

- (i) lending applied for but not obtained, or
- (ii) a lending offer refused by the potential borrower, as well as
- (iii) lending not applied for due to expected rejection.

For the purpose of this study, 'turnover growth' is used as a proxy of firm viability. In particular, we make the hypothesis that all enterprises which reported a stable (non-negative) turnover growth can be considered as viable.

Based on the agri-food survey, no financing gap has been identified for the Finnish agri-food sector. This indicates that small, medium and large-sized agri-food enterprises have access to the financing they require, be it working or investment capital.

While the high efficiency of the Finnish financial sector was highlighted throughout the interviews conducted, and while no large-scale structural impediments have been identified, interviews with agri-food enterprises and banks indicated that, particularly for start-ups, a gap may still exist. This is due to their absence of collateral and insufficient levels of own equity. In addition, these enterprises sometimes lack the technical knowledge necessary to prepare business plans in order to demonstrate that the investment will contribute to increased future business growth. Also mature agri-food companies seeking expansion may face finance constraints, if the value of their own assets is low.

In addition, banks mentioned that many **Finnish agri-food enterprises tend to be cautious in terms of investing in innovation**. Thus, even if innovation investments are required to support the company growth, request for finance will only be submitted after a very careful evaluation of the risk the investment might represent (i.e. indebtedness of the company, etc.). Banks indicated that they are ready to finance further innovation in the sector to increase its value addition.

¹⁰⁴ The financing gap presented in this section is different from the total unmet demand presented in Section 3.2.2. In the quantification of the total unmet demand, all the enterprises in the population applying for finance are considered independent from their economic viability.



3.5. Conclusions

Gross investments in tangible goods by Finnish agri-food sector enterprises have grown in recent years, with most investments made in machinery and equipment. In line with this trend, most agri-food enterprises invested in capacity expansion and working capital. Investments into new products have also been pursued. However, overall, the level of innovation in the sector is considered low.

The key drivers of the demand for finance from the sector are:

- **Capacity expansion**, with bakeries, dairies and slaughterhouses, in particular, investing in highly automated equipment. Increased technological innovation has also helped to improve cost efficiency in production and the real-time control of production processes.
- **Inventory and working capital needs**, in order to cover daily operational costs.
- **The development of new products**, particularly with the objective of increasing value added.
- **Hiring and training employees**, to support the development of the sector.

The Finnish financial sector is sound and no significant constraints emerged from the analysis. Available financial products are standard business loans, without any specific products targeting the agri-food sector. The low levels of NPLs in the Finnish financial sector and the sound financial standing of financial institutions encourages lending. This has translated into rising levels of outstanding loans to the agri-food sector.

Public support measures exist that are focussing on SMEs or start-ups, including business promotion tools, such as innovation funding, grants and guarantees. However, a specific focus or tailored offering of products to agri-food enterprises does not exist.

Discouragement and rejection levels are very low for the agri-food sector in Finland. A fear of possible rejection by enterprises when applying for loans could not be identified as a reason for companies deciding not to approach financing institutions. This points to a good overall relationship between banks and agri-food enterprises. Most agri-food enterprises that did not apply for a loan had sufficient own funds. Rejection levels of applications are very low, and are mostly caused by investment risks that are considered too high by banks and as supported by insufficient levels of collateral. Start-ups, in particular, are rejected due to unrealistic business plans, a lack of sufficient collateral, or because the maturity of the loan applied for is considered too long by banks.

Start-ups could particularly benefit from technical support that improves their business and investment planning. This support should also aim to improve their ability to realistically assess the feasibility of their investment proposals, including how long it would take to generate profits and repay a loan.

The results of the Agri-food survey show that there is no financing gap in Finland. Nevertheless, agri-food enterprises and banks have indicated in interviews that not all financial needs of economically viable companies are currently being met, particularly start-ups may face problems in accessing finance.

In the future, investment in innovation is needed to increase the value addition in the Finnish agri-food supply chain. The need for environmental and climate investments (such as strengthened water and energy efficiency) is also increasing.

Based on the analysis of this study, the following recommendations for further actions related to financial instruments, including under the EAFRD, could be considered in order to increase access to finance for agri-food businesses:

- Despite the overall efficiency of the Finnish financial market, agri-food start-ups may face obstacles in accessing finance. A specific financial instrument for the agri-food sector providing risk coverage to financial institutions (in the form of a guarantee or a loan risk-sharing fund) might increase their probability to obtain the financial resources they need. The opportunities offered by the new EAFRD legal framework, for example related to the easier combination of grant and financial instruments support, might provide further help.



ANNEX

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A.2. Stakeholders interviewed

Type of Organisation	Name of Institution
Advisory Service Provider	Faba Osk
Advisory Service Provider	ProAgria
Agri-food enterprise	Atria Ltd. (pork production)
Agri-food enterprise	Valio Ltd
Association, including farmers	Central Union of Agricultural Producers and Forest Owners as well as some members (dairy, livestock and crop farmers)
Bank	Nordea Finance (9 interviews conducted with various representatives across the country)
Bank	OP Financial Group (5 interviews conducted with various representatives across the country)
Food Industry organisation	FoodWest Oy
Government	Ministry of Agriculture and Forestry
Government	Ministry of Economic Affairs and Employment
Government	Ministry of Environment
Government	Food Managing Authority
Grain logistics, storage and handling	Suomen Viljava Oy
Input supplier	Tilasiemen Oy
Machinery and Equipment Supplier	Transfarm Oy
Research	Natural Resources Institute



A.3. Methodology for financial gap calculation

This section of the report clarifies the terminology and proposes a method for estimating the financial gap formula for Target Group I and Target Group II. This version of the formula aligns with the *fi-compass* Factsheet on the financial gap in agriculture and the 2013 EC working paper on the Ex-ante assessment of the EU SME initiative. It is based on the data from the *fi-compass* survey of 7 600 farms carried out in mid-2018.

Financing gap definition. We define the financing gap to be the *unmet credit demand due to constrained or missing access to financing*. This definition includes market failures as well as other types of constraints.

Operationalisation of the financing gap formula. Each component of the formula can be obtained in the survey data under the following **assumptions**:

Rejected credit applications include applications that are rejected by banks (or other credit organisations) and offered from banks but turned down by the farmers/firms.

The share of Viable firms is measured by the share of total firms that have a non-negative turnover growth¹⁰⁵ or a non-negative turnover and that are not in a situation of cost increase (these two criteria might be used to obtain an upper and lower boundary for the calculations).

Discouraged application is proxied by the average size (financial value) of loan applications made by firms that applied for a similar type of financial product. This allows for grouping firms which did not apply for fear of rejection with rejected firms (see step 2 and 4 below).

To calculate the financial gap, we define the following four steps. Each step refers to the latest surveyed year for both the surveys.

Step1: Ratio of viable farms with unmet demand for finance

Rejection Rate^{Viable}: This refers to the share of viable enterprises whose application was unsuccessful. It is measured by the ratio of enterprises with unsuccessful applications over the total population. It includes rejected applications by the lending institution and offers turned down by the applicant itself.

$$\text{Rejection Rate}_j^{\text{viable}} = \frac{\text{Number of Rejected Viable Firms}}{\text{Total survey population}_j}$$

with and j = Short Term , Medium term, Long Term Loans, Credit lines.

Discouraged Rate^{Viable}: It represents the share of viable enterprise that were self-discouraged because of fear of rejection. It is computed as follows:

$$\text{Discouraged Rate}_j^{\text{viable}} = \frac{\text{Number of Discouraged Viable Firms}}{\text{Total survey population}_j}$$

with and j = Short Term , Medium term, Long Term Loans, Credit lines.

Unmet demand Rate^{Viable}: The total share of survey respondents with unmet demand for finance is obtained by summing the two rates:

$$\text{Unmet demand Rate}_j^{\text{viable}} = \text{Rejection Rate}_j + \text{Discouraged Rate}_j$$

Step 2: Number of farms rejected or discouraged

¹⁰⁵ A turnover that has been stable or growing in the last year.



N. of Farms in unmet demand_{ij}^{viable}: In order to get the number of farms constrained in accessing financing, we multiply total share of viable respondents with unmet demand from the survey sample (Step 1) by the total farm population from Eurostat by farm size.

For TGI, this total population is adjusted by removing farms having a Standard Output (SO) below EUR 8 000 EUR 4 000 or EUR 2 000, depending on the Purchasing Power Parity Index (PPI) of the country. The EUR 8 000 EUR 4 000 or EUR 2 000 SO thresholds are used for countries with their 2017 PPI respectively above the 66th percentile, between the 33th and 66th percentile, or below the 33th percentile of the PPI index in the EU. We assume equal rates of rejections among small, medium and large-sized farms, and disentangle the share of farms with constrained in obtaining credit by financing product.

$$N. of Farms rejected_{ij}^{viable} = Eurostat Farm population_i * Rejection Rate_j^{viable}$$

$$N. of Farms discouraged_{ij}^{viable} = Eurostat Farm population_i * Discouraged Rate_j^{viable}$$

$$N. of Farms in unmet demand_{ij}^{viable} = N. of Farms rejected_{ij} + N. of Farms discouraged_{ij}$$

for $i = Small, Medium, Large$

and $j = Short Term, Medium term, Long Term Loans, Credit lines$.

Step 3: Standard Loan Application Size

Application Size_{ij}: For each type of financial product and each firm/farm size category, a standard size of application is constructed. A starting point for Country experts might be the EU wide geometric mean, adjusted at country level with the purchasing power parity index. This value might be further adjusted based on the results of the analysis.

Step 4: Financial gap across farm size and product type

The financing gap is obtained by multiplying the amount of loans (Step 3) by the total number of farms facing constrained access to credit as calculated in Step 2.

Note: when the survey sample size allows, an indicative breakdown of the gap will be provided for young farmers per member state. The breakdown is obtained from the age ratio within rejected loan applications.

$$Financial Gap_{ij} = Application Size_{ij} \times N. of Farms in unmet demand_{ij}^{viable}$$

for $i = Small, Medium, Large$

and $j = Short Term, Medium term, Long Term Loans, Credit lines$.

Finally, the total gap is the sum of figures across size classes (i) and products (j).

Private financing (obtained from family or friends) will be included in a separate quantification for countries with a high share of private lending.

The methodology for the gap calculation for TG II is the same as for TG I, but no lower limit on the size of enterprises is applied in step 2 (all enterprises in the population are included in the calculation). For Target



Group II, we obtain each component of the financing gap formula from the following questions in the Agri-food survey of Target Group II carried out in mid-2019:

Lending/funding applied to: For what kind of finance did you apply in 2018 and with what amount?

Lending not applied to: For what reasons did you not apply for some kind of finance?

Rejected: What was the result of your application?

Viability: Has the following company indicator changed in the last year: Turnover?

It has to be noted that the surveys to be used by the Study for the calculations, the *fi-compass* farm survey and the Agri-food survey, are designed to be statistically representative at national level. Therefore, regionalised figures and calculations could be applied with a limited dimension and for only few countries. Information from interviews may complement such regionalised descriptions.

For Finland, Table 15 and Table 16 report the elements used in the calculation of the financing gap for the agricultural and agri-food sectors, respectively.

**Table 15:** Elements for the calculation of the financing gap in the agriculture sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Lower bound: farms with a non-negative turnover growth and no cost increase	Share of respondents rejected by creditor or farmer	0.30%	0.30%	0.30%	0.30%
	Share of respondents that have not applied because of possible rejection	0.00%	0.39%	0.00%	0.39%
	Total (sum of rejected and discouraged)	0.30%	0.68%	0.30%	0.68%
Upper bound: farms with a non-negative turnover growth	Share of respondents rejected by creditor or farmer	0.89%	1.07%	0.30%	0.68%
	Share of respondents that have not applied because of possible rejection	0.58%	0.97%	0.88%	0.97%
	Total (sum of rejected and discouraged)	1.47%	2.03%	1.17%	1.65%
Total unmet demand: all farms	Share of respondents rejected by creditor or farmer	1.87%	1.36%	0.30%	0.68%
	Share of respondents that have not applied because of possible rejection	0.88%	1.56%	1.47%	0.97%
	Total (sum of rejected and discouraged)	2.74%	2.92%	1.76%	1.65%
Farms with constrained access to finance, lower bound	Small-sized farms	22	50	22	50
	Medium-sized farms	76	175	76	175
	Large-sized farms	15	35	15	35
Farms with constrained access to finance, upper bound	Small-sized farms	108	150	86	121
	Medium-sized farms	376	521	300	422
	Large-sized farms	75	104	60	84
Standard loan application size (EUR)	Small-sized farms	21 195	51 416	141 800	19 136
	Medium-sized farms	26 855	48 869	153 972	21 227
	Large-sized farms	79 206	124 363	277 242	113 048

Source: fi-compass survey.

**Table 16:** Elements used for the calculation of the financing gap in the agri-food sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Firms with a non-negative turnover growth and no cost increase	Share of respondents rejected by creditor or firm	0.00%	0.00%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	0.00%	0.00%	0.00%	0.00%
	Total (sum of rejected and discouraged)	0.00%	0.00%	0.00%	0.00%
Total unmet demand: all firms	Share of respondents rejected by creditor or firm	0.00%	0.00%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	0.00%	0.00%	0.00%	0.00%
	Total (sum of rejected and discouraged)	0.00%	0.00%	0.00%	0.00%
Firms with constrained access to finance	Small-sized firms	-	-	-	-
	Medium-sized firms	-	-	-	-
	Large-sized firms	-	-	-	-
Standard loan application size (EUR)	Small-sized firms	99 565	136 300	386 593	112 419
	Medium-sized firms	791 002	744 845	2 072 021	601 837
	Large-sized firms	780 003	1 304 554	3 662 081	1 224 000

Source: Agri-food survey.



A.4. TG I: *fi-compass* survey

The analysis for the agriculture sector in the report relies on the *fi-compass* survey on financial needs of EU agricultural enterprises, conducted from April to June 2018 across 24 EU Member States (EU 24): Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

The survey was carried out targeting the completion of 300 questionnaires for each Member State. The target was reached in all countries except Lithuania (for few interviews) and Ireland, where the farmers were less confident in sharing information.

Overall, the survey consists of 7 659 respondents, of which 73% own the agricultural enterprise, 8% are member owners, 8% are owner's relatives, 7% administrative managers, 3% other employees, and 1% human resource managers. Table 17 reports the number of respondents by Member State.

Table 17: *fi-compass* survey sample size per Member State

Country	No. of Respondents	Country	No. of Respondents
Belgium	350	Latvia	315
Bulgaria	351	Lithuania	296
Czech Republic	309	Hungary	315
Denmark	302	The Netherlands	301
Germany	376	Austria	320
Estonia	310	Poland	320
Ireland	151	Portugal	349
Greece	350	Romania	350
Spain	354	Slovenia	300
France	350	Slovakia	312
Croatia	300	Finland	327
Italy	351	Sweden	300

Source: *fi-compass* survey.

Additionally, the sample covers 198 (94.7%) of the 209 NUTS2 regions in the 24 Member States. These regions have nearly 99% of EU 24 farms.

Almost 85% of questions were completely answered and 98% of all questions were answered on average. The most problematic questions were on confidential, financial aspects. Only 50% of interviewees replied concerning their turnover, 67% gave the specific amount of their loan and 56% the exact interest rate of their loan.

For additional information, please refer to <https://www.fi-compass.eu/publication/brochures/survey-financial-needs-and-access-finance-eu-agricultural-enterprises>.



A.5. TG II: Agri-food survey

To mirror the *fi-compass* survey on the needs of EU agricultural enterprises, a computer assisted telephone interviewing (CATI) survey was conducted for the agri-food processing sector in mid-2019.

For the purpose of this survey, a commercial global register was used in each country. A commercial global register provides data in a single source, harmonises the information collected on businesses (e.g. Industrial classification, employee size, turnover, contact names etc.) and offers software platforms that allow users to easily access a sample of businesses for commercial purposes.

The survey was conducted targeting the completion of a minimum of 45 questionnaire for each Member State. The minimum sample size obtained varied per country mirroring the differences in the size of the sector. Table 18 reports the sample size per country

Table 18: Agri-food survey sample size per Member State

Country	No. of Respondents	Country	No. of Respondents
Belgium	100	Latvia	50
Bulgaria	100	Lithuania	50
Czech Republic	66	Hungary	46
Denmark	50	The Netherlands	80
Germany	186	Austria	50
Estonia	50	Poland	130
Ireland	50	Portugal	100
Greece	70	Romania	150
Spain	197	Slovenia	50
France	180	Slovakia	50
Croatia	45	Finland	50
Italy	200	Sweden	48

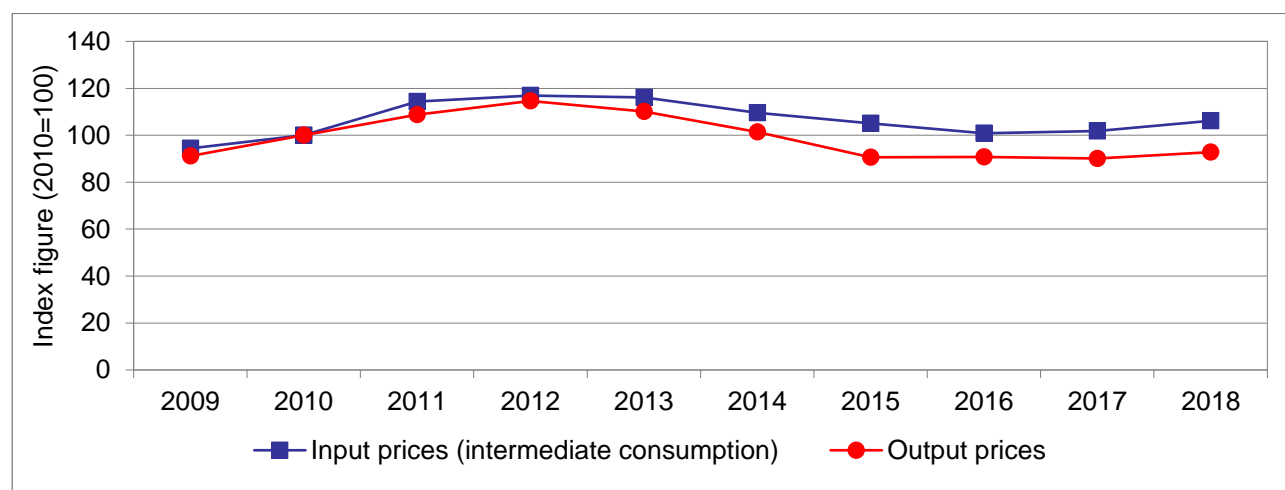
Source: Agri-food survey.

The survey consists of 2 148 respondents, of which 85% were enterprises operating in the manufacturing food sector, and 15% in the manufacturing of beverages.



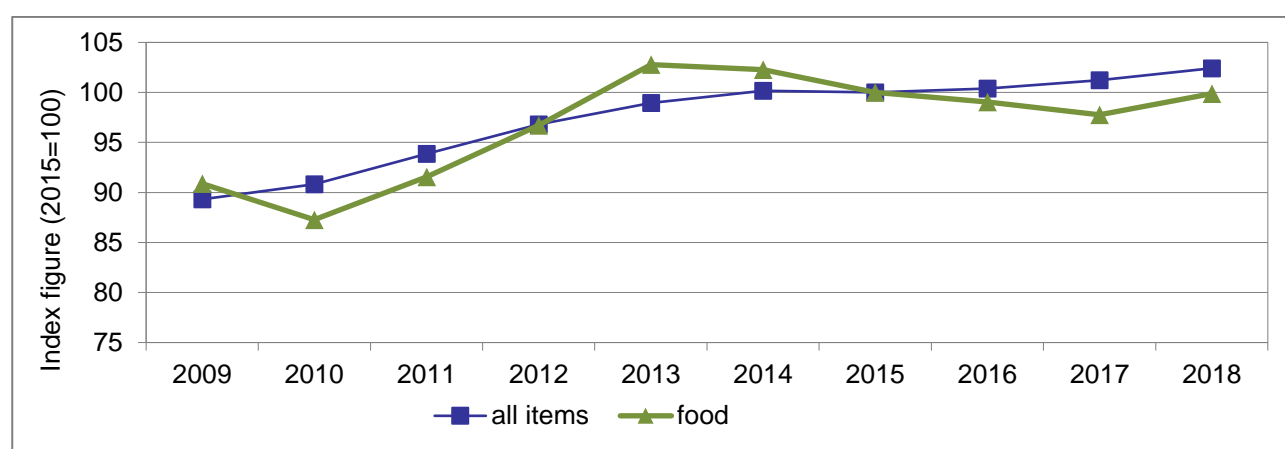
A.6. Data from the agriculture statistical factsheets

Figure 31: Evolution of agricultural input and output prices, 2009-2018



Source: European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland.

Figure 32: Evolution of harmonised indices of consumer prices, 2009-2018



Source: European Commission, DG AGRI, June 2019, Statistical Factsheet for Finland.

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