



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

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. |
| ARIB | Agricultural and Registers Information Board |
| ASF | African Swine Fever |
| CAP | Common Agricultural Policy |
| CEEC | Central and Eastern European Country |
| CNDP | complementary national direct payments |
| EAA | Economic Accounts for Agriculture |
| EAFRD | European Agricultural Fund for Rural Development |
| EC | European Commission |
| ECB | European Central Bank |
| EIB | European Investment Bank |
| EIF | European Investment Fund |
| ERDF | European Regional Development Fund |
| ESIF | European Structural and Investment Fund |
| EU | European Union |
| 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. |
| 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. |
| ha | Hectare |
| GDP | Gross Domestic Product |
| GFCF | Gross Fixed Capital Formation |
| GVA | Gross Value Added |
| MA | Managing authority |
| RDF | Rural Development Foundation |
| RDP | Rural Development Programme |
| SME | Small and medium-sized enterprise |
| SO | Standard Output |
| UAA | Utilised Agricultural Area |
| Young farmer | Young farmer means a person who is no more than 40 years of age at the moment of submitting the application, possesses adequate occupational skills and competence and is setting up for the first time in an agricultural holding as head of that holding ² |

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

2 Regulation (EU) No 1305/2013 of the European Parliament and of the council of 17 December 2013 on support for Rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R1305>.



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EXECUTIVE SUMMARY

This report gives an insight into agriculture and agri-food financing in Estonia 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. These were 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 Estonia

In recent years, investments in the Estonian agriculture sector have been influenced by a crisis in the pig and dairy sub-sectors. The crisis originated with the outbreak of African Swine Fever (ASF) in 2014 and the consequential Russian trade embargo, which severely affected most pig and dairy farms. Between 2014 and 2015, Gross Fixed Capital Formation³ (GFCF) decreased by 36% from EUR 237 million to EUR 151 million. The recovery from this sudden decrease in production capacity was accompanied by high demand for investment. It was only after 2016 that economic indicators for agriculture started to develop positively. According to the *fi-compass* survey, 49% of Estonian farmers applied for finance in 2017, compared to an EU 24 average of below 30%.

Overall, the report identifies two main investment drivers:

- (i) **Expansion of production capacity;**
- (ii) **Increased efficiency and modernisation of equipment, machinery and technologies.**

According to the *fi-compass* survey, 60% of the demand for credit was driven by expansion needs. The recovery of meat prices after the end of the ASF crisis had a positive impact on investment demand. Dairy farms mainly invested in increasing their production capacities, while purchase of land had an important role in both the crop sub-sector and the dairy sector. The proportion of Estonian farms making investments in land purchases, at 33%, is much higher than elsewhere in the EU.

The need for working capital is another driver of the demand for finance in agriculture. However, a significant part of the short-term financing is provided by input suppliers, with only 8% of loans contracted in recent years being used to finance running costs (short-term loans). The demand for short-term financing arises from the intensification of agricultural production⁴, an increase in production costs, and low economic margins.

The Common Agricultural Policy (CAP) is a vehicle for investment support. Direct payments help to stabilise farmers' incomes and are treated by banks as a guarantee for the repayment of (short-term) loans to farmers, in which case no other collateral may be required. Several investment support measures provided under the European Agriculture Fund for Rural Development (EAFRD) also sustain demand for investment

3 GFCF measures the value of acquisitions of new or existing fixed assets. GFCF/GVA is used as a measure for how much of the new value added in the economy is invested rather than consumed. Increase of the GFCF is a measure of business confidence, a belief in that investments will be profitable in the future. In times of economic uncertainty or recession, typically business investment in fixed assets will be reduced, since it ties up additional capital for a longer interval of time, with a risk that it will not pay itself off.

4 Production has become more intensive and this requires more variable inputs, which input suppliers provide together with short-term financing.



finance. The amount requested by Estonian farmers by the end of 2019 indicate a large-scale unmet demand for grants.

The supply of finance is concentrated within two banks, representing more than 50% of the borrowing needs in the agriculture sector. Also, agricultural input and equipment suppliers offer short-term credit and leasing options. The Rural Development Foundation (RDF) helps improve access to finance through loans, credit insurance and guarantees. Since 2016, agricultural enterprises can also benefit from loans from funds financed under the EAFRD Programme and co-financed by banks. This financial instrument offers two types of loans: a growth loan for micro and small-sized enterprises, and a long-term investment loan. Due to demand, the total loans budget has been increased from EUR 36 million to EUR 39 million

The total outstanding loan volume for agriculture, forestry and fishing increased by more than 190% between 2014 and 2018, to reach an estimated EUR 454, despite the ASF crisis. Short-term loans and leasing products, with an estimated total contract value of EUR 254 million in 2017, are an important element of the financing mechanisms used by the sector

The financing gap for the Estonian agriculture sector is estimated between EUR 28 million and EUR 117 million. A first component of the gap corresponds to the estimated value of loan applications from viable enterprises that were rejected by banks, or where the loan offer was refused by the applicants due to non-acceptable lending conditions. The second component corresponds to the estimated value of loan applications not submitted by viable farmers because they were discouraged by fear of a possible rejection. Young farmers and new entrants account for an important part of the financing gap with an estimated share of 44% or between EUR 15 million and EUR 52 million.

This report identifies several reasons why viable loan applications by farmers are rejected, refused or farmers are discouraged from applying:

- Insufficient collateral to meet banks' requirements: financial institutions often request large guarantees, frequently above 100% of the loan value. Farms without the required collateral, such as those with little or no arable land, or young farmers and new entrants, either see their loan application rejected or are discouraged from applying.
- High lending risk: an unstable economic environment and increased competitive pressure means that lending to several sub-sectors has become increasingly risky. This has led banks to adopt a cautious lending policy, especially when they do not have a specialised agricultural lending unit. This is an important factor for small-sized farms.
- Many farmers lack financial planning skills, making it difficult for them to plan and deliver payments to banks. This has also caused problems in preparing business plans and negotiating loan terms with banks. Furthermore, especially farmers with weak financial skills can be discouraged from making loan applications because of the administrative burden.
- The preference of financial institutions to offer medium-term loans with maturities of five to seven years means that there is a lack of long-term financing options.

RECOMMENDATIONS

The EAFRD loan instrument managed by Rural Development Foundation has successfully supported farmers' access to finance and has good take-up and appreciation among stakeholders. The continuity of the instrument should be assured in the 2021-2027 programming period, subject to a 'health check' of the current set-up and/or findings of the ex-ante EAFRD assessment(s) for the new period. In this setting, the following points should be considered when reformulating existing instruments or proposing new ones:

- There appears to be insufficient availability of long-term loans in the market and further actions to strengthen their supply may be warranted.
- Although current EAFRD instrument have achieved substantial take-up among young farmers, this market segment still represents more than 40% of the estimated financing gap.



- The scope of existing loan instruments could be extended beyond current limits; for example, to cover loans between EUR 100 000 and EUR 250 000.
- As financing costs for farms are above those for other enterprises in Estonia, current loan conditions for farmers might be revised to provide for additional interest rate reductions.
- As lack of collateral still represents one of the main constraints on access to finance, the current public guarantee offering should be reviewed to assess the adequacy of the available budget, alongside access conditions and costs.
- Opportunities offered by the new legal framework – such as the easier combination of financial instruments and grant support, possibilities to finance the purchase of land for young farmers – should be explored to see if they can be used to increase the effectiveness of financial instruments, particularly for young farmers and small-sized enterprises.
- As lack of financial and business knowledge is signalled as an important constraint, especially for small and medium-sized farms, technical assistance support could be provided to strengthen capacities to develop business plans and improve financial management of farmers. Strengthening understanding of the agriculture sector and agriculture production within banks could also make a difference in the future financing of the sector.

Financing gap for the agri-food sector in Estonia

Between 2014 and 2017, investments in the Estonian agri-food sector fell by 9%, from EUR 113 million to EUR 103 million. This negative trend can be explained by the difficulties encountered in the agriculture sector.

Demand for finance is driven by the necessity to increase production efficiency and capacity. Agri-food enterprises mainly invest in equipment for modernisation and automation of production. As agricultural production in Estonia has increased by more than agri-food processing capacity, there is a need to increase processing capacity. Modern infrastructures and production processes are also necessary to add value to local agricultural production. Lack of qualified labour is another important driver of investments in capacity expansion. Demand is also driven by the transition towards a green and circular economy which, among others, requires investments to improve the energy efficiency within the sector.

The need for working capital is another driver of demand for finance, especially for small-sized enterprises. Short-term financing is often needed in response to the long terms of payment conditions imposed by the retailing sector. The highest needs for short-term loans are encountered in the dairy, and fruit and vegetables processing sub-sectors.

The EAFRD provides investment support for agri-food processors through grants. By the end of 2019, however, demand for grants exceeded the amount of financing available. Additionally, Rural Development Programme (RDP) support for processing and marketing provided seems to have had an important impact on the long-term investment loans taken up by small-sized enterprises.

The supply of finance is characterised by a high concentration of the banking sector. The Estonian banking sector is dominated by large foreign banks, with four banks holding approximately 84% of total assets in the banking sector. In 2018, the two biggest commercial banks held a market share of 62% for loans to non-financial enterprises. A specific feature of the supply of finance is that more than 90% of loans issued in Estonia have floating interest rates that exceed the Euro zone average by approximately one third.

The EAFRD financial instrument (growth loan for micro and small-sized enterprises and long-term loans for SMEs) was created with an objectives to facilitate access to finance by providing co-shared loans with commercial banks. The involvement of a player with knowledge of the agriculture sector, such as the Rural Development Foundation, has proven pivotal for banks to accept joining the scheme. Other financial instruments, such as those financed under the ERDF, are also available to SMEs in general. While agri-food businesses are eligible for such support they have received less than 5% from the overall portfolio of these financial instruments.



Despite the existing offer of preferential loans, many small-sized firms cannot access finance because of their weak economic performance. Banks consider lending to agri-food companies risky as the sector is subject to price fluctuations and agricultural crises. Banks set strict credit requirements and pay close attention to the history of the company and the project promoters. According to the Agri-food survey results, bank loans registered a higher rejection rate in Estonia (14%) than the average for the EU 24 (8%).

The financing gap in the agri-food sector is estimated at EUR 169 million. Unmet financing needs are concentrated among small-sized firms, with 90% of the gap value attributed to enterprises of less than 50 employees. The main drivers for the rejection of investment loan applications and for firms being discouraged from applying for finance include:

- **Inadequate collateral:** for small-sized businesses located in rural areas, their lack of collateral guarantees mainly stems from the low value of infrastructures in illiquid rural estate markets. This constraint is partially addressed by existing financial instruments. However, in some cases, banks consider the current guarantee instruments offered by KredEx unprofitable, and thus refuse to provide finance to the sector because of its high risk.
- **Bank policy regarding long-term finance and inadequate business plans:** banks prefer to offer shorter-term loans with refinancing facilities. According to capital providers, low financial awareness of micro, small and medium-sized companies is a problem.
- **High-risk for start-up finance:** this pertains to innovation and the launch of new products, as well as the lack of business and credit history of new start-ups.
- **Difficulties financing large-scale projects.**

RECOMMENDATIONS

Based on the findings of this study, the following recommendations could be considered to improve the offer of financial instruments supporting Estonian agri-food sector:

- The EAFRD loan instrument managed by Rural Development Foundation has proved successful in supporting agri-food enterprises to access finance, showing a good take-up and appreciation among stakeholders. Nonetheless, the continuity of such an instrument should be subject to an assessment of efficiency, impacts and achievement of targets.
- The existing public guarantee offering could be reviewed, for example to analyse the adequacy of the available budget and the access conditions. The analysis in this report indicates that the uptake of such instruments in the agri-food sector is limited, while lack of collateral still represents one of the main constraints in the market. Stakeholders have also indicated that the pricing policy of the instruments is a critical element.
- New entrants need specific attention as their innovative ideas and lack of business history, combined with small, if any, levels of collateral have proved to be a problem for banks. As noted for the agriculture sector, both for guarantee and loan instruments, the opportunities offered by the new legal framework, such as the easier combination of financial instruments and grant support, might offer interesting opportunities to increase the effectiveness of financial instruments in supporting new entrants and small-sized enterprises.
- Specific support for large strategic projects (above EUR 10 million) could also be considered if there is sufficient critical mass of demand - such support could be provided through specific financial instruments. The provision of technical support to help small-sized enterprises in preparing their cash flow projections and business plan may also be considered, since limited financial knowledge among entrepreneurs has been signalled as a difficulty by interviewed financial institutions.



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 Estonia. 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 a better 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, at 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, where the latter survey was undertaken as part of the work of this study. The analysis of supply and demand for finance is further elaborated by desk research and enriched with secondary data obtained 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 Estonian agriculture sector

- Estonian agriculture plays an important role in the employment, with a rate of 3.4%.
- In 2016, the average UAA per farm in Estonia was 59.6 hectares (ha) which is nearly three times the size of the EU 28 average.
- In 2016, according to national statistics (latest farm business survey), there were 16 079 farms of which 21% had between 20 ha-100 ha and 12% had UAA over 100 ha⁵.
- Milk accounted for 29.6% of agricultural output, followed by cereals at 18.9% and pigs at 8.3%.
- The structural transformation of the agriculture sector saw the number of farms with less than 100 ha to decrease by 20%, while the number of farms above 100 ha to increase by 10% in 2010-2016.
- Young farmers represents 15.5% of farms' owners.
- New entrants are witnessed in the horticulture and livestock sub-sectors, as well as in niche sub-sectors, such as organic farming.
- The overall performance of the agriculture sector has been negatively affected by drought, Russian embargo and the African Swine Fever.

Estonian agriculture plays an important role in the employment level, with a 3.4% rate. Agricultural land occupies nearly 22% of the predominantly rural country, and more than half of it is arable or used for perennials. Despite its considerable potential, average yields in Estonian agriculture are modest and volatile, due to relatively variable weather conditions. In 2016, the average utilised agricultural area (UAA) per farm in Estonia was 59.6 ha⁶, which is nearly three times the size of the EU 28 average. The growth in average UAA is partially the consequence of an ongoing process in which farms are increasing in size and the number of small-sized farms is declining. Between 2010 and 2016⁷, the number of agricultural holdings with less than 100 ha decreased by 20%. At the same time, the number of agricultural holdings with more than 100 ha increased by 10%⁸.

The structural transformation in the Estonian agriculture sector has benefitted the large-sized farms. The total number of farms has been decreasing since 2001 in all main farm types (arable crops, dairy, pig farms), but the African Swine Fever (ASF) and the crisis with the low milk prices have accelerated the loss of (small) farms. The consolidation process has been accentuated by recent operations of several holdings that have acquired a number of small-sized dairy and pig farms, still operating as individual limited liability companies within the parent holdings. As a result, since 2007, the ownership structure of Estonian farms is shifting towards limited liability companies. According to the latest farm business survey in 2016, one third of Estonian farms were either medium-sized farms between 20 ha and 100 ha, or larger-sized farms of more than 100 ha.

Even though young farmers remain a small share of all farmers, the agriculture sector is attracting new entrants. New entrants are witnessed in the horticulture and livestock sub-sectors, as well as niche

5 Statistics Estonia, 2016, Table on Utilised agricultural area by size class and legal form holder. <https://www.stat.ee/en>.

6 Eurostat, 2019, Farm Structure Survey in 2016, <https://ec.europa.eu/eurostat/documents/2995521/9028470/5-28062018-AP-EN.pdf/8d97f49b-81c0-4f87-bdde-03fe8c3b8ec2>.

7 2016 is the latest data of farm business survey that is available.

8 Statistics Estonia, 2016, Table on Utilised agricultural area by size class and legal form holder, <https://www.stat.ee/en>.

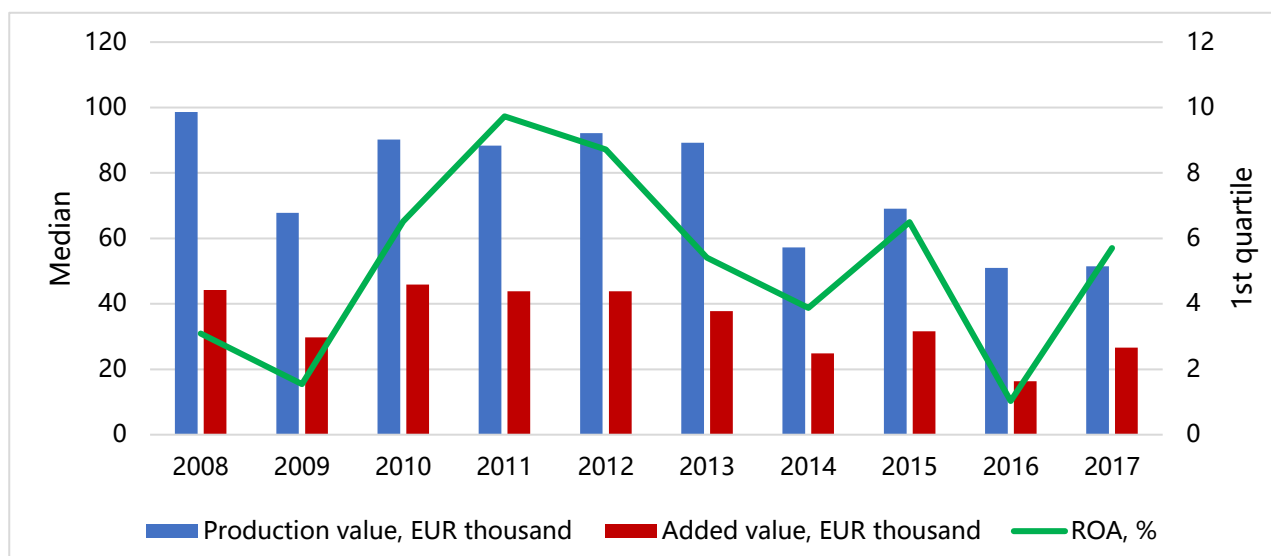


production types such as organic farming. In 2016, 49.8% of farm managers were 55 years or older, whilst 15.5%⁹ were less than 40 years old. The latter relatively high percentage (if compared to the rest of EU 28) can also be attributed to the business support under the EAFRD measure for setting up young farmers.

Between 2016 and 2018, the performance of the Estonian agriculture remained below the levels of 2012-2014 (Figure 1). The main reasons behind this were:

- (i) Agricultural output's decrease caused by a drop in crop production due to drought;
- (ii) Drop in milk prices due to the Russian embargo;
- (iii) ASF that affected several regions and many pig farms went out of business; with pig/pork prices fell drastically due to marketing restrictions in disease zones.

Figure 1: Dynamics of median economic indicators in Estonian plant and animal farms¹⁰, 2008-2017, EUR thousand



Source: Statistics Estonia, 2019.

In 2018, milk and cereals were the two largest contributors to Estonian agricultural output, accounting for 28% and 18% of the production value respectively. They were followed by the pig sub-sector at 8%, cattle and fodder crops at 7% each and horticulture and technical crops at 6% each¹¹. Noticeably, services and processing accounted for 11%.

The income in the Estonian agriculture sector showed a different trend compared to other sectors of the economy. After an increase between 2009 and 2012, agricultural income decreased continuously until 2016, reaching a value 40% below its 2010 level. It increased in 2017 by reaching the 2010 level and stayed around that figure in 2018 (Figure 2). The latter may be a signal for stabilisation, as output prices, which were below those of input prices for several years, recovered. The incomes' trend followed that of the output prices, which increased between 2009 and 2012, decreased between 2013 and 2016 and a recovered in 2017-2018 (Figure 3). As concerns consumers' prices for food, their trend closely followed that of the overall consumers' prices index over the period 2009-2018 (Figure 4).

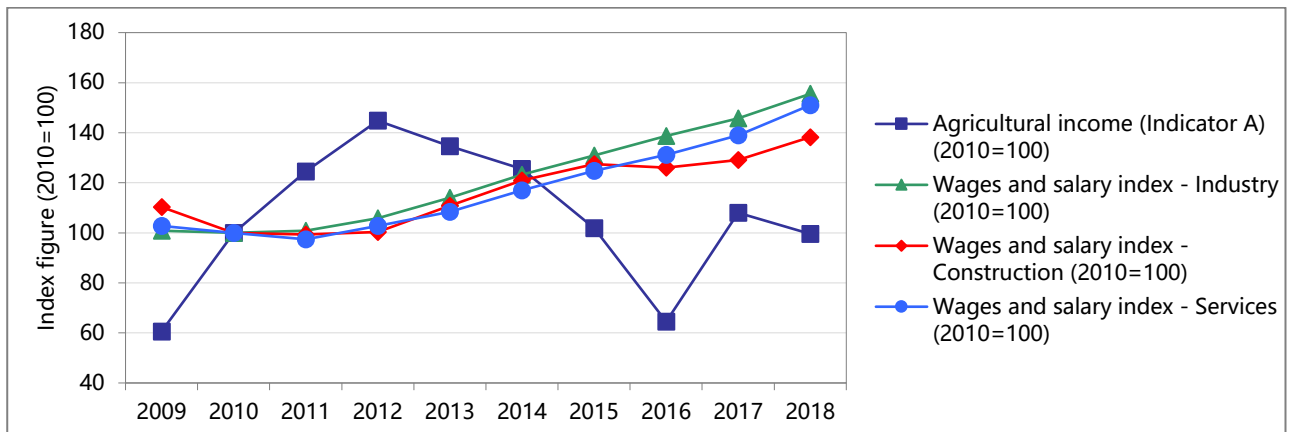
9 Statistics Estonia, 2019, www.stat.ee.

10 The Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets.

11 Statistics Estonia, 2019, www.stat.ee.

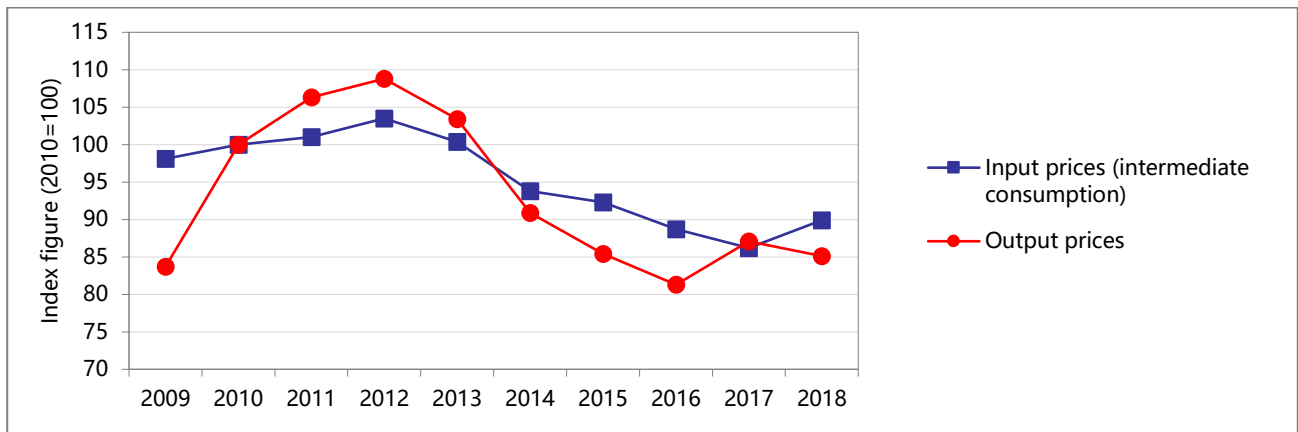


Figure 2: Evolution of agricultural income compared to wages and salaries in the other sectors of the economy, 2009-2018



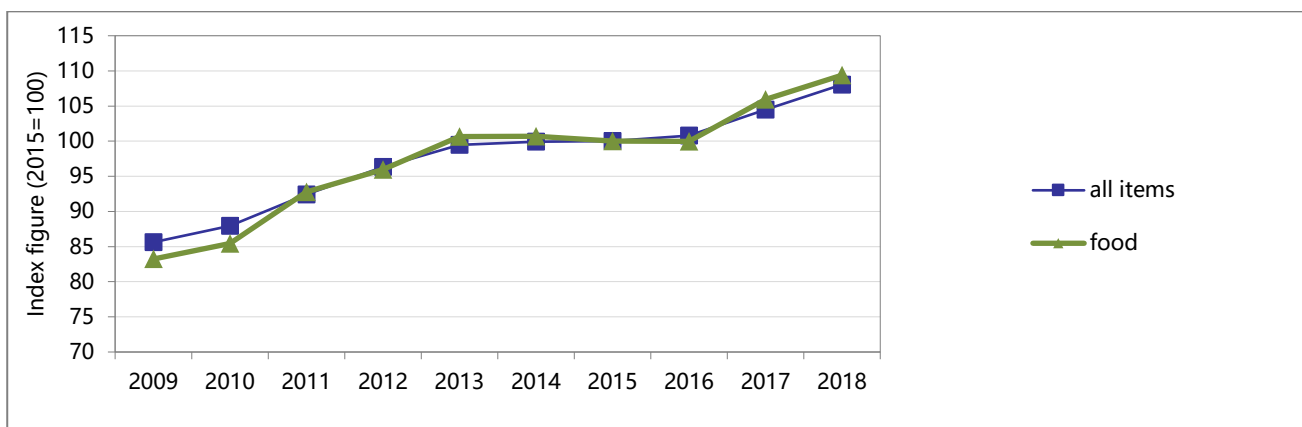
Source: European Commission, DG AGRI, June 2019, Statistical Factsheet for Estonia.

Figure 3: Evolution of agricultural input and output prices, 2009-2018



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

Figure 4: Evolution of harmonised index for consumer prices, 2009-2018

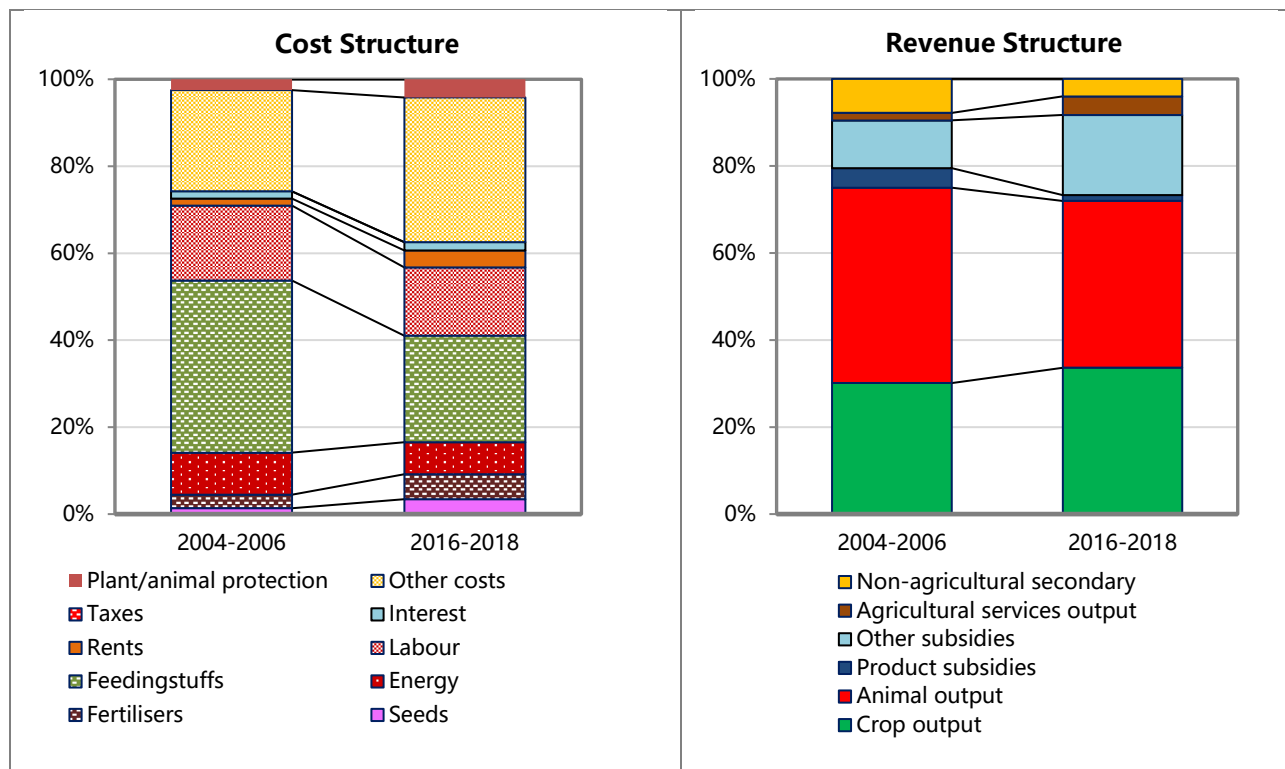


Source: European Commission, DG AGRI, June 2019, Statistical Factsheet for Estonia.



As for the evolution of cost and revenue structure for the agriculture sector (Figure 5) between 2004-2006 and 2016-2018, feeding stuffs and energy costs have decreased, while costs associated to fertilisers, seeds and other costs increased. On the revenue side, the share of revenues from animal output decreased while the share of subsidies increased.

Figure 5: Agricultural income – only cost and revenue structures in Estonia, 2004-2018



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

Statistical factsheet Estonia, 2019

More data on agriculture indicators from Estonia can be found in the [Statistical Factsheet for Estonia 2019](#) of the Directorate-General for Agriculture and Rural Development, Farm Economics Unit.



2.2. Analysis on the demand side to the agriculture sector

This section describes the drivers of demand for finance in the agriculture sector and analyses the met and unmet demand. It seeks to elaborate the main reasons for farm enterprises to request financing and identify the agriculture sub-sectors displaying the largest need for finance. The section also provides an analysis of the type of producers that face the greatest constraints to accessing credit. The analysis of the demand for agriculture finance is based on the findings from the *fi-compass* survey of 310 Estonian farms, as well as interviews with key stakeholders in the agriculture sector, combined with information obtained from the Farm Accountancy Data Network (FADN).

Key elements on finance demand from the Estonian agriculture sector

- Between 2014 and 2015, investment levels in Estonian agriculture dropped by 36% to EUR 151.8 million as a result of the ASF and the Russian embargo. Nevertheless, Estonian investment levels in agriculture increased significantly reaching EUR 223.7 million in 2018, which was still 5% below the 2014 GFCF level.
- 31% of Estonian farms signalled difficulties in accessing finance for investments, which is nearly three times higher than the EU 24 average of 12%.
- Access to land was reported as critical by 37% of Estonian farmers, compared to 11% in the EU 24.
- The total unmet demand for finance is estimated at EUR 213.9 million.
- Based on the *fi-compass* survey, between 13 and 25% of loan applications are rejected, depending on the type of loan products.
- The main reason for rejecting loan applications are: (i) economically non-viable farms; (ii) too high investment risks; (iii) restrictions in banks' credit policies; and (iv) lack of collateral (mainly agricultural land), particularly for young farmers and new entrants.
- The more constrained farm categories are young farmers and new entrants, micro-enterprises, but also farms in their expansion phase, which need to invest although they may already have existing liabilities.
- Banks generally do not offer loans with maturities beyond 7 years, which might be insufficient to insure the financial viability of some types of agricultural investments.
- Unfavourable terms and conditions, and lack of financial literacy, sometimes discourage small-sized farms from applying for finance.
- Approximately 57% of the *fi-compass* survey respondents considered that they will need additional finance in the next two to three years.

2.2.1. Drivers of total demand for finance

Between 2017 and 2018, the Gross Fixed Capital Formation (GFCF) experienced a large increase from EUR 163.1 million to EUR 223.7 million in 2018. The increase can be explained by good crop yields and high milk prices: the favourable economic results in 2017 boosted investments in 2018. This represents a significant recovery after some difficult years.

In fact, between 2014 and 2015, the GFCF level in the agriculture sector dropped strikingly, decreasing from EUR 237 million to EUR 151.5 million (-36%). This was mostly the consequence of two events, which severely affected the sector:



- In 2014, the spread of the ASF severely and negatively impacted the pig sub-sector, dragging down its performance and halting its investment growth. Many farms lost their livestock and had to respect strict hygiene rules. The disease was recorded in the country until the end of 2016¹².
- Between 2014 and 2016, significant instability in the overall agriculture sector was also generated by the economic sanctions imposed by Russia in 2014 on agricultural products. Russian trade sanctions drove Estonian agricultural prices down, especially in the milk sub-sector.

Table 1: Gross Fixed Capital Formation in the Estonian agriculture sector, 2014-2018, EUR million

| | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------------------------|--------|--------|--------|--------|--------|
| Agricultural Products | 23.44 | 11.24 | 15.27 | 13.74 | 15.02 |
| <i>Animals</i> | 23.33 | 10.82 | 13.85 | 13.61 | 14.78 |
| <i>Plantations</i> | 0.12 | 0.42 | 1.42 | 0.14 | 0.23 |
| Non-Agricultural Products | 213.62 | 140.34 | 147.5 | 149.36 | 208.76 |
| <i>Materials</i> | 130.78 | 101.06 | 102.02 | 99.38 | 124.27 |
| <i>Buildings</i> | 82.72 | 39.15 | 45.31 | 49.79 | 84.49 |
| <i>Other</i> | 0.12 | 0.13 | 0.17 | 0.19 | - |
| Total GFCF | 237.06 | 151.58 | 162.77 | 163.1 | 223.78 |

Source: Eurostat - Economic Accounts for Agriculture, 2019.

In 2018, the largest amount of investment was allocated to increase equipment efficiency and modernisation. The GFCF for non-agricultural assets (equipment and infrastructure) stood at EUR 208.7 million in 2018, accounting for more than 93% of the overall investment in the sector (Table 1). Investment in assets constituted the largest component, with a GFCF level amounting to EUR 124.2 million¹³. Dairy farms mainly invested in increasing barn capacity, whereas meat farmers allocated their financing resources to improve equipment modernisation to reduce their demand for labour¹⁴.

Access to finance is a significant challenge for Estonian farmers. Results from the *fi-compass* survey show that Estonian farms have more difficulty in accessing finance compared to the EU 24 average. Nearly one third of Estonian respondents had difficulties with accessing finance for investments, compared to just 12% in the EU 24.

Accessing land was also a significant problem in Estonia with 37% of respondents facing this issue, compared to an EU 24 average of 11% (Figure 6). High production costs and low purchase prices are also challenging the Estonian agriculture. In 2017, according to the *fi-compass* survey, 40% of Estonian farms experienced difficulties related to high production costs and 31% due to low prices.

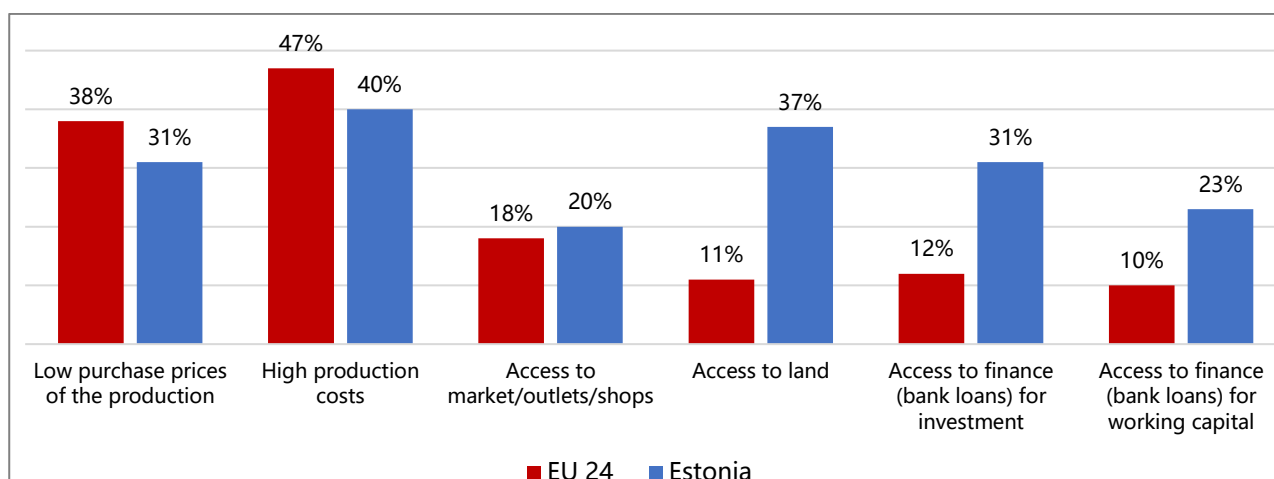
12 I.Nurmoja, K.Schulz, C.Staubach, C.Sauter-Louis, K.Depner, F.J. Conraths & A.Viltrop, 2017, Development of African swine fever epidemic amongst wild boar in Estonia - two different areas in the epidemiological focus, Scientific Reports, <https://www.nature.com/articles/s41598-017-12952-w>.

13 Eurostat, 2019, Economic accounts for agriculture.

14 Interviews with farmers and farmers' organizations.



Figure 6: Difficulties experienced by farmers in 2017



Source: *fi-compass survey*.

In Estonia, farmers used loans primarily to invest in machinery, equipment and facilities, whilst investments in working capital ranked second (Figure 7). According to the *fi-compass* survey, in 2017, the demand for credit of 60% of Estonian farmers, including pig farmers, was driven by investment in capacity expansions and modernisation (machinery, equipment and facilities). In the same year, 41% requested access to finance to meet their working capital needs. Both were very close to the EU 24 average.

The Estonian economy, particularly the primary production sector, is characterised by increasing labour costs as well as by labour shortages. Labour costs in agriculture increased more than the value added and young people are not particularly available to work in the sector. To address this challenge, farmers started to shift towards more modern and efficient means of production¹⁵.

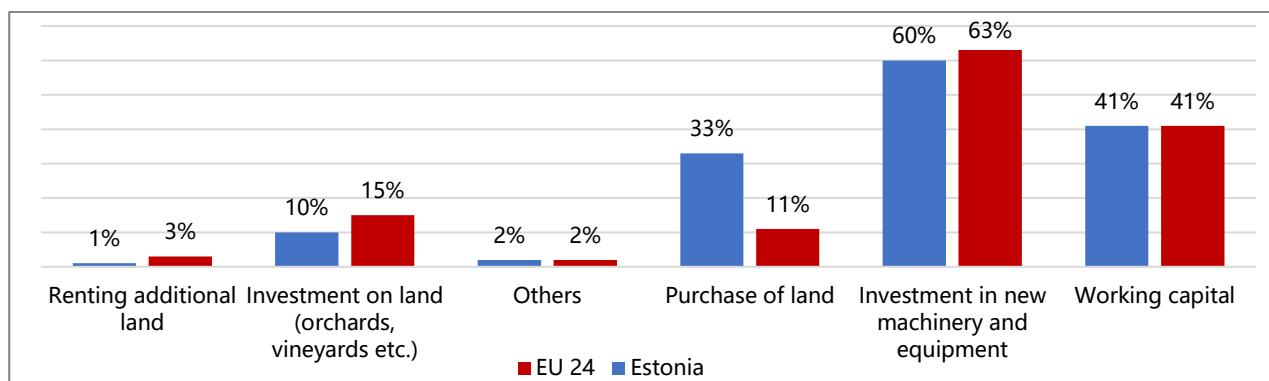
Loans for investment in land were more frequent in Estonia than in the EU 24. 33% of Estonian farms used their loan to purchase land, against an EU 24 average of 11% (Figure 7). This can be explained by the relatively small proportion of land owned by Estonian farmers and by the fact that land is the only type of collateral requested and accepted by banks when applying for bank finance¹⁶. A farm in Estonia owns on average 35% of its total agricultural farmland, and rents 65% of the land it uses. According to the RDF survey, 47% of the responded farmers had used external financing for purchasing agricultural land in the previous five years and 61% of surveyed primary producers stated that insufficient guarantees have been a problem when applying for loans from the banks.

15 Interviews with farmers and farmers' organizations.

16 Interviews with farmers and farmers' organizations.



Figure 7: Purpose of bank loans in the agriculture sector in 2017



Source: *fi-compass survey*.

Financial needs depend on the economic size of the farm. In 2017, according to the FADN survey, the average liabilities of agricultural holdings with Standard Output¹⁷ (SO) greater than EUR 500 000 amounted to approximately EUR 2 million. Farms with SO between EUR 100 000 and EUR 500 000 stood at EUR 276 446. On the contrary, agricultural holdings with SO lower than EUR 50 000, accounted for only a small part of total liabilities in the sector¹⁸. Small-sized holdings rely mainly on short-term loans. In 2017, holdings with SO below EUR 8 000 had average short-term loan liabilities of EUR 3 070, whilst average long-term liabilities amounted to only EUR 1 418¹⁹.

The deteriorating economic performance affecting the agriculture sector in recent years, also led to a lack of sufficient internal financing. Low milk and meat prices were not able to cover production costs, and internal reserves were spent²⁰. The resulting negative effect on investments was not sufficiently counterbalanced by public support. Between 2014 and 2016, the national complementary direct payments were not paid, contributing to reduced financial performance and investments in the sector. The lack of national support drove down the demand for finance, not only because it reduced the amount of resources available to the sector, but especially because it affected the perception of the farmers who felt unsupported²¹.

The CAP is a vehicle for investment support. The presentation of the CAP support is essential to this analysis, as direct payments (Pillar I) and rural development grants (Pillar II) play an important role in stabilising farmers' incomes, directing their investments behaviour and contributing to the overall growth in the sector. In addition to EU direct payments, the so-called complementary national direct payments (CNDP) were paid from the Estonian national budget to farmers. This accounted for approximately 15.6% of the direct payments amount in 2017 and 13.7% in 2018. The re-implementation of this support measure positively affected the overall perception of the sector and contributed to boosting investments²². Banks offering loans to agriculture tend to lend resources to farmers with approved grant projects or with forthcoming direct payments. This allows for guaranteeing a (large) part of the re-payment, while remaining rather risk averse.

The RDP provides support to agricultural holdings' demand of investment. Support for improving farm performance is provided under the RDP, and the public support offered to agriculture consists of EAFRD and national co-financing. When investing with RDP support, farmers must co-finance part of the investment. The main investment support under the RDP is the so-called sub-measure 4.1 'Support for Investment in

17 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.

18 FADN database.

19 FADN database.

20 Interviews.

21 Interviews with farmers and farmers' organizations.

22 Interviews with farmers and farmers' organizations.



Agricultural Holdings', which is a sub-category of activity of measure 4 'Investment in tangible assets' of the Estonian RDP 2014 -2020. By the end of 2019, the total grant budget allocated to sub-measure 4.1 was about EUR 145.7 million (Table 2). In total 1 162 applications were approved, while 1 383 were not supported either because they were ineligible, withdrawn, not admissible, or selected but left without an available budget. The budget initially requested (based on all submitted applications before any administrative check) was EUR 282 million, with EUR 139 million more from what has been made available under all grant calls.

Table 2: Estonia: Data on the implementation of sub-measures 4.1 and 6.1 in the Estonian RDP 2014-2020, public finance, end of 2019

| Sub-measure | Total number of received applications | Total budget requested by all submitted applications for all calls (EUR million) | Total number of approved and supported applications from all calls | Total budget made available under the grant calls (EUR million) | Number of non-approved applications | Total requested budget not being supported by all calls (EUR million) |
|----------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------|
| 4.1 'Support for investments in agricultural holdings' | 2 545 | 282.4 | 1 162 | 145.7 | 1 383 | 138.9 |
| 6.1 'Business start-up aid for young farmers' for financing farmers' | 760 | 30.3 | 455 | 19.3 | 305 | 11.0 |

Source: Ministry of Agriculture, 2020.

Note: The 'total budget requested' and the 'total requested budget not being supported by all calls' is calculated based on 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 their evaluation, and/or with insufficient value-added, and/or ranked at a place for which budget under the call has not been anymore available. Some applications could have also been withdrawn at a later stage.

In a similar manner, the demand for start-up aid by young farmers was higher than the available budget for the grant calls under sub-measure 6.1, although of a much smaller dimension. Sub-measure 6.1 'Business start-up aid for young farmers' for financing farmers' is accessible to young farmers. The total budget initially requested (before any administrative check to take place) amounted to EUR 30.3 million, while the budget made available was EUR 19.3 million. In total, 455 applications of young farmers were approved (Table 2).

Table 3 gives an overview of the applications submitted in the two rounds for proposals²³. Two thirds of the beneficiaries of sub-measure 6.1 were male and the average age of applicants was 31. The data shows that young farmers want to invest particularly in the cultivation of cereals, vegetables, and oilseeds. Very few young farmers plan to invest in milk production and there are no young farmers interested in pig production. Applicants applying for support under sub-measure 6.1 are not active in applying for other sub-measures.

23 Results from the third call are not available yet.



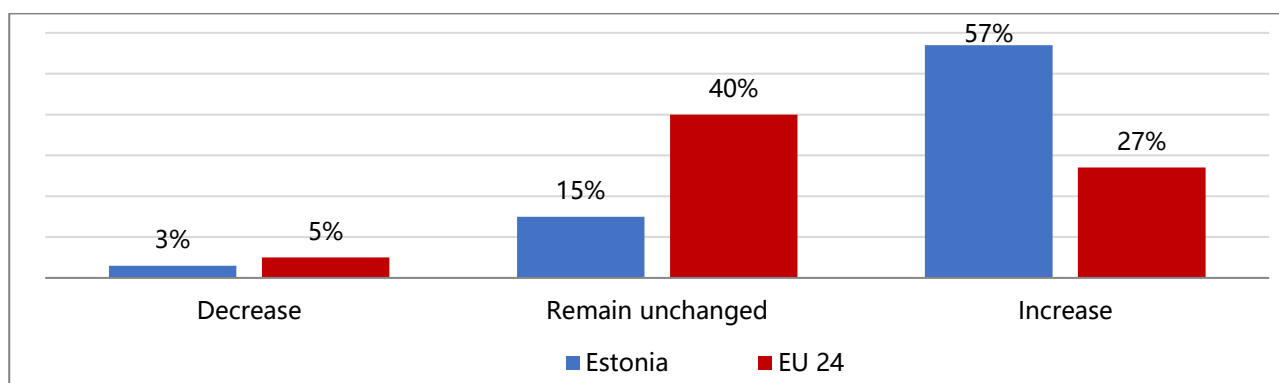
Table 3: Estonian RDP 2014–2020, sub-measure 6.1 ‘Business start-up aid for young farmers’, applying and assigning (I-II application rounds)

| Sub-sector | Number of applications | Number of applications accepted | Applying for the grant, EUR million | Assigning a grant, EUR million | Total value of the applications that were not financed, EUR million |
|-----------------------------------------------------------|------------------------|---------------------------------|-------------------------------------|--------------------------------|---------------------------------------------------------------------|
| Cereals, oil seeds and protein concentrate growing plants | 122 | 63 | 4.9 | 2.5 | 2.4 |
| Other cattle and buffalo rearing | 61 | 27 | 2.4 | 1.1 | 1.3 |
| Fruit and berry growing | 55 | 28 | 2.1 | 1.1 | 1.0 |
| Beekeeping | 44 | 26 | 1.8 | 1.0 | 0.8 |
| Vegetable growing | 32 | 15 | 1.2 | 0.6 | 0.6 |
| Sheep and goat farming | 29 | 12 | 1.1 | 0.5 | 0.6 |
| Mixed farming | 34 | 16 | 1.4 | 0.6 | 0.8 |
| Milk production | 9 | 7 | 0.4 | 0.3 | 0.1 |
| Other | 41 | 20 | 1.9 | 0.8 | 1.1 |
| Total | 427 | 214 | 17.0 | 8.6 | 8.4 |

Source: Ministry of Rural Affairs, 2019; ARIB, 2019.

Farmers expect their financial needs to increase in the future. Approximately 57% of the Estonian farmers expect their financial needs to grow in the next two to three years (Figure 8).

Figure 8: Farmers’ expectations on future financing needs, 2017

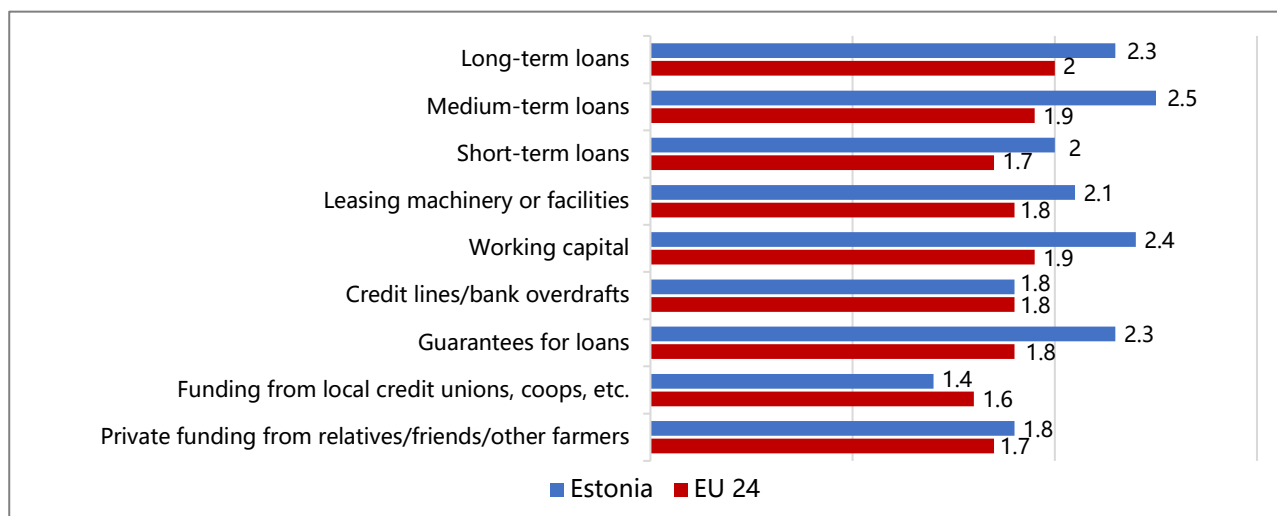


Source: *fi-compass* survey.

According to the *fi-compass* survey, medium-term loans will remain the most important financing products, followed by long-term loans (Figure 9). Interviews with farmers revealed that on average farmers expect to apply for loans of between EUR 100 000 and EUR 500 000.



Figure 9: Most important financing instruments to farmers’ future financing (1 low - 4 high) in 2017



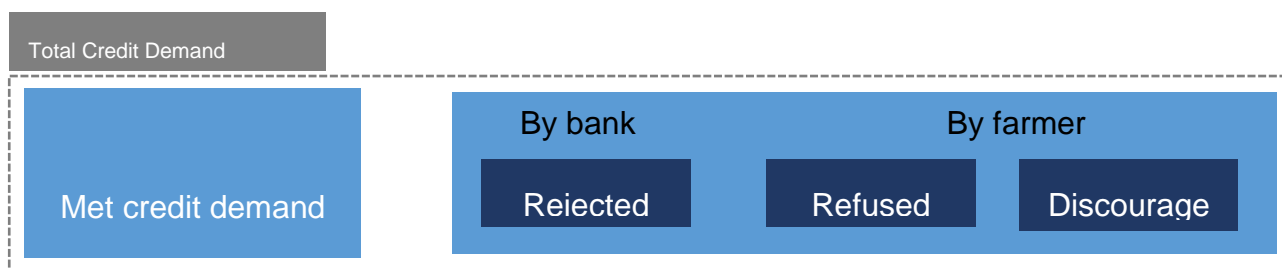
Source: fi-compass survey.

Furthermore, Estonian farmers expect that guarantees will play an important role in helping them to meet their future financial needs via securing loans (Figure 9). Most farmers express willingness to use investment grants in the future²⁴. In the RDF survey, 90% of the respondents claimed that they need investment subsidies in the next five years to implement their development plans. In the previous five years 77% of respondents had applied for investment subsidies²⁵.

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 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 farmers, alongside cases where farmers are discouraged from applying for credit due to an expectation of rejection or refusal (Figure 10).

Figure 10: Schematic overview of the demand side of agriculture sector



Source: Ecorys, 2019.

24 Interviews with farmers.

25 The Rural Development Foundation (RDF), 2019. Survey on Identifying the needs and opportunities for raising capital, and long-term lease, selling and repurchase transactions of agricultural land, https://mes.ee/sites/default/files/ey_uuringu_aruanne.pdf.

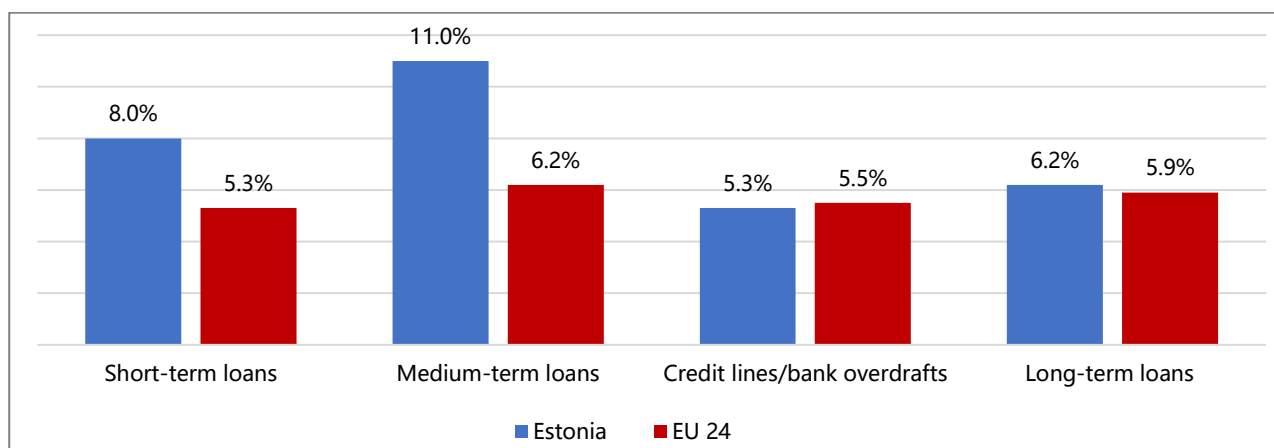


Based on the results of the *fi-compass* survey, the unmet demand for finance in the agriculture sector in Estonia is estimated to be EUR 213.9 million.

Private finance in the Estonia agriculture sector is estimated to be between EUR 25.3 million and EUR 50.6 million²⁶. According to the *fi-compass* survey, 16.9% of farmers sought finance from private individuals such as family members or friends in 2017, it is slightly above EU 24 average (11.4%).

Medium-term investment loans were the most commonly used bank finance products, followed by short-term loans. The *fi-compass* survey found that 11% of Estonian farmers applied for medium-term loans, compared to 6.2% in the EU 24. The application rate for short-term loans was approximately 8% (Figure 11). 6.2% and 5.3% of Estonian farms applied for long-term loans and credit lines/bank overdrafts, respectively. However, this pattern of application for loan products does not necessarily reflect farmers' preferences²⁷.

Figure 11: Estonian farms applying for finance in 2017, by financing product



Source: *fi-compass* survey.

A significant part of short-term financing demand is met by input suppliers²⁸. Table 3 provides an overview of current and long-term liabilities and supplier payables of agricultural holdings in absolute terms. Between 2013 and 2017, supplier payables accounted for 27-38% of farmers' current liabilities. Input suppliers offer short-term credit to farmers on simple lending terms that reduce transaction costs, but usually the interest rates are considerably higher (ca. 12% per annum²⁹) than interest rates on loans.

26 The lower and upper bound are computed by considering a standard volume of private finance lending of EUR 5 000 and EUR 10 000, respectively, adjusted by the country specific purchasing power parity index.

27 See below for a discussion of availability of long-term financing options.

28 Which might not be captured by the *fi-compass* survey.

29 Interviews with farmers, farmers' organizations, and financial institutions.



Table 3: Liabilities of enterprises in crop and animal production³⁰ in Estonia, 2013-2017, EUR million

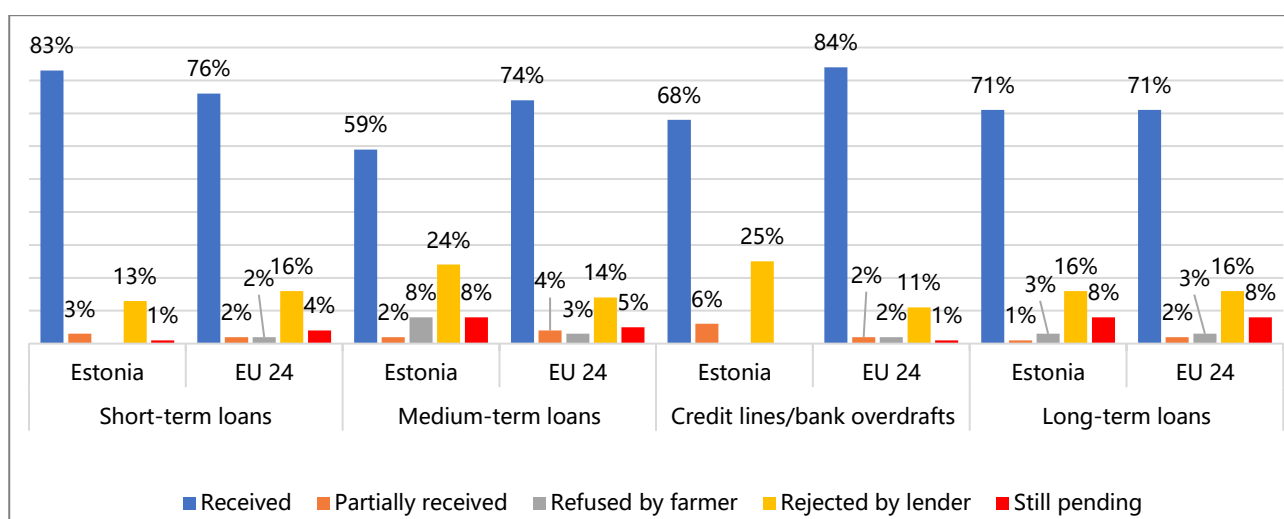
| | 2013 | 2014 | 2015 | 2016 | 2017 |
|----------------------------------------------------------|------|------|------|------|------|
| Liabilities total | 779 | 691 | 806 | 877 | 823 |
| Current liabilities total | 301 | 267 | 298 | 324 | 291 |
| of which debt obligations | 162 | 137 | 134 | 164 | 158 |
| of which customer prepayments | 2 | 1 | 4 | 1 | 3 |
| of which supplier payables | 91 | 87 | 113 | 107 | 79 |
| Ratio supplier payables to current liabilities, % | 30 | 33 | 38 | 33 | 27 |
| Long-term liabilities | 477 | 424 | 508 | 553 | 531 |

Source: Statistics Estonia, 2019.

According to bank representatives, on average 5 to 15% of all agricultural loan applications are rejected. The *fi-compass* survey shows similar percentages for short and long-term loans. The type of financing products with the highest rejections rates are credit lines/bank overdrafts and medium-term investment loans (Figure 12):

- Credit lines/bank overdrafts and medium-term loans. According to the *fi-compass* survey, approximately a quarter of applications for credit lines/bank overdrafts and for medium-term loans were rejected by the financier, a rejection rate much higher than the EU 24 average of 11% and 14%, respectively.
- Short and long-term loans applications. 13% of short-term loan applications submitted by the Estonian respondents were rejected. For long-term loans, the rejection rate was the same as for the EU 24 at 16%.

Figure 12: Results from applications for finance in the agriculture sector in 2017



Source: *fi-compass* survey.

30 Those two sub-sectors are not disaggregated in Statistic Estonia.

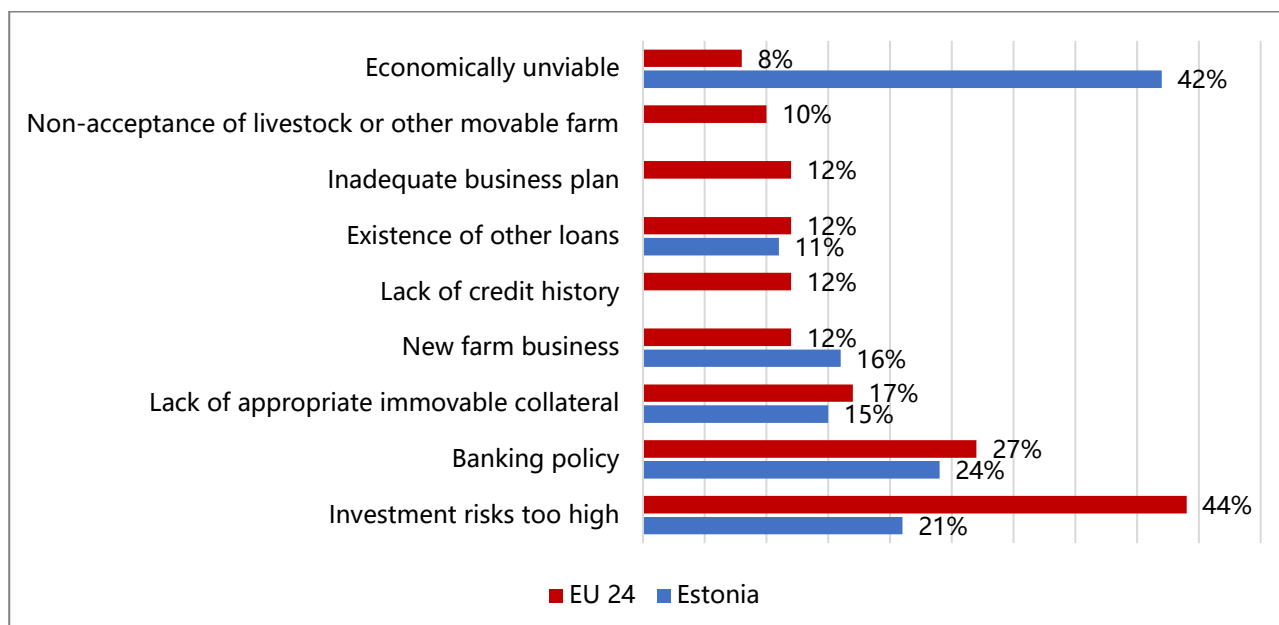


Interviews with financial institutions found that agricultural enterprises with rejected loan applications belong mainly in the following categories:

- Micro-enterprises. Considering the volume of their assets and turnover, micro-enterprises have relatively larger needs for external finance than medium and large-sized companies. This is one of the reasons why micro-enterprises are considered to be more risky from lenders’ point of view.
- Agricultural holding and companies in the expansion phase of their business. They have the greatest need for financing resources, compared to companies in other stages of development³¹. The problem of rejection occurs if companies have already expanded their activities and have already outstanding debts but still wish to expand further their activities.
- Young farmers and new entrants. The demand for financing is particularly high amongst young farmers and new entrants, but banks have not developed dedicated products for them³². Overall, interviews with farmers’ organizations and financial institutions confirm that this segment of the sector is experiencing the most difficulties in obtaining loans from banks³³.

Interviewed banks also highlighted the weakness of farms’ viability, low solvency levels, and bad credit history are the **main reasons for rejecting farmers’ loan applications.**

Figure 13: Reasons for applications’ rejection in the agriculture sector in 2017



Source: *fi-compass* survey.

Further to the above findings, the *fi-compass* survey suggests that farmers’ loan applications are rejected by banks because of insufficient collateral, inadequate business plan, lack of equity and the banks’ limits on lending to agriculture (for example, as a percentage of the overall lending).

Here we try to clarify some of the above factors:

- Farms’ lack of viability and low solvency levels. Results from the *fi-compass* survey suggest that, in 2017, 42% of applications for bank finance were rejected because their farms were considered by the banks as economically unviable (Figure 13). As seen in section 2.2.1, the agriculture sector in Estonia went through several difficult years, especially the dairy and pig breeding sub-sectors, which caused its economic

31 Interviews with farmers and financial institutions.

32 See discussion of financial products in section 2.3.1.2.

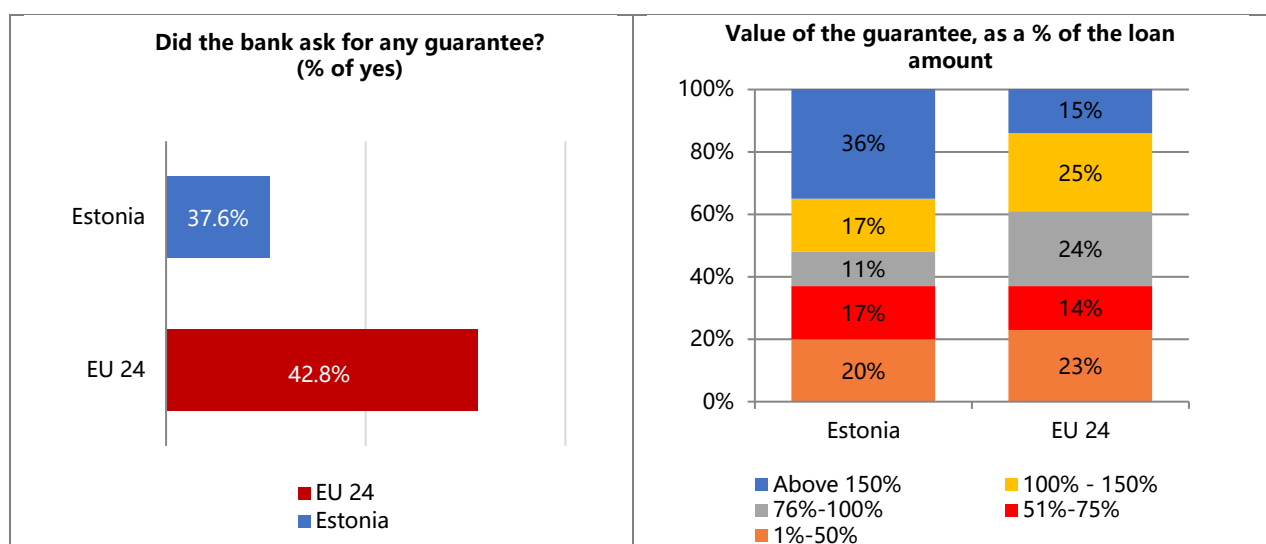
33 Interviews with farmers’ organizations and financial institutions.



performance to decrease significantly. The worsening of farms' key economic indicators made the agriculture sector unattractive to banks, which made them tighten the terms and conditions for granting credits. These weak performances are compounded by markets' uncertainty driving up the investment risk (investment risk motivated 21% of rejections - Figure 13).

- Lack of collateral.** Interviews with farmers, farmers' cooperatives and farmers' organizations revealed that a 'textbook market failure' in the Estonian agriculture sector is the very high collateral level asked by the banks in a context where the collateral market is illiquid and not well developed. The high-risk that banks associate with agriculture sector makes them very demanding and their collateral requirements difficult to meet. According to the *fi-compass* survey, Estonian farms are required to have a higher guarantee rate on average than in the EU 24 (Figure 14). In 36% of the cases, the value of the guarantee requested is above 150% the value of the loan amount, whereas in the EU 24, only 15% of the guarantee requested had a value of such amount. In Estonia, 94% of the loan guarantees used are personal collateral. Compared to the EU 24, other types of guarantees such as public guarantee, private guarantee, European/International guarantee are less common. As a general principle, Estonian banks only accept land as valuable collateral, because buildings in rural areas are valued at very low rates³⁴.

Figure 14: Information related to guarantees requested by agricultural producers, 2017



Source: *fi-compass* survey.

- Insufficient cash flow** due to the short-term nature of the loans. Interviews with farmers and farmers' organizations revealed that Estonian banks typically do not issue loans with a maturity longer than seven years. This type of financing product is not typically well-suited to satisfy farmers' investment needs, which would require a longer period to be profitable. As a result, farmers are not able to generate sufficient cash flow to service the debt, making their applications more likely to be rejected³⁵. Lack of financial knowledge also makes it difficult for farmers to prepare effective business plans.
- Lack of equity** and own contribution to the investment project. This also links to the high-risk perception of banks for the sector mentioned above, since availability of own funds contributes to risk mitigation³⁶.

34 The value of transactions made in Harju county (Tallinn) accounted for 71% and the value of transactions conducted in Tartu county for 10% of the total value of transactions in 2015, which suggests that the rural real estate market could be worth less than 10% of the national market, (Statistical Yearbook of Estonia, 2016).

35 Interviews with farmers and farmers' organizations.

36 Interviews with farmers and financial institutions.

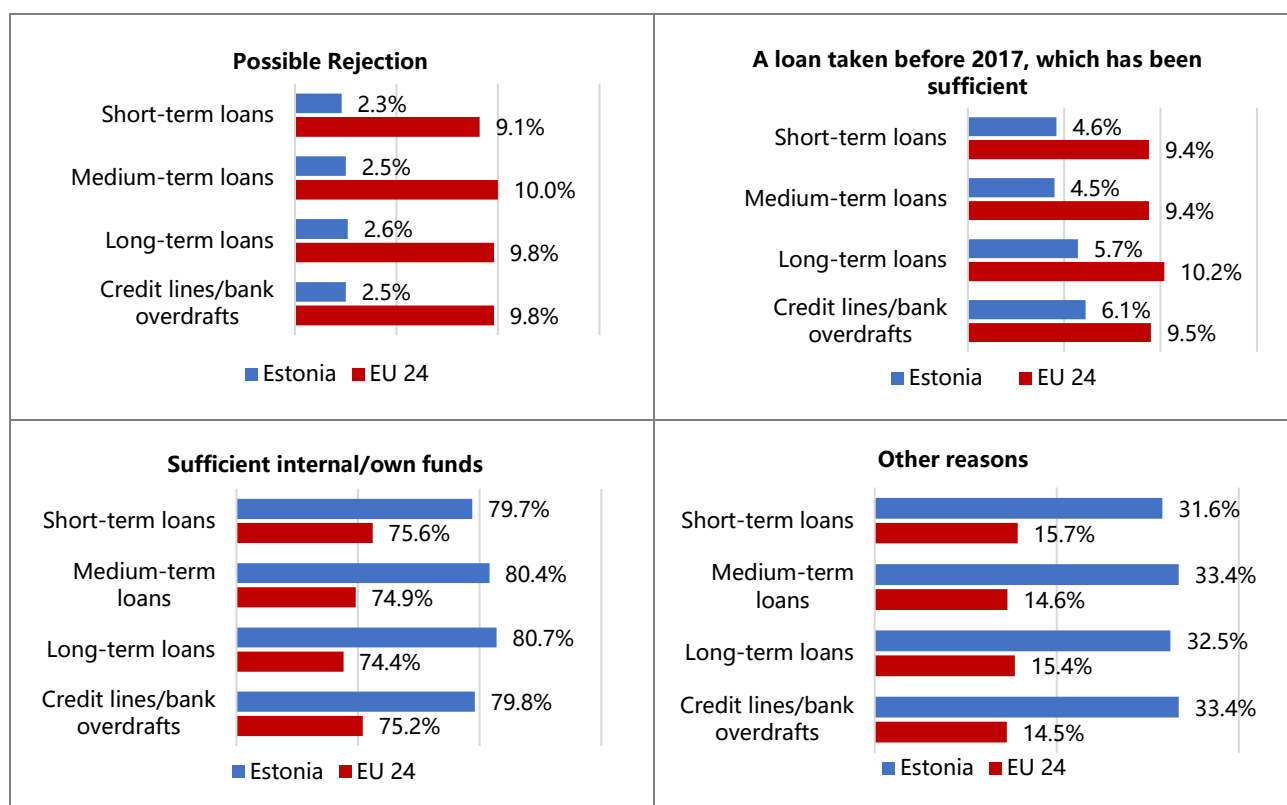


- **Bad credit history.** Farmers who have problematic credit history due to both the economic difficulties experienced by the sector after 2014 and to their difficulty to adapt to the short repayment period characterising the products offered by the banks.

Part of the unmet demand for finance arises from farms discouraged from applying for loans for fear of rejections (Figure 15). The main reasons why some farmers do not apply for loans are:

- **Lack of sufficient collateral and the restrictive conditions imposed by banks.** The knowledge that banks in Estonia ask for significant collateral prevents farmers from trying to apply for credit. According to the results from the RDF survey, companies consider the lack of collateral to be the most restrictive factor in applying for a loan³⁷. This situation was further confirmed by interviews with farmers’ organizations and with financial institutions. Additionally, the Foresight analysis on the CAP also highlights that the very short loan repayment period imposed by the banks prevents farmers from applying even if they need to, since the maturity would not fit with their financial situation. All interviewees agree that financial instruments could help to address this market failure;
- **Farmers’ limited knowledge on financial matters and banking**³⁸. According to the interviews with financial institutions’ representatives, farmers tend to favour leasing financial products, as the vendor of the equipment can help with the preparation of the required documents. This compensates for the farmers’ limited financial literacy. Furthermore, the leased asset is usually considered as a sufficient guarantee and no additional collateral from the farmer is required. Additionally, interviews with farmers’ organizations and financial institutions revealed that the sector is likely to suffer from insufficient information about the loan products made available by banks.

Figure 15: Reasons for not applying for loans in the agriculture sector in 2017



Source: fi-compass survey.

37 RDF survey.

38 Interviews with financial institutions.



The Estonian EAFRD managing authority, which was also the first one to launch an EAFRD-funded financial instrument in 2014-2020, has finalised its ex-ante assessment for the introduction of EAFRD supported financial instrument in the CAP Strategic Plan. The results are summarized in the box below. This, together with the experience gained under the 2014-2020 period, should provide sufficient background for deciding on how to continue the use of financial instruments under the CAP.

Main findings from the Ex-ante assessment of financial instruments in the Estonian CAP Strategic Plan 2021–2027³⁹

- Real estate in rural area often does not qualify as collateral because of its low market value.
- There is a lack of supply of long-term (> 7 years) investment loans.
- High interest rates are problems for young entrepreneurs, small-sized enterprises, and small loans.
- Credit institutions are not interested in evaluating business plans when the loan amounts are small.
- The issue with insufficient economic performance and poor business plans is sometimes related with banks' insufficient knowledge on less common agricultural segments (i.e. outside cereals or dairy).
- Lack of equity brought in by loan applicants limits the loan amounts that banks are willing to provide for financing for large investment projects (e.g. large cooperative investments).
- Credit institutions lack understanding of the specificities of cooperatives and producers' organisations.

Main findings from the ex-ante assessment of financial instruments in the Estonian Rural Development Programme 2014–2020 and the European Maritime and Fisheries Fund Operational Programme 2014–2020

- The most important sources of financing to agricultural producers and agri-food companies were: own financial resources (65% of the respondents), investment subsidies (60%), leasing (55%) and loans provided by credit institutions (40%).
- The resources allocated to investments were mainly devoted to buildings, mobile machinery and equipment, purchase of agricultural land, and product development.
- The main difficulties in accessing finance are related to the too short repayment periods requested by credit institutions; the lack of collaterals and the poor quality attributed to those provided; companies' low economic performance; high cost of financing; limited access to long-term investment loans; and lack of information on different funding options.
- More than 60% of the companies needed to provide additional collaterals to guarantee the loans.
- Loan guarantees offered by the Rural Development Foundation and KredEx were the most frequently used guarantee products. However, 28% of the companies used family houses or other personal assets as collaterals.
- The high price of the guarantee products offered by the Rural Development Foundation and KredEx was declared to represent a constraining factor for many loan applications.
- Micro, small-sized enterprises and start-ups (including young farmers) were the segments of the sector experiencing more difficulties in accessing investments.
- In order to overcome these problems, the suitable products or instruments would be: microloans, subsidised guarantee products, long-term investment loans. However, 75% of the respondents stated

39 Not published at the time of writing.



that their investment needs are less than EUR 50 000, making the target group for long-term investment loans quite small.

- Almost 90% of the cooperatives declared to expect an increasing need of external financing (both for working capital and investments) in the upcoming five years. They also stated to prefer to finance their investments by investment subsidies, loans and own contributions. About half of the cooperatives stated that they would use financial instruments instead of investment subsidies to finance their investments.
- Non-optimal investment situations for cooperatives are mainly related to long-term and large scale investments. These constraints could be eased by subsidised guarantee products, and long-term investment loans (assuming that the repayment periods were longer than that offered by commercial banks).
- The investment strategy of EAFRD financial instruments could focus on four types of instruments: (i) growth loan for micro and small-sized enterprises; (ii) long-term investment loan; (iii) guarantees; and (iv) equity investments.



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 Estonia 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 Estonian agriculture sector

- The banking sector in Estonia is relatively concentrated, with the Swedbank and SEB being the most important credit providers, including for agriculture.
- The most used financing tools are leasing, loans, and guarantees.
- The total outstanding loan volume was estimated at EUR 454.5 million in 2018.
- Between 2008 and 2018, the share of loans to agriculture over the total outstanding loans increased from 3% to 6%.
- Leasing financial volumes are growing faster than loan products. Compared to 2008, the volume of the leasing portfolio was almost twice as high in 2018, amounting to almost EUR 280 million.
- Only a few commercial banks offer products specifically targeting agricultural holdings.
- The main constraints identified on the supply side of the market are: (i) higher interest rate applied to farmers loan application, and (ii) banks do not offer loans with maturities beyond 7-10 years; (iii) banks do not have a strong sector expertise and might find difficult to assess the viability of investments outside the main agriculture sub-sectors.

2.3.1. Description of finance environment and funding availability

This section provides an overview on the finance providers in the Estonian agriculture sector. In addition, the section will shed light on the financial products available in the Estonian market to finance agricultural activities. Finally, a description on the trends of the financial market will be provided.

2.3.1.1. Finance providers

Estonia's main finance providers are commercial banks. The agriculture sector is predominantly financed by two banks, namely Swedbank and SEB who serve more than 50% of the borrowing needs.

In the area of corporate loans (for all sectors), the market share of Swedbank and SEB was 38% and 24% respectively. In 2018, the market share of Luminor Bank for corporate loans was 15%. The LHV Bank and OP Corporate Bank Estonian branches had a market share of 8% and 5%, respectively⁴⁰. Commercial banks hold also 80% of the leasing market. The market shares of leasing providers were as follows: Swedbank Liising 24%, Luminor Liising AS 22%, and SEB Liising 19%.

Agricultural equipment and input providers as well as downstream actors also offer short-term credit and leasing options through leasing finance providers. These companies provide inputs for farms (seeds,

40 Eesti finantsteenuste turg 31, December 2018.



fertilisers), machinery and also purchase agricultural commodities. They are usually multinational, Scandinavian companies that are active in the crop and cereal market.

The RDF, founded in 1993, is a facility to support the uptake of credits by farmers. It offers guarantees of up to 80% of the volume of the loan. It provides loans to SMEs directly and indirectly via financial intermediaries⁴¹. Its activities are not limited to the agriculture sector, although it is one of the key target sector of the Foundation. In addition, the RDF is the implementing body of an EAFRD co-funded financial instrument that provides growth and investment loans to farms for over 2014-2020 programming period.

2.3.1.2. Financial products

This section provides an overview of credit products offered by credit institutions. Table 4 provides an overview of the main types of financial products such as investment loans, working capital and short-term loans, and overdrafts that aim to finance companies.

Table 4: Summary of loan products for agricultural holdings and their general conditions

| Loan type | Loan volume | Loan period | Guarantee |
|----------------------------------------|----------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Investment loans | Minimum EUR 2 000 | Up to 5-10 ⁴² years | Guarantee: up to 80% of the loan amount can be guaranteed by RDF, EIF COSME ⁴³ – Loan Guarantee Facility. Guarantee of private or legal person. Collateral: mortgage on real estate or agricultural land. |
| Working capital loan, short-term loans | Minimum EUR 2 000 | Up to 12-36 months | Guarantee: It is possible to apply for a up to 80% guarantee by RDF, EIF COSME – Loan Guarantee Facility. Collateral: mortgage on real estate or agricultural land, board members or owners 'members' or owners' personal guarantees ⁴⁴ . |
| Overdrafts | Up to EUR 25 000 | Up to 1 year | Security: possible to apply for a up to 80% guarantee by RDF Collateral: Guarantee of private or legal person, mortgage on real estate. |

Sources: SEB 2019, Swedbank 2019, Luminor 2019, LHV 2019, Coop Bank 2019.

41 Maaelu Edendamise Sihtasutus (MES), <https://www.mes.ee/en/node>.

42 It appeared from the interviews with farmers that usually banks are reluctant to issue loans with more than seven years maturity. However, in case the farm has collateral and credit history as a client of the bank, it is possible to get also loans with 7+ years of maturity.

43 In Estonia, as of the end of 2018, COSME had provided access to finance for 112 SMEs in the agriculture, forestry and fishing sector for a total of EUR 31.5 million (13.0 % of the total portfolio).

44 Majority of medium and large-sized farms operate in the form of limited liability company. The owners' or board members' personal guarantees are accepted as collateral by banks.



Only Swedbank and SEB Bank include loan products for financing purchases of agricultural land with an option of a 20 years repayment period⁴⁵.

The share of fixed-rate loan agreements is estimated at 10% of all loan agreements. However, this estimate is only indicative. Since the terms of each loan agreement depend on the specific risk level of the client, credit institutions usually have not added interest rates to the list of loan terms. Depending on the individual case, the interest rate will therefore vary. Loan interest rates are predominantly linked to EURIBOR plus a bank margin (on interest rate levels see also section 2.3.2.).

Agricultural input companies provide short-term loans by pre-financing inputs. The inputs are paid later by the revenue earned on the harvest. Here, interest rates are relatively high at about 12%, calculated on an annual basis for an agreed period (e.g. five months).

Since 2016, agricultural enterprises are able to obtain loans supported by the Estonian RDP 2014-2020⁴⁶. The financial instrument financed by the RDP provides loans to agriculture, the food industry and rural entrepreneurs. The initially foreseen guarantee scheme did not materialise. The total budget of the RDP financial instrument, launched in 2016, was originally EUR 36 million. After few years of operation, it was increased to EUR 39 million due to a higher demand. The use of EAFRD financial instrument is described in the table below.

Table 5: Use of EAFRD financial instruments for period 2014-2020 in Estonia as of 19 November 2019

| RDP measure | Allocated amount of financial instrument (EU + national), EUR | Finance product | Number of beneficiaries | Paid amount, EUR | Ratio of paid to allocated amount |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------|-------------------------|-------------------|-----------------------------------|
| Sub-measure 4.1 'Support for Investment in Agricultural Holdings' | 21 121 690 | Growth loan for micro and small-sized enterprises | 56 | 3 655 242 | 80.0% |
| | | Long-term investment loan | 24 | 13 250 943 | |
| Sub-measure 4.2 'Investments to process and market agricultural products' | 9 724 140 | Growth loan for micro and small-sized enterprises | 9 | 474 974 | 83.3% |
| | | Long-term investment loan | 9 | 7 633 900 | |
| Sub-measure 6.4 'Investments in creation and development of non-agricultural activities' | 8 614 170 | Growth loan for micro and small-sized enterprises | 51 | 3 588 960 | 70.5% |
| | | Long-term investment loan | 6 | 2 485 000 | |
| Total | 39 460 000 | | 155 | 31 089 019 | 78.8% |

Source: Data from Estonian Rural Development Foundation, 2019.

The EAFRD financial instrument offers two types of loans: a growth loan support ranging from EUR 5 000 - 100 000 targeting micro and small-sized enterprises, and a long-term investment loan ranging

45 However, there are no statistics available on the share of loans having this longer repayment period. This finding is based on data from websites of the individual credit institutions.

46 *fi-compass*, 2017, Loans for rural development 2014-2020, Estonia, Case study, https://www.fi-compass.eu/sites/default/files/publications/case-study_Estonia.pdf.



from EUR 250 000-1 000 000 (Table 6). These loans are either direct loans implemented by the RDF or co-loans with partner banks. At least of 50% the long-term investment loan is co-lending.

For the growth loan, the interest rates are in general not less than 6% plus the average interest rate applied by the ECB. For start-up entrepreneurs, micro-sized enterprises, disabled entrepreneurs and female entrepreneurs, the interest rates are not less than 4% plus the ECB rate, and for young farmers and producer groups not less than 2% plus the ECB rate.

For the long-term investment loans, the interest rates are determined by market conditions, except for start-up entrepreneurs, micro-sized enterprises, disabled entrepreneurs and female entrepreneurs, for whom the interest rates are not less than 2% plus the ECB rate, and for young farmers and producer groups, for whom the interest rates are not less than 1% plus the ECB rate.

Overall, the EAFRD financial instrument and its products have seen a very good uptake. According to the RDF, co-loans from EAFRD and commercial banks have been launched more successfully than expected thanks to the lower risk for commercial banks, as well as better sectoral knowledge and analytical capacity of the RDF. In total EUR 23.8 million has been given out as loans from the EAFRD financial instruments with co-loans from banks amounting to EUR 28.3 million, i.e. for every euro issued as a loan from the EAFRD financial instruments, EUR 1.2 have been issued by banks as co-loans. This type of loans comprises 76.6% of the loans issued from the EAFRD financial instruments⁴⁷.

Table 6: The terms of the loans offered under the EAFRD financial instrument

| Loan type | Loan volume | Loan period | Guarantee | Interest rate |
|---------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Growth loan for micro and small-sized enterprises | EUR 5 000 -100 000 | Up to 8 years, Loan grace period up to 3 years | At least 50% of loan volume | <ul style="list-style-type: none"> a) under market conditions b) interest rates as follows: <ul style="list-style-type: none"> - in general, not less than 6% + the average interest rate applied by the ECB to its main refinancing operations during the previous half-year (<i>ECB rate</i>) - not less than 4% + ECB rate for start-up entrepreneurs, micro enterprises, disabled entrepreneurs, female entrepreneurs - not less than 2% + ECB rate for young farmers and producer groups (sub-measure 4.1 of the RDP) |
| Long-term investment loan | EUR 250 000 - 1 000 000 (up to 3 million for producer groups) | Up to 20 years, Loan grace period up to 5 years | At least 80% of loan volume | <ul style="list-style-type: none"> a) under market condition b) interest rates as follows: <ul style="list-style-type: none"> - not less than 2% + ECB rate for start-up entrepreneurs, micro enterprises, disabled entrepreneurs, female entrepreneurs - not less than 1% + ECB rate for young farmers and producer groups (sub-measure 4.1 of the RDP) |

Source: RDF, *Micro and small-sized business growth loan, 2019*; RDF, *Investment loan, 2019*.

Most of the support (75%) goes to long-term investment loans, which were the loans most requested by farmers in terms of lending volume, amounting to EUR 23.3 million (Table 7). However, more enterprises were supported with the growth loans products (116). At the end of 2019, one fifth of growth loans for micro and

⁴⁷ Data obtained from the RDF, as of 11 November 2019.



small-sized enterprises had been issued to young farmers. Overall, young farmers represent a significant share of beneficiaries of the RDF facility with 18% of loans and 11% of the lent amount.

Table 7: The use of EAFRD financial instruments, as of 19 November 2019

| Financial instruments | Number of enterprises | Loan amount issued, EUR million | Average loan amount in EUR |
|---------------------------------------------------|-----------------------|---------------------------------|----------------------------|
| Growth loan for micro and small-sized enterprises | 116 | 7.72 | 66 544 |
| - of which start-ups | 12 | 1.01 | 84 417 |
| - of which young farmers | 24 | 1.62 | 67 725 |
| Long-term investment loan | 39 | 23.37 | 599 227 |
| - of which start-ups | 4 | 2.11 | 527 500 |
| - of which young farmers | 4 | 1.79 | 446 250 |

Source: RDF, *Possibilities for agricultural policy in support of generational change, 2019.*

In addition to products provided under the co-funded EAFRD financial instrument, the RDF offers to farms, from its own resources, direct loans and loans through credit institutions. Main terms and conditions are in the following table.

Table 8: Terms and conditions of loans offered by the RDF

| Loan type | Loan volume | Loan period | Guarantee | Interest rate | Purpose |
|------------------------------------------------------|---------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Working capital loan (direct) | Up to EUR 200 000 | up to 3 years with a grace period of up to 12 months; | Collateral: real estate, movable property, other collateral accepted by the lender. Guarantee: at least 50% of the loan amount. | ECB interest rate plus a minimum of 4%. | Mitigation of adverse weather conditions and natural phenomena effects. |
| Loan for small and medium-sized enterprises (direct) | Up to EUR 1 500 000 | Up to 10 years, with a grace period up to 1 years | Collateral: real estate, movable property, other collateral accepted by the lender. Guarantee: at least 50% of the loan amount. | ECB interest rate plus a minimum of 4%. | Improving access to capital for small and medium-sized enterprises |
| Loans through credit institutions | Up to EUR 1 500 000 | Up to 25 years, | / | Bank of Estonia interest rate plus a minimum of 0.5%. Credit institutions may add up to 5% risk margin. | / |

Source: RDF website, <https://mes.ee/>.



The RDF also offers guarantees, outside the EAFRD instrument. The purpose of the specific guarantees is to enable micro, small and medium-sized enterprises to access funds with the support of the state foundation. Guarantees cover up to 80% of the loan amount to a maximum value of EUR 2 500 000 and are mainly issued to micro-sized enterprises since most of the agricultural producers are micro-sized enterprises.

In 2018, 416 guarantee agreements were signed with the RDF, and there were 523 agreements in 2017. Guarantees to financial institutions amounted to EUR 59.39 million, which is 11% less than in 2017. In 2018, the average guarantee fee was 3.32% of the guaranteed amount, and 3.12% in 2017. Guarantee activities enabled companies to receive loans in 2018 amounting to EUR 98.4 million from credit institutions. 26% of the guarantees were provided to agricultural holdings.

2.3.1.3. Description of the financing market

Banks operating in Estonia have a robust lending capacity and their capital position places no limits on the supply of loans. Banks have a high level of capitalisation and profitability, and a favourable financing position⁴⁸. Inflation is relatively high in Estonia at 3.2% in 2018, meaning that monetary policy is even more stimulating for Estonia⁴⁹.

In 2017 and 2018, access to bank loans slightly worsened⁵⁰. There were fewer banks offering larger loans and the price of loans increased slightly. At the same time, the strong financial position and improving credit histories of enterprises, the strong capitalisation of banks, the rapid growth in deposits, and the very low base interest rates favoured lending.

Subsidiaries of banks based in other countries (mostly Scandinavian countries) have easier access to funding but are more exposed to the financing risks from parent banks. In 2018, funds from parent banks represented 17% of all the financing sources of Estonian commercial banks. Therefore, crisis or problems in the Nordic economies are likely to spill over into the Estonian market.

In 2018, the exit of several foreign banks from the sector affected the average cost of funding. The average cost of funding remained low in 2018 and this supported the supply of credit, but that average cost was still a little higher than a year earlier. Several subsidiaries of foreign banks that had previously accessed additional funds from their parent banks at favourable rates, exited from the Estonian market.

The general rise in the price of loans to companies indicates that the interest rates on smaller loans have also changed.

2.3.2. Analysis of the supply of finance

Between 2008 and 2018, the outstanding volume of short and long-term loans granted to agriculture, forestry, and fishing sectors almost doubled reaching EUR 454.5 million in 2018. Table 9 provides an overview of loan balances granted to the agriculture sector. The percentage increase over time is similar for short and long-term loans, suggesting that there is no structural change with regards to the supply of finances over the last ten years. Overall, **the share of all loans given to the agriculture, forestry and fishery sector increased from 3% to 6%.**

48 Estonian Financial Supervision and Resolution Authority. Eesti finantsteenuste turg 31. detsember 2018 seisuga. <https://www.fi.ee/et/publikatsioonid/eesti-finantsteenuste-turg-31-detsember-2018-seisuga>.

49 Bank of Estonia. Financing of the Economy. February 2018. https://www.eestipank.ee/sites/eestipank.ee/files/publication/en/LendingReview/mry_2018__eng.pdf.

50 Bank Lending Survey, 2017, https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey.

**Table 9:** Outstanding loans to agriculture, forestry and fishing sectors in 2008-2018

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Short-term loans (EUR million) | 17.6 | 24.2 | 20.7 | 25.1 | 26.1 | 30.2 | 29.6 | 27.3 | 34.2 | 34.0 | 31.0 |
| Short-term loans (% of all loans) | 7% | 11% | 9% | 10% | 7% | 9% | 8% | 7% | 8% | 8% | 7% |
| Long-term loans (EUR million) | 220.0 | 190.0 | 202.8 | 215.0 | 274.2 | 309.2 | 340.4 | 343.8 | 385.1 | 407.5 | 423.1 |
| Long-term loans (% of all loans) | 93% | 89% | 91% | 90% | 93% | 91% | 92% | 93% | 92% | 92% | 93% |
| Total (short and long-term loans) (EUR million) | 237.6 | 214.2 | 223.5 | 240.1 | 300.3 | 339.4 | 370.0 | 371.1 | 419.3 | 441.5 | 454.5 |
| Share of agriculture, forestry and fishing of the total loan amount in Estonia, (%) | 3% | 3% | 3% | 4% | 5% | 5% | 6% | 5% | 6% | 6% | 6% |

Source: Bank of Estonia, 2019.

Similar trends can be found for the leasing portfolio of the three sectors, although leasing financial volumes are growing faster than loan products. Compared to 2008, the volume of the leasing portfolio was almost twice as high in 2018, amounting to almost EUR 280 million. The share of leasing portfolio for the agriculture, forestry and fishing sectors in terms of total leasing portfolio is approximately 12%, twice as high as the share of the total loan amount (Table 10).

Table 10: Leasing portfolio, outstanding contracts, agriculture, forestry and fishing sectors in 2008-2018

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Agriculture, forestry and fishing (EUR million) | 158.6 | 124.8 | 104.1 | 125.0 | 142.4 | 174.4 | 207.4 | 205.7 | 240.4 | 254.6 | 279.3 |
| Share within the total leasing portfolio in Estonia, (%) | 7% | 7% | 7% | 9% | 9% | 11% | 13% | 12% | 13% | 12% | 12% |

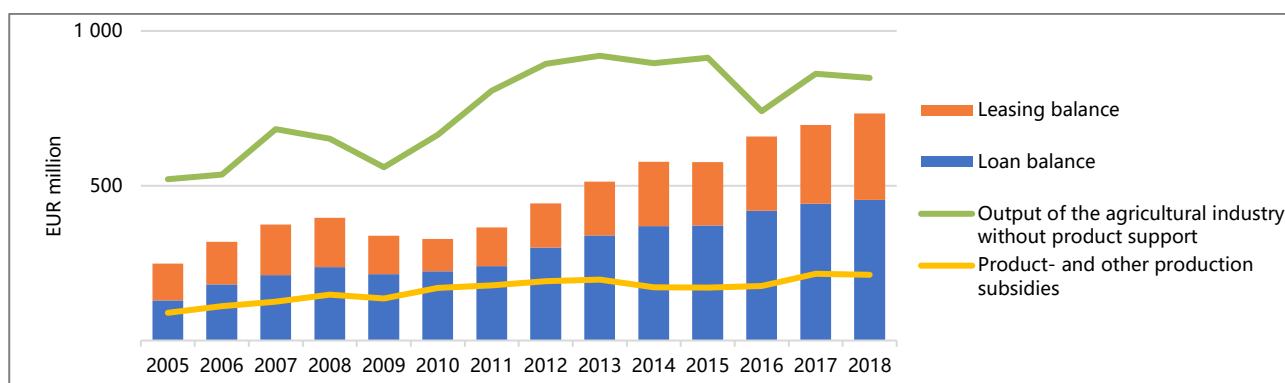
Source: Bank of Estonia, 2019.

During the first years of the economic crisis in 2008-2010, the balance of agricultural loans and leases including forestry and fishing declined (Figure 16). In 2016, at the peak of the dairy crisis and the spread of ASF, despite a reduction in the sector output, loans and leasing continued to grow. At the end of 2018, the stock of loans and leases in the agriculture, forestry and fishing sectors amounted to EUR 734 million which is 87% of the value of agricultural production. Between 2005 and 2018, the amount of product and other production aid increased from EUR 89.6 million to EUR 213 million. The volume of non-performing loans in the primary production sector only increased in 2016⁵¹ as crop harvest (cereals) was poorer than expected (-39% compared to 2015), but after that year the situation started improving again.

51 KrediInfo Ltd, 2018, Purchasing Power Parity.



Figure 16: Loans and leases of agricultural, forestry and fishing companies compared to agricultural output, 2005-2018



Source: Bank of Estonia, 2019.

Improving productivity and profitability (entrepreneurial income) in Estonian agriculture is a key challenge. There is still strong pressure on wage growth, increasing rental costs (the share of rented land and rental prices for land are rising), and the increase in the cost of capital goods does not make this task easy for farmers⁵². Possible future increases in interest rates may also have a significant impact on the livelihood of the agriculture sector. For example, if interest rates rise by 2%, this would increase the annual interest payments of the agriculture sector by EUR 15 million⁵³. During the sector crisis peak between 2015 and 2016, payables to suppliers (commercial companies) increased in the agriculture sector (Table 3). This may suggest that during the crisis, several companies or sub-sectors became too risky for banks, leading to increasing debts to suppliers. The interest rate paid to suppliers is usually higher than the interest rates on loans issued by banks. Thousands of agricultural companies buy the necessary inputs, pesticides and fertilisers from commercial companies and, after growing cereals, sell their cereals to the same companies.

Agricultural holdings pay higher interest rates for loans when compared to other economic activities.

Table 11 shows the average interest rate on loans issued by credit institutions operating in Estonia based on data collected by the Bank of Estonia over the past years. ‘Total economic activities’ shows the average interest rates of all activities, and the interest rates on loans granted to the primary production sector are also specified in the table. The level of interest rates can be explained by the following factors:

- In general, the structure and the competitive situation of the banking sector affect the level of interest margins. In Estonia, where the banking sector concentration is one of the highest in the Eurozone and has further concentrated over the last couple of years, interest rates are higher than in many other Eurozone countries⁵⁴.
- In addition, higher interest rates of the agriculture sector may also be related to the higher risks perceived by banks. Banks lack in-depth knowledge of the sector as well as outstanding debt of some sub-sectors, due to agricultural and economic crisis made banks’ lending less to farms⁵⁵. Furthermore, the Russian embargo contributed to increasing uncertainty in the economic performance of the sector.
- Finally, financial institutions have not developed specific products to finance young farmers. Consequently, the risk associated to this type of borrower is embedded in the interest rate rather than in the product design.

52 Also, since the balance of loans and leasing has been growing the interest paid annually has been increasing and is almost equal to payments for land rent (in 2019, EUR 32 million and EUR 37 million, respectively).

53 Viira, 2019, Suure laenukoormuse ja madala tootlikkuse nõiarings. Raha, Põllumehe Teataja aprill 2019. <https://pollumeheteataja.ee/uudis/2019/04/22/suure-laenukoormuse-ja-madala-tootlikkuse-noiarings/>.

54 Eesti Pank, 2017, Majanduse Rahastamise Ülevaade. Veebruar, <http://www.eestipank.ee/publikatsioonid/majanduse-rahastamise-ulevaade>.

55 Interviews with financial institutions.

**Table 11:** Interest rates of loans granted to non-financial corporations by borrower's main economic activity, 2012-2018

| Type of loans | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Short-term loans | Total economic activities | 3.99% | 3.49% | 3.07% | 3.26% | 3.40% | 3.62% | 3.21% |
| | Agriculture, forestry, fishery | 4.07% | 3.24% | 3.27% | 3.31% | 3.13% | 3.18% | 3.23% |
| Long-term loans | Total economic activities | 3.60% | 3.07% | 2.93% | 2.40% | 2.32% | 2.30% | 2.51% |
| | Agriculture, forestry, fishery | 3.80% | 3.23% | 3.08% | 2.74% | 2.70% | 2.58% | 2.79% |

Source: Bank of Estonia, 2019.

The lack of sufficient collateral or guarantee is a problem affecting the supply of finance to all types of sectors in the Baltic countries, including Estonia. The Bank Lending Survey found that the share of companies for which this is a fundamental problem is larger in Estonia, Latvia and Lithuania, and it has become worse over the past five years. This particularly affects new companies and those based in rural areas, which find it harder to provide collateral to a bank. In recent years Swedbank has also offered loans against agricultural subsidies. Loans against subsidies means that the loan is repaid by the applicant from the area payments administered by the Estonian Agricultural and Registers Information Board (ARIB). In this case, no additional collateral is required. Thus, the costs that normally result from setting up, valuing and insuring the collateral are saved. Schemes such as this one could ensure that the supply of finance is taken up by farms.

According to interviews with farmers, farmers' organizations and financial institutions, commercial banks have less and less sector-specific expertise in the agriculture sector. This is not a big problem for the main sub-sectors such as milk and cereals, but more of an issue for animal husbandry, horticulture and niche products. On the other hand, new entrants and young farmers often start in the animal husbandry or horticultural sub-sectors because these do not require as much agricultural land. This is one of the reasons why the EAFRD loans co-financed by commercial banks were launched successfully. The commercial banks relied on the agricultural expertise of the RDF as a Fund manager of the instrument to evaluate the loan applications, thereby reducing the risks for the banks.

Interviews with financial institutions and farmers' organizations highlighted the lack of a co-funded financial instrument providing intermediate size loans. Currently there is a gap as under the EAFRD financial instrument as only two different types of loans are provided to farms: growth loans going from EUR 5 000 to EUR 100 000 and long-term investment loans providing support from minimum amount of EUR 250 000. The middle financing, between EUR 100 000 – 250 000 is not covered.

Finally, the supply side rarely provides long-term financing options of ten years or more. This is a characteristic of the sector, stemming, to some extent, from risk aversion, and constraints from banks' source of funding (customer deposits and up to five years bonds⁵⁶).

56 Bank of Estonia, February 2019, Financing of the Economy, <https://www.eestipank.ee/en/publication/financing-economy/2019/financing-economy-february-2019>.



2.4. Financing gap in the agriculture sector

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

Key elements of the financing gap in the Estonian agriculture sector

- The financing gap for the Estonian agriculture sector is estimated to be between EUR 28 million and EUR 117 million.
- The financing gap for young farmers is estimated to be between EUR 15.8 million and EUR 52 million.
- Financial institutions do not offer special credit products for young farmers and new entrants.
- Long-term loans are the type of products for which the gap is the largest.
- Although small and medium-sized farms make up a significant part of the financing gap, a large portion arises from the unmet demand of large-sized farms.
- General drivers of the financing gap include inadequate collateral or business plan, high lending risk and lack of long-term financing options.

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.

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

All the calculations are based on the results of the *fi-compass* survey for Estonian farms and statistics from Eurostat (see Annex 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 farms⁵⁷. 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 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 boundary:

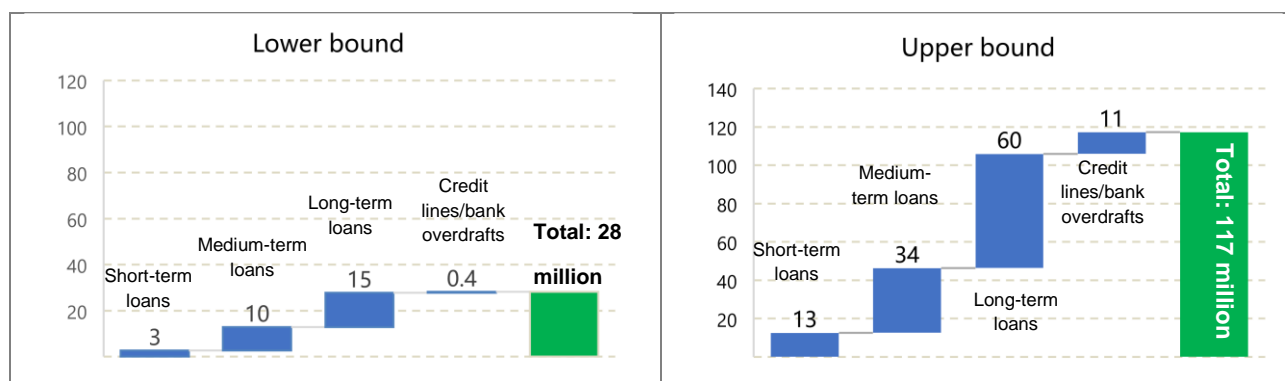
- The lower bound gap is calculated under the hypothesis that only enterprises which reported a stable (non-negative) turnover growth and no cost increase in the previous year can be considered as viable.
- The upper bound gap is calculated under the hypothesis that all enterprises which reported a stable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

The financing gap for the Estonian agriculture sector is estimated to be between EUR 28 million and EUR 117 million (Figure 17). Although small and medium-sized farms make up a significant part of the financing gap, a large portion arises from the unmet demand of large-sized farms (Table 12). Long-term loans are the type of products for which the gap is the largest. The financing gap is marginal for short-term loans.

⁵⁷ 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 17: Financing gap by product in the agriculture sector, 2017, EUR million



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

Table 12: Financing gap by farm size and product, 2017, EUR million

| | | Total | Short-term | Medium-term | Long-term | Credit |
|-------------|--------------------|--------------|-------------|-------------|-------------|-----------------------|
| | | | Loans | Loans | Loans | lines/bank overdrafts |
| Upper bound | Small-sized farms | 30.7 | 2.6 | 9.2 | 17.1 | 1.8 |
| | Medium-sized farms | 34.6 | 3.5 | 9.3 | 19.7 | 2.1 |
| | Large-sized farms | 52.0 | 6.6 | 15.2 | 22.9 | 7.3 |
| | Total | 117.2 | 12.6 | 33.7 | 59.7 | 11.3 |
| Lower bound | Small-sized farms | 7.7 | 0.5 | 2.8 | 4.3 | 0.1 |
| | Medium-sized farms | 8.5 | 0.7 | 2.8 | 4.9 | 0.1 |
| | Large-sized farms | 12.0 | 1.4 | 4.6 | 5.7 | 0.3 |
| | Total | 28.2 | 2.6 | 10.2 | 14.9 | 0.4 |

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

The demand for financing and related gap is particularly high amongst young farmers and new entrants. Approximately 44% (upper bound) of the overall gap may be attributed to young farmers. Between 39% and 47% of rejected and viable loan applications came from applicants below the age of 40. Similarly, 48% and 63.5% of the discouraged applications came from young farmers. Using this information to provide a different breakdown of farms with constrained access to finance, the financing gap for young farmers is between EUR 15.8 million and EUR 52 million. Young farmers are mostly seeking to start the cultivation of cereals, legumes and oilseeds. However, they generally do not have enough collateral to set up the required guarantee to apply for an investment loan, thus, new start-ups mostly have no access to loans. In addition, financial institutions do not offer special credit products for young farmers and new entrants.

Finally, part of the financing gap pertains to small atypical projects of start-up farmers, which find it difficult to obtain funding on competitive terms. These projects include non-mainstream sectors (i.e. everything that is not cereals or milk production) as well as horticulture, berry cultivation, sheep milk, on-farm processing of milk and meat, short supply chains, and cider production. Such projects usually do not have enough documented references in Estonian conditions to use as benchmarks which makes it difficult to evaluate the costs, yields/production and market size. In addition, these projects have a relatively long payback period and thus require a longer loan period. The development of appropriate financing instruments for small projects, but those higher than EUR 10 000, can have an impact on the structure of agricultural financing.



More in general, as discussed in more detail in section 2.2.2, the drivers of the financing gap include amongst others⁵⁸:

- **Lack of sufficient collateral:** farms with little or no arable land and young farmers/new entrants struggle to provide the required amount of collateral to secure medium and long-term loans. Furthermore, financial institutions often request large guarantees, frequently above 100% of the loan value. Farms without the required collateral either see their loan application rejected or are discouraged from applying;
- **High lending risk:** several sub-sectors became increasingly risky due to an unstable economic environment and increased competitive pressure. This led banks to adopt a cautious lending policy, especially when they do not have a specialised agricultural lending unit. This is an important factor for small-sized farms and young farmers;
- **Farmers' lack of knowledge on financing:** A large number of farmers, especially older farmers, lack financial planning skills, making it difficult for them to plan and ensure timely loan payback. This has also caused problems in preparing business plans and negotiating loan terms with banks and often discourages farmers from applying for finance;
- **Lack of long-term financing options and specific products:** financial institutions have a preference for medium-term loans, with loan duration not fully suitable to the investment needs. The short-term nature of repayment plans on many loan products is often disconnected from the longer horizon of investment returns, which makes developing an adequate business plan and cash flow difficult to achieve. In addition, interest rates for the agriculture sector are higher than the average of the other sectors, which makes more difficult to insure the project viability.

58 For further discussion of each of these drivers, see the relevant demand or supply sections.



2.5. Conclusions

In 2014 and 2018, supported by a set of public investment measures and financial instruments, the Estonian agricultural financial market expanded significantly. The volume of outstanding loans grew 190% over that period and stood at EUR 454.5 million in 2018 compared to EUR 237.6 million in 2008. The market continued to expand despite the fact that the performance of the sector had been significantly affected by a set of adverse events in 2014 and the Russian trade ban.

Between 2014 and 2017, due to the crisis, investments level in the sector dropped by 36% but recovered almost to pre-crisis level in 2018. Investments are mainly aimed at expanding capacity and increasing efficiency, through improved machinery, equipment and facilities. Nevertheless, about a third of surveyed Estonian farms signalled difficulties in accessing finance for investments, which is nearly three times higher than the EU 24 average of 12%.

In 2017, a financing gap in the Estonian agriculture sector is estimated to be between EUR 28 million and EUR 117 million. Inadequate collateral, a lack of long-term financing products and poor farm performance as well as a lack of knowledge on financial matters, including business plan preparation, have been central problems for farmers' access to finance. The problem of high collateral requirement is compounded by an illiquid real estate and land market in rural areas.

Several financial instruments are active in the country. Their impact has already contributed to palliate some of the constraints and market failures hindering the sector. The EAFRD loan instrument managed by RDF is being successful in supporting farmers' access to finance, showing a good take-up and appreciation among stakeholders. The co-financing with commercial banks has been also a success, as sharing responsibilities and risk seems to be a working solution.

Based on the findings of this report, the following recommendations could be considered to improve the offer of financial instruments supporting the sector:

- There appears to be insufficient availability of long-term loans in the market and further actions to strengthen their supply may be warranted.
- Although current EAFRD instrument have achieved substantial take-up among young farmers, this market segment still represents more than 40% of the estimated financing gap.
- The scope of existing loan instruments could be extended beyond current limits; for example, to cover loans between EUR 100 000 and EUR 250 000.
- As financing costs for farms are above those for other enterprises in Estonia, current loan conditions for farmers might be revised to provide for additional interest rate reductions.
- As lack of collateral still represents one of the main constraints on access to finance, the current public guarantee offering should be reviewed to assess the adequacy of the available budget, alongside access conditions and costs.
- Opportunities offered by the new legal framework – such as the easier combination of financial instruments and grant support, possibilities to finance the purchase of land for young farmers – should be explored to see if they can be used to increase the effectiveness of financial instruments, particularly for young farmers and small-sized enterprises.
- As lack of financial and business knowledge is signalled as an important constraint, especially for small and medium-sized farms, technical assistance support could be provided to strengthen capacities to develop business plans and improve financial management of farmers. Strengthening understanding of the agriculture sector and agriculture production within banks could also make a difference in the future financing of the sector.



3. PART II: AGRIFOOD SECTOR

3.1. Market analysis

Key elements on the Estonian agri-food sector

- The agri-food sector generates 2% of the total value added in Estonia.
- Micro-sized enterprises account for 72% of Estonian agri-food firms.
- Large-sized agri-food companies are owned mainly by foreign companies.
- Between 2017 and 2018, the average number of people employed in the sector decreased by 1.6%.
- The bulk of the Estonian agri-food output comes from the dairy and meat processing industries at 24% and 17% respectively.
- Between 2010 and 2017, sales revenues of the agri-food sector increased by 49%, and profits grew 160% before decreasing by a third in 2018, due to costs growing faster than sales revenue.
- In 2018, agri-food sales revenue accounted for 15% of the total processing industry's sales revenue at EUR 1.9 billion.

The Estonian agri-food sector is dominated by micro enterprises. It employs approximately 2% of the total number of employed people and provides 2% of value created in Estonia⁵⁹. In 2018, the number of people employed in the agri-food sector was 14 400, 12% less than in 2017. In 2017⁶⁰, there were 737 companies (legal entities) operating in the agri-food sector⁶¹. Micro enterprises with less than ten employees accounted for 72% of the total number of enterprises. In the same year, Estonia had 13 large-sized agri-food enterprises accounting for 1.8% of the total, with gross sales accounting for 33.7%⁶² of the aggregate gross sales of the food manufacturing industry⁶³. Large-sized companies in the sector are mainly owned by foreign companies. Investment and financing decisions of these companies are made in the headquarters outside Estonia and these companies usually do not have problems with funding.

Between 2010 and 2017, sales revenues of the agri-food sector increased by 49%, and profits grew 160% before decreasing by a third in 2018⁶⁴. In the 2018, the total production value of the sector was EUR 1.6 billion, of which nearly EUR 530 million was exported. In 2018, the sector experienced financial

59 Ministry of Rural Affairs, 2019, Statistics Estonia.

60 2018 data are not available.

61 The agri-food sector includes the first processing step of agricultural products (e.g. grain and grinding mills, peeling mills, oil mills, slaughterhouses and cutting plants, dairies, egg products, fruit and vegetable processing, malting plants, spice plants, cellars, sugar factories and fish processing) and the second processing step (e.g. bread and pastry, bakery, pasta, butchery, confectionery, non-alcoholic drinks, alcoholic beverages, vinegar, other processed products and prepared meals in various forms of production and manifestation). The upstream sectors of the agri-food sector (e.g. seed breeding, fertilizers, pesticides, agricultural machinery, animal breeding, animal feed and compound feed, animal health, barn technology and farm interiors etc.), the agri-sector and the downstream sectors of the agri-food sector (gastronomy, wholesale and retail of food) are not included in Part II of the analysis. For further information please revert to Annex I of TFEU, https://eur-lex.europa.eu/resource.html?uri=cellar:07cc36e9-56a0-4008-ada4-08d640803855.0005.02/DOC_45&format=PDF.

62 The gross sales of large-sized agri-food companies is larger than reported here. There are two large-sized manufacturers of beverages. Since the number is small, their sales figures are not published in statistics.

63 Ministry of Rural Affairs, 2019, Statistics Estonia.

64 2018 figures include the results of beverages industry.



problems, costs increased significantly faster than sales revenue and. The increase in costs was caused by an increase in input prices, which is also reflected in the rise in food producer prices. Labour costs, which account for almost a quarter of production costs, increased by 5% year-on-year. Although its growth has slowed, wage pressure from labour shortages in the agri-food sector, as well as in Estonian companies in general, remain. In 2018, to mitigate labour shortages over 700 seasonal workers were hired in the agri-food sector, most of them Ukrainian citizens⁶⁵.

In 2018, sales revenue of agri-food companies amounted to EUR 1.9 billion, accounting for 15% of the total manufacturing industry's sales revenue. Dairy and meat continued to account for the largest shares of sales at 21% and 17% respectively, whilst the beverage sub-sector accounted for 12%. The beverage, dairy and meat sub-sectors make the greatest contribution to the creation of added value in the agri-food industry, whilst the shares of the flour and oil sub-sectors are the most modest. The net value added of the sector in 2018 amounted to EUR 326 million⁶⁶.

The Estonian agri-food trade deficit persists. Estonia has a large agri-food trade deficit due to the import of high valued processed agri-food products. In 2016, the agri-food trade deficit amounted to EUR 317 million, which is an improvement in the value reported in the 1990s when the deficit amounted to over EUR 500 million⁶⁷. Whilst Estonia is showing a positive trade-balance of primary products to the EU 28, the import of processed meats, produce from the milling industry and other processed products shows the potential of the Estonian agri-food sector.

65 Ministry of Rural Affairs, 2019, Statistics Estonia.

66 Ministry of Rural Affairs, 2019, Statistics Estonia.

67 OECD Food and Agricultural Reviews: Innovation, Agricultural Productivity and Sustainability in Estonia, 2018.



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 Agri-food survey results of 50 Estonian enterprises, as well as interviews with key stakeholders in the agri-food sector combined with national statistics.

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

- Between 2014 and 2017, investments in the Estonian agri-food sector decreased by 9% while the country still lacks enough capacity to process its agricultural production.
- The dairy processing sub-sector was the most affected by the Russian embargo, although it was impacted less than dairy farming.
- High production costs and lack of qualified labour are the main challenges faced by the sector.
- In order to cope with high production costs and labour shortages, agri-food enterprises invested mainly in increasing processing capacity and modernising machinery and equipment.
- The unmet demand for finance in the agri-food sector is estimated at EUR 169 million.
- In 2018, according to the Agri-food survey, 14% of bank loan applications were rejected.
- The main reasons for loan application rejections are: (i) bank policy on long-term finance, (ii) projects viability, (iii) lack of collateral, and (iv) high-risk of start-ups.
- More than half of Estonian agri-food companies expect their financing needs to remain the same over the next two to three years.

3.2.1. Drivers of total demand for finance

The Estonian agri-food sector is showing a declining investment trend. Between 2014 and 2017, the overall level of investments in the sector decreased by 9%, moving from approximately EUR 113 million in 2014 to approximately EUR 102 million in 2017 (Table 13)⁶⁸. The negative performance of agri-food investments can be easily reconciled with the difficulties experienced by the Estonian economy already discussed in section 2.2.1.

68 Ministry of Rural Affairs, 2019, Statistics Estonia.

**Table 13:** Investment levels in the Estonian agri-food sector, 2014-2017⁶⁹, EUR million

| Sector | | 2014 | 2015 | 2016 | 2017 |
|------------------------------|-----------------------------------------------------------------------|--------------|-------------|-------------|--------------|
| Manufacture of food products | Total investments in fixed assets (included financial leasing) | 83.1 | 82.9 | 69.1 | 90.0 |
| | of which tangible assets (incl. financial leasing) | 70.5 | 69.9 | 68.3 | 83.9 |
| | <i>of which construction, alteration of buildings, structures</i> | 19.0 | 15.0 | 14.7 | 23.3 |
| | <i>of which other equipment, machinery, inventory</i> | 39.9 | 45.4 | 42.3 | 50.6 |
| Manufacture of beverages | Total investments in fixed assets (included financial leasing) | 29.7 | 15.8 | 16.0 | 12.8 |
| | of which tangible assets (included financial leasing) | 28.6 | 15.0 | 15.6 | 12.3 |
| | <i>of which Construction, alteration of buildings, structures</i> | 10.6 | 4.5 | 4.2 | 2.4 |
| | <i>of which other equipment, machinery, inventory</i> | 16.2 | 9.9 | 10.4 | 9.0 |
| Total agri-food | Total investments in fixed assets (included financial leasing) | 112.8 | 98.7 | 85.1 | 102.3 |

Source: Statistics Estonia, 2019.

The most affected sub-sector by the Russian embargo was the dairy processing. The price volatility produced by Russia's economic sanctions negatively impacted the economic performance of milk processing firms⁷⁰. Nevertheless, interviews with farmers' cooperatives and agri-food companies revealed that this sub-sector was not impacted as much as dairy farming. The main reason is that dairy processing firms started to actively work towards winning new markets in non-EU countries in order to reduce their dependence from the Russian market. A lot of resources were devoted to improving quality controls and procedures in order to ensure compliance with non-EU countries' regulations like Japan and China⁷¹. Overall, the processing sector was not particularly hit by the ASF.

In 2017, investments in manufactured food products accounted for approximately 88% of the overall investment in the sector. The financing resources allocated to the manufacture of food products amounted to EUR 90 million, whereas those devoted to the manufacture of beverages stood at EUR 12.8 million (Table 13).

In 2017, with regards to the manufacturing of food products, approximately 93% of resources were allocated to investments in tangible assets, including through leasing. The same year, the level of investments in intangible assets amounted to approximately EUR 84 million. Investments in equipment, machinery and inventory accounted for the second highest share at 56%, with EUR 50.6 million, followed by investments in buildings amounting to EUR 23.3 million (Table 13)⁷².

According to the Agri-food survey, approximately 2-3% of the firms experienced difficulties accessing finance (bank loans) for investments and for working capital. In 2018, 2% of the firms mentioned regulatory issues/trade barriers/administrative constraints as a difficulty (Figure 18).

69 2018 data was not available.

70 Interviews with agri-food companies.

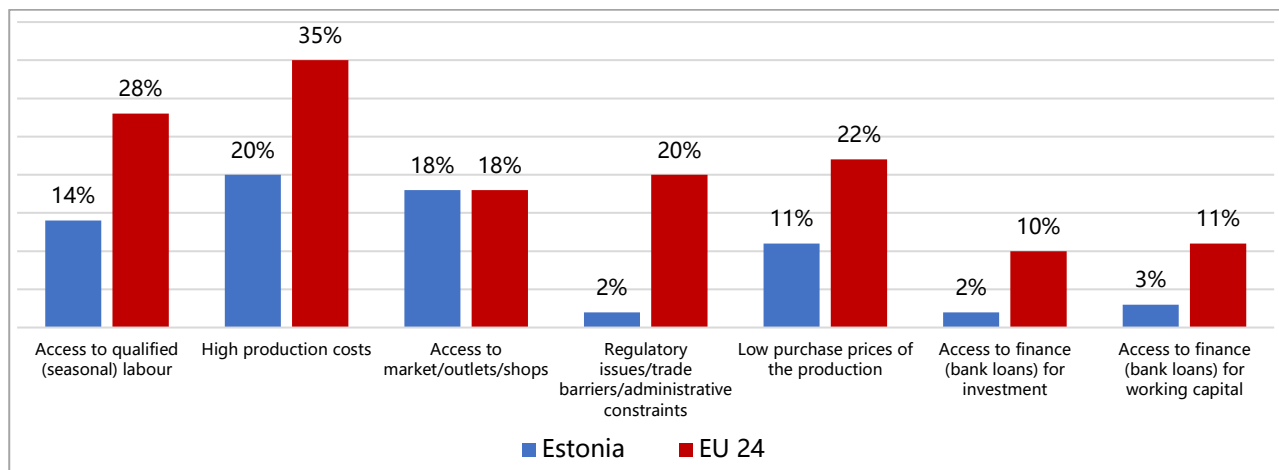
71 Interviews with agri-food companies and managing authority.

72 Ministry of Rural Affairs, 2019, Statistics Estonia.



In 2018, high production costs were the main difficulty for Estonian agri-food enterprises. According to the Agri-food survey, approximately 48% of firms experienced an increase in the cost of production and 20% (Figure 18) consider it the main challenge for their business.

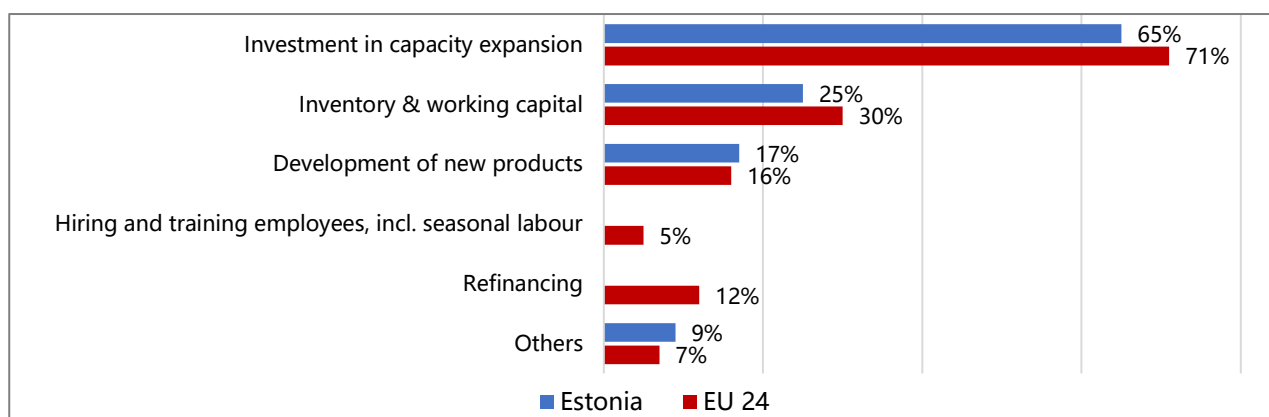
Figure 18: Difficulties experienced by agri-food enterprises in 2018



Source: Agri-food survey.

To tackle this issue, agri-food firms invested mainly in modernisation and automation. The demand for finance in the sector was mainly driven by the necessity of increasing production efficiency and capacity. As depicted by Figure 19, 65% of the enterprises requested access to bank finance for capacity expansion⁷³. This is also confirmed by the Agricultural Research Centre survey⁷⁴, according to which agri-food companies prioritise investments in equipment and machinery, buildings, energy efficiency and training employees. Investments in inventories and working capital were also important in driving Estonian companies' demand for finance (Figure 19).

Figure 19: Purpose of bank loans in the agri-food sector in 2018



Source: Agri-food survey.

⁷³ Agri-food survey.

⁷⁴ Agricultural Research Centre, 2019, Põllumajandustootjate, põllumajandustoodete töötlemise ja turustamisega tegelevate ning maapiirkonnas tegutsevate ettevõtjate toetusvajaduse ja võimaliku sekkumisvajaduse uuring. [in Estonian, unpublished draft report].



Another important driver of the sector's demand for finance has been the necessity to increase firms' production capacity. Interviews with farmers' cooperatives and agri-food companies revealed that agriculture production in Estonia increased more than the agri-food processing capacity. Having efficient infrastructures and production processes is necessary to add value to agricultural production. According to the OECD⁷⁵, *'the composition of Estonia's agri-food trade suggests the food manufacturing industry is not as developed as primary production'*. Over 70% of Estonia's agri-food imports are mainly for household consumption whilst the country exports a larger share of agri-food products for industrial use than the EU 28 average. The lower processing capacity is illustrated by several sub-sectors' trade balance. For example, Estonia is a net exporter of cereals but a net importer of processed cereals, and a net exporter of live animals, but a net importer of meat.

The agri-food industry, and especially the dairy and meat sub-sectors, require more investments in order to add value to agricultural raw materials produced in Estonia⁷⁶. Higher capacity and more modern means of production are preconditions for the agri-food sector to increase its production efficiency and win other export markets. The problem for small, medium-sized, and cooperative enterprises is to find suitable sources of financing⁷⁷.

As with the primary production sector, the agri-food industry also suffers from a shortage of qualified labour. According to the Agri-food survey (Figure 18), 14% of enterprises declared access to qualified labour as an important issue they faced in 2018 and this is confirmed by the interviews with agri-food companies. This problem led enterprises to allocate more resources to innovate and automate their production processes in order to reduce their workforce⁷⁸.

The demand for financial resources is also driven by the necessity to comply with environmental aspects such as improving energy efficiency, reducing and recycling waste, and reducing the use of plastics. The transition towards a green economy requires more investments aimed also at increasing energy efficiency. Additionally, enterprises also need to make their machines and equipment compliant with the new environmental standards⁷⁹.

Between 2010 and 2017, the debt-to-asset ratio of the manufacturing of food products sector has remained rather stable, between 48% and 54%. During the same period, the debt-to-assets ratio in the manufacture of beverages sector ranged between 37% and 42%. Overall, the ratio of the agri-food sector is higher than that of manufacturing. However, there is substantial variation at sub-sector level, as shown in Table 14 for 2017⁸⁰. Interviews with farmers' cooperatives and agri-food companies revealed that the dairy sub-sector needs more investments, in particular to increase volume and efficiency of its production, which might explain a higher indebtedness⁸¹.

75 OECD, 2018, Innovation, Agricultural Productivity and Sustainability in Estonia.
<https://www.oecd.org/estonia/innovation-agricultural-productivity-and-sustainability-in-estonia-9789264288744-en.htm>.

76 OECD, 2018, Innovation, Agricultural Productivity and Sustainability in Estonia.
<https://www.oecd.org/estonia/innovation-agricultural-productivity-and-sustainability-in-estonia-9789264288744-en.htm>.

77 Ministry of Rural Affairs, 2019, Statistics Estonia.

78 Interviews with agri-food companies.

79 Interviews with agri-food and managing authority.

80 Ministry of Rural Affairs, 2019, Statistics Estonia.

81 Interviews with farmers' cooperatives and agri-food.



Table 14: Debt-to-asset ratio of agri-food sector, Estonia, 2017

| | Assets total, EUR million | Liabilities total, EUR million | Debt-to-assets ratio |
|------------------------------------------------------------------------|------------------------------|-----------------------------------|----------------------|
| C10 Manufacture of food products | 1 338.0 | 687.6 | 51% |
| C101 Processing and preserving of meat and production of meat products | 235.0 | 121.8 | 52% |
| C103 Processing and preserving of fruit and vegetables | 88.8 | 40.5 | 46% |
| C105 Manufacture of dairy products | 329.2 | 178.4 | 54% |
| C107 Manufacture of bakery and farinaceous products | 189.2 | 65.9 | 35% |
| C108 Manufacture of other food products | 189.2 | 81.6 | 43% |
| C11 Manufacture of beverages | 374.3 | 137.0 | 37% |

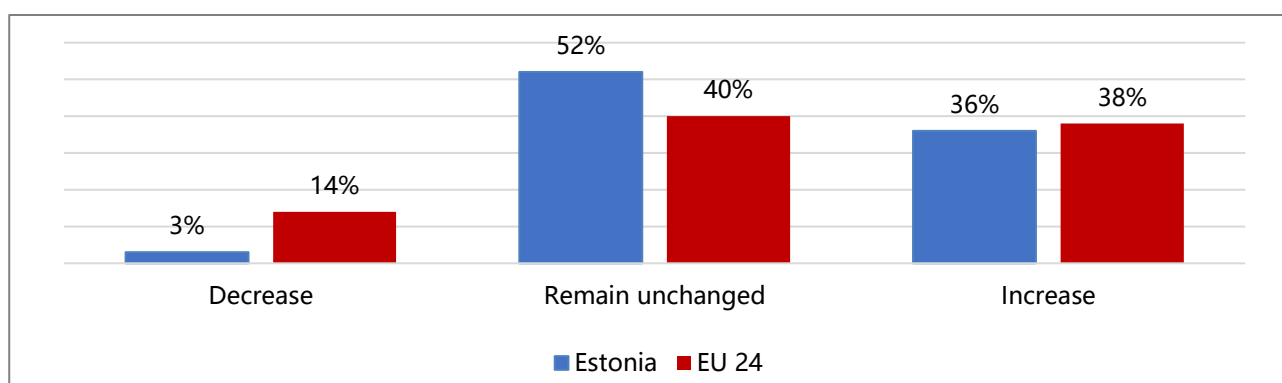
Source: Statistics Estonia, 2019.

More than a third of Estonian enterprises expect their financial needs to increase in the future.

According to the Agri-food survey, 36% of the agri-food firms interviewed expect their demand for finance to increase over the next two to three years (Figure 20). Interviews with farmers’ cooperatives and agri-food companies revealed this increase will be mainly due to:

- Major projects in different sectors of the food industry will be needed to generate higher productivity and added value;
- The decline in investment subsidies might require more external finance from banks, although a reduction of subsidies might also make banks more reluctant.

Figure 20: Agri-food companies’ expectations on future financing needs, 2018



Source: Agri-food survey.

The RDP 2014-2020 provides support to agri-food processing companies, especially through sub-measure 4.2 ‘Investments to process and market agricultural products’. The objective of the sub-measure is to contribute to increasing the share of processing of products and to increasing the efficiency of processing. This would increase the competitiveness of products on Estonian, EU and external markets. By the end of 2019, the total public budget allocated to the sub-measure 4.2 amounted to EUR 74.3 million. If we consider



the initially requested financing from all submitted applications (before any administrative checks) we see a non-covered demand of EUR 38 million. It is a low amount, yet substantial from Estonian point of view given the investment level and the fact that RDP beneficiaries also have to co-finance the operations. In total, and by the end of 2019, 197 applications were approved and the grant budgets were taken up (Table 15).

Table 15: Estonia: RDP 2014 – 2020 implementation of sub-measure 4.2, total public finance, 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 made available under the grant calls (EUR million) | Amount requested not being supported (EUR million) |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|
| 4.2 Support for investments in processing, marketing and/or development of agriculture products | 308 | 102.6 | 197 | 74.3 | 38.1 |

Source: EAFRD managing authority. Preliminary data.

Note: The 'Total support requested' and the 'Amount requested not being supported' are calculated based on 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 their evaluation, and/or with insufficient value-added, and/or ranked at a place for which the budget under the call has not been anymore available. Some applications could have also been withdrawn.

3.2.2. Analysis of the demand for finance

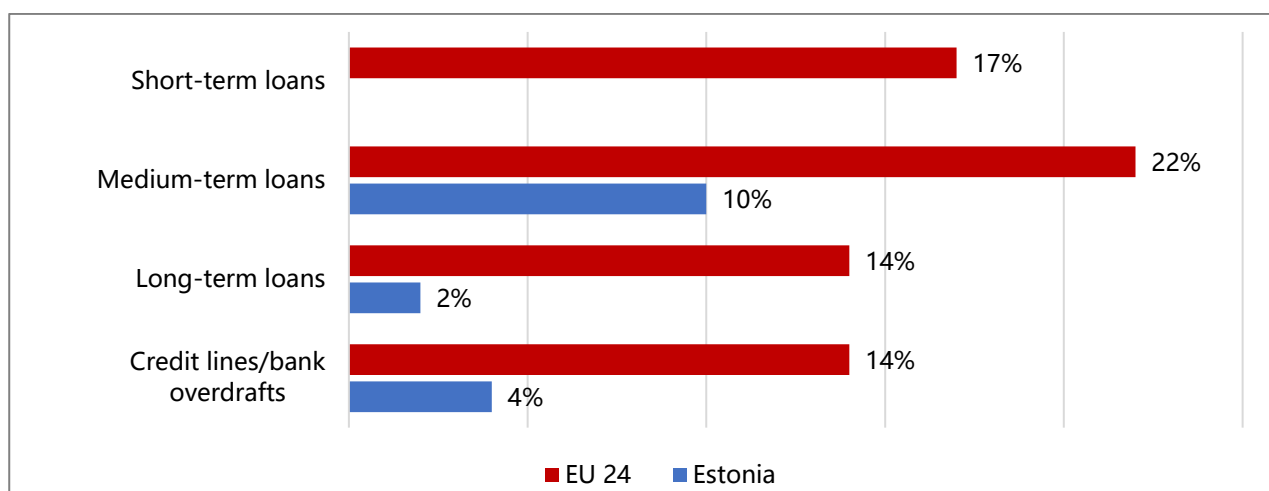
The potential total demand for finance combines both met and unmet demand. The met demand consists of the value of all applications for finance which were accepted by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial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

The unmet demand for finance in the agri-food sector in Estonia is estimated at EUR 169 million.

Estonian food companies are predominantly financed by internal resources. On average, the Estonian agri-food sector relies less on bank finance than the EU 24 average. In 2018, according to the results of the Agri-food survey, medium-term loans were the most demanded financing products in Estonia. Approximately 10% of Estonian agri-food companies applied for medium-term financing, compared to 22% in the EU 24 (Figure 21). Fewer companies applied for credit lines and long-term financing. These findings are in line with the results from the SAFE survey suggesting that manufacture enterprises' bank loan application rate in Estonia was 21% in 2018.



Figure 21: Estonia agri-food enterprises applying for finance in 2018, by financing product



Source: Agri-food survey.

Estonian agri-food companies rely mostly on short-term financing products. Although, the Agri-food survey did not record any short-term loan application, interviews with agri-food companies revealed that short-term financing products are highly requested by the Estonian agri-food sector. As already mentioned in the previous section, Estonian agri-food firms mostly need financial resources to invest in capacity expansion (e.g. processing equipment, buildings, transport vehicles), as well as in inventories and working capital.

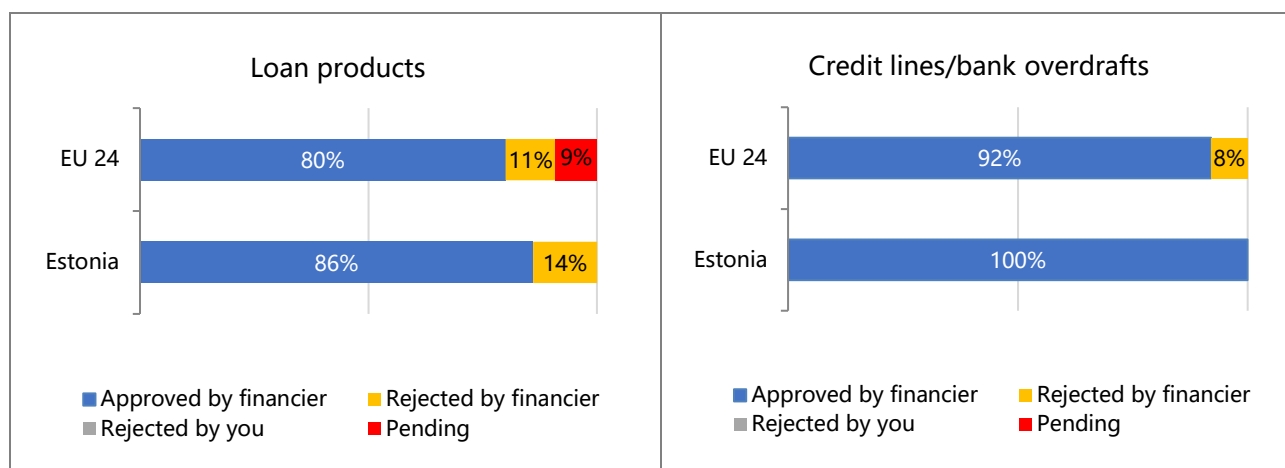
Interviews with agri-food companies reveal that **there is an unmet need for short-term loans for financing inventories**, especially for small-sized firms. At sub-sector level, the processing and preserving of fruit and vegetables and manufacturing of dairy products are the segments with the highest needs for short-term loans in order to finance inventories⁸². Furthermore, short-term financing is also needed in response to the longer terms of payments for agri-food industries imposed by retail chains.

Bank loans registered a higher rejection rate in Estonia than in the EU 24. Results from the Agri-food survey indicate a 14% rejection rate for loan products compared to the 11% observed in the EU 24. On the contrary, no rejections were recorded with reference to applications for credit lines/bank overdraft (Figure 22). These results are in line with those reported by the SAFE survey, according to which 11% of Estonian applications were rejected by financiers.

82 Interviews with agri-food companies.



Figure 22: Results from loans applications in the agri-food sector in 2018



Source: Agri-food survey.

Loan application rejections are driven by bank policy regarding long-term finance, inadequate business plans including the need for having secured long-term supply contracts, lack of collateral, and the risks associated with start-ups:

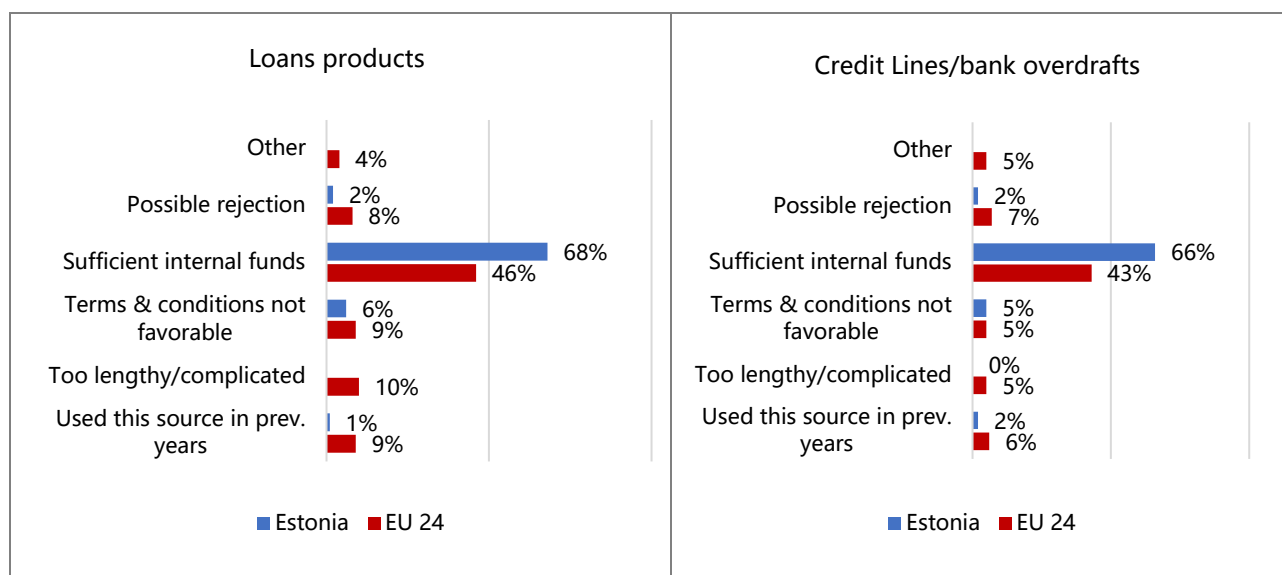
- Bank policy regarding long-term finance. The frequent use of medium-term loans is mostly due to the credit policies of banks and does not always match the needs of the enterprises. Banks prefer to offer shorter-term loans with refinancing facilities.
- Non-sustainable business plan that does not align with the short repayment timeframe of the type of loan products usually offered. This constraint particularly affects micro-sized enterprises.
- Banks require secured long-term contracts with downstream players of the supply chain. This is especially relevant in the case of capacity expansion projects of the agri-food companies.
- The lack of collateral to establish guarantees e.g. low value of buildings due to the limited and illiquid market for them in the rural areas.
- Risks associated with start-ups, which are accentuated by the previous reasons (such as a lack of collateral, lack of secured long-term contracts with downstream actors, and an inadequate business plan).

Insufficient provision of specific training and advisory services, may contribute to difficulties in successfully applying for finance. The dominance of micro enterprises with managers with lower financial literacy can mean such enterprises may lack the appropriate internal human resources, and hence, find it difficult to fully understand specific financial mechanisms. In fact, large-sized enterprises do not experience significant constraints in accessing finance. As they are mostly foreign-owned, they have also access to foreign financing and markets.

In addition, some enterprises are not fully aware of the type of public support available. According to the Agri-food survey, discouraged applications represented approximately 2% of agri-food enterprises, for both loan products and credit lines.



Figure 23: Key reasons for not applying for loans in the agri-food sector in 2018



Note: Reasons listed in the figure concern the last investment project within 2016 to 2018.

Source: Agri-food survey.

Large-scale investment projects struggle to gather sufficient financing sources. Feedback from interviews with farmers’ cooperatives and agri-food companies suggest that important constraints exist in the market to finance strategic projects above EUR 10 million. As mentioned above, the Estonian agri-food industry, especially the dairy and meat sub-sectors, need investments to increase production volumes and efficiency, whilst also adding value to the raw production of the agriculture sector.



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 Estonia 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. This 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 Estonian agri-food sector

- The Estonian banking sector is amongst the most concentrated in the EU.
- The most common financing products offered to the sector are bank loans, leasing, and guarantees.
- Crowdfunding is also used as a source of financing, especially by start-ups operating in niche markets⁸³.
- Public guarantee instruments are in place to ensure access to finance to micro, small and medium-sized enterprises (SMEs).
- Commercial banks deem guarantee fees to be too high. As a result, the guarantee schemes in place are not able to fully compensate for the lack of collateral.
- In 2017, the total outstanding loan volume to the sector was EUR 540 million.
- Financing start-ups and micro-sized enterprises at an early development stage is considered too risky. This is mainly due to insufficient collateral, inadequate credit guarantees, short business history of enterprises or too high transaction costs.
- Banks consider the agri-food sector as risky, due to price volatility, exposure to crisis events.
- Low financial awareness of companies represents a further constraint as it prevents companies from making an adequate cash flow forecast when preparing their business plans.

3.3.1. Description of finance environment and funding availability

3.3.1.1. Finance providers

Commercial Banks

As of June 2018, there were eight licenced credit institutions and eight affiliated branches of foreign credit institutions in Estonia. Four of the eight licenced credit institutions are majority-owned by Estonian shareholders.

According to the Bank of Estonia, there are four structurally important banks in the country, namely Swedbank AS, AS SEB Pank, Luminor Bank AS and AS LHV Pank, that hold approximately 84% of the total assets in the Estonian banking sector. This makes the banking sector in Estonia amongst the most concentrated in the EU 28.

The market is in particular dominated by two large foreign banks: Swedbank and SEB, both of which in the 2000s acquired two of the biggest local banks. In 2018, Swedbank and SEB, have a combined market share of 62% for loans to non-financial enterprises, including agriculture and agri-food enterprises. All other

83 Ühirahastusplatvorm <https://fundwise.me/>.



banks have a considerably lower market share. However, in 2018, the market shares of LHV increased from 6% to 8%, and from 4% to 5% for OP Corporate Bank⁸⁴.

Commercial banks are the main credit providers to the Estonian agri-food market. However, two public foundations are also active in the market; they mainly provide loans and guarantees to SMEs.

Public institutions

The **Foundation KredEx** helps to improve access to finance for small and medium-sized enterprises. KredEx was created in 2001 by the Ministry of Economic Affairs and Communications with the aim of providing various financial solutions. KredEx offers loans, credit insurance and state guarantees to companies for faster development and safe expansion to foreign markets. It also helps find solutions to the shortcomings of the financial market.

The Rural Development Foundation, founded in 1993, is a facility to support the uptake of credits by enterprises operating in the agriculture sector, including agri-food firms. It offers guarantees to SMEs up to 80% of the loan volume.

Crowdfunding platforms

In 2018, a few companies operating in the agri-food sector launched crowdfunding campaigns. These enterprises were mainly start-ups producing high-value added products in specific niche markets such as craft beer, ciders and ice cream. The most popular platform for crowdfunding is Funderbeam, a global platform with a regional office in Estonia, dedicated to connecting start-ups and high-growth companies to individual and corporate investors.

3.3.1.2. Financial products

Just over 90% of loans issued by banks in Estonia have floating interest rates, they exceed the Eurozone average by approximately one third⁸⁵. According to information provided by credit institutions, several types of loans are available to the agri-food sector. The general conditions of each type of loan are provided in the following table.

84 Financial Supervisory Authority, 2018, The Estonian financial services market.

85 Eesti Pank, 2017, Finantssektori Struktuuri Ülevaade,

https://www.eestipank.ee/sites/eestipank.ee/files/files/Finantsstabiilsus/fssu/fsr_2017__est_www.pdf .


Table 16: Loan types and their general conditions - offered by Commercial bank

| Loan type | Terms and conditions | | | | | | | Guarantee period |
|-----------------------------|------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------|-------------------|------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| | Objectives | Loan period: | Amount | Interest rate | Self-financing | Collateral: | Guarantee | |
| Investment loan | For investing in larger and longer payback projects | from 5 to 10 years | | | at least 15% to 30% of project sum | Mortgage on real estate or agricultural land, KredEx, RDF, board members' or owners' personal guarantees | | |
| Limit loan | For short-term financing of a particular project or activity | Up to 1 year | EUR 2 000-25 000; EUR 15 000 with no EIF guarantee | 9%–12% per year | | | Private and EIF guarantee | Up to 5 years, up to 3 years with no EIF guarantee |
| Micro loan | For business development of small businesses. | 1–5 years | EUR 5 000–25 000 | from 6% + EURIBOR | not required | | Private or legal person surety | |
| Overdraft | short-term capital needs, to ensure the stability of cash flows | up to 1 year | up to EUR 25 000 or up to the company's average monthly turnover | | | | Possible to apply up to 80% surety by KredEx and / or RDF, surety of private or legal person, mortgage on real estate. | |
| Short-term loan | Loan for short-term capital needs | up to 18 months | Minimum EUR 2 000 | | | | it is possible to apply for a surety by KredEx, RDF, EIF | |
| Small overdraft | In order to ensure the stability and flexibility of cash flows. Somewhat similar to limit loan | | EUR 1 000–15 000 or half of the company's monthly turnover | | | | | |
| Working capital loan | For short-term capital need, for additional financing of the company's working capital needs | up to 1 to 3 years | | | | | possible to apply up to 80% surety by KredEx and / or RDF, surety of private or legal person, mortgage on real estate | |

Sources: SEB 2019; Swedbank 2019; Luminor 2019; LHV 2019; Coop Bank 2019.



An EAFRD financial instrument has been implemented under the Estonian Rural Development Programme 2014-2020. It provides two different type of loans: growth loans to micro and small-sized enterprises and long-term loans to SMEs operating in agriculture, fishery, food and beverage sectors. For the description of the products see Table 17 (further information is available in section 2.3.1.2).

Enterprises operating in the agri-food sector can also apply for guarantees offered by the RDF, outside the EAFRD instrument. Those guarantees are offered to SMEs and they cover up to 80% of the total loan volume. In addition to loans and guarantees, commercial banks also provide financial and operational leasing. Further information on RDF is available in section 2.3.1.

Three other financial instruments co-funded by ERDF are also potentially available to agri-food enterprises, although specific data on the real impact on the sector are not available:

- Fund of Funds implemented by EIF whose resources are allocated to a Venture Capital fund, Expansion Capital fund and Business Angel Co-Investment fund. The aim of the instrument is to foster equity investments in innovative Estonian enterpris;
- Export and Credit insurance, managed by KredEx;
- Loans and guarantees, also managed by KredEx.

An overview of ESIF financial instruments is presented in the table below.

Table 17: Overview of ESIF financial instruments.

| | FoF & venture Capital | Export and Credit insurance | Loans and guarantees | Estonian Rural Development Plan 2014-2020 (RDP) financial instrument |
|-------------------------------|-------------------------|-----------------------------|-------------------------|----------------------------------------------------------------------|
| Fund manager | EIF | KredEx | KredEx | Ministry of Rural Affairs of the Republic of Estonia |
| Total amount | EUR 48 million | EUR 10 million | EUR 85.49 million | EUR 39 million |
| Contributing ESIF Fund | ERDF | ERDF | ERDF | EAFRD |
| Thematic objective | Competitiveness of SMEs | Competitiveness of SMEs | Competitiveness of SMEs | Competitiveness of SMEs |

Source: KredEx website <https://www.kredex.ee/en>, Ministry of Rural Affairs 2018, European Investment Fund, 2018 www.eif.org.

KredEx also provides other loan products such as industrial loans, capital loans, export loans, start-up loans and loan guarantees. The main characteristics of KredEx products that can be used in the agri-food industry are presented in the following table.

**Table 18:** Product types and their general conditions – offered by KredEx

| Loan type | Objectives | Terms and conditions | | | |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Loan period: | Amount | Interest rate | Collateral |
| Starter loan | N/A | Up to 60 months | Up to EUR 100 000 of which 50% could be used for working capital | 6-month EURIBOR+7% | Joint and several guarantee of 25% of the loan amount. The guarantee is to be provided by individuals who own the company, and they may have a direct or indirect holding |
| Industry loan | Investments into PPE and intangible assets and related direct costs in relation to expansion of the company's activity, diversification of output or restructuring of the production process | N/A | Up to EUR 2 million, but not more than 40% of the project | N/A | N/A |
| Export loan | N/A | In general, 2-10 years | Up to EUR 3 million per foreign buyer | Consists of price and risk margin, which depends on the specific transaction | N/A |
| Capital loan | N/A | N/A | Up to EUR 2 million, but not more than the amount of the company's equity capital as of the issuing of the loan | 8.5-15%, final interest rate depends on the risk level of the business and the project and collateral | N/A |
| Loan guarantee | Up to 80% of the secured loan, leasing or bank guarantee and in the case of construction sector companies up to 60% of the secured loan, leasing or bank guarantee. | N/A | Maximum amount EUR 5 million (EUR 1.5 million for large-sized companies) | N/A | N/A |

Source: KredEx website <https://www.kredex.ee/en>.

The share of agri-food companies in the KredEx portfolio is marginal for the time being. By field of activity, 35% of KredEx sureties were used by construction companies, 12.9% by forestry; 7.9% by professional, scientific and technical fields and 7.1% by metal companies. In 2018, the share of other activities (including agri-food) in the volume of guarantees issued was less than 5%.

Commercial banks provide vehicle leasing, commercial vehicle leasing and equipment leasing. Terms and conditions are summed-up in the following table.

**Table 19:** Leasing products offered by the Estonian banks and their terms and conditions, 2019

| Leasing type | Terms and conditions |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vehicle leasing | <ul style="list-style-type: none"> • Financed amount from EUR 5 000. • Interest rate from 2.49% + 6-month EURIBOR*. • Down payment from 10%. • At the end of lease period vehicle have to be not older than 12 years. • Repayment period up to 6 years. |
| Commercial vehicle leasing | <ul style="list-style-type: none"> • Financed vehicle from EUR 6 000. • Down payment from 10%, smaller down payment is possible with EIF guarantee. • At the end of lease period vehicle must be not older than 12 years. • Repayment period up to 6 years. |
| Equipment leasing | <ul style="list-style-type: none"> • Leasing equipment or machinery maturity at the end of the leasing contract - 15 years. • Financed amount from EUR 6 000. • Repayment period up to 7 years. • Down payment from 10%, it can be smaller in case of EIF guarantee. |

Source: Swedbank, SEB Pank, Luminor LHV Pank website.

3.3.2. Analysis of the supply of finance

In 2018, the total supply of loans continued to grow for all sectors, driven mainly by a positive growth of lending to companies and household. The stock of loans issued to non-financial corporations, as a ratio to GDP, decreased from 45% in 2010 to 29% in 2018. The overall loan stock growth has allowed the loan-to-deposit ratio to remain between 100-110% since 2013. The volume of deposits has increased due to a strong increase in domestic deposits that represent the largest share of banks' assets. Furthermore, in 2018, the profitability of banks remained strong as the net profit of the banking sector increased by 7% compared to the previous year. The main sources of Estonian banks' profitability are low interest expenses, high efficiency and good quality assets.

Between 2010 and 2018, the interest rate on loans issue to non-financial corporations decreased (Table 20). Between 2017 and 2018, the average interest rate decreased from 3.62% to 3.21% for short-term loans and increased from 2.30% in 2017 to 2.51% in 2018 for long-term loans. **In 2018, according to the Bank Lending Survey⁸⁶, the overall credit standards and conditions were tightened** compared to the previous year.

86 Financing of the Economy, February 2019, <https://www.eestipank.ee/en/publication/financing-economy/2019/financing-economy-february-2019>.

**Table 20:** Average interest rate on loans to non-financial corporation by maturity, 2010-2018

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Short-term loans | 5.34% | 5.12% | 3.99% | 3.49% | 3.07% | 3.26% | 3.40% | 3.62% | 3.21% |
| Long-term loans | 4.44% | 4.32% | 3.60% | 3.07% | 2.93% | 2.40% | 2.32% | 2.30% | 2.51% |

Source: Calculations based on Bank of Estonia's statistics.

In 2017, the total outstanding loan volume to the agri-food sector was EUR 540 million. The analysis of the supply of finance the agri-food sector is based on data from Statistics Estonia on the outstanding portfolio of loans to the food and beverage sectors, for the years 2010 to 2017 (Table 21).

Table 21: Supply of finance to the Estonian agri-food sector, 2010-2017, EUR million

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|-----------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| C10 Manufacture of food products | | | | | | | | |
| Current liabilities | 110.3 | 121.3 | 150.8 | 172.1 | 161.5 | 158.4 | 155.8 | 124.1 |
| Growth of the outstanding amount | 668.0 | 10.9 | 29.5 | 21.3 | -10.6 | -3.1 | -2.5 | -31.7 |
| Long-term liabilities | 186.2 | 194.7 | 191.1 | 179.3 | 270.2 | 280.8 | 296.7 | 340.0 |
| Growth of the outstanding amount | 2.2 | 8.5 | -3.5 | -11.8 | 90.9 | 10.6 | 15.8 | 43.3 |
| C11 Manufacture of beverages | | | | | | | | |
| Current liabilities | 52.7 | 47.6 | 49.8 | 48.2 | 56.7 | 65.2 | 61.7 | 50.4 |
| Growth of the outstanding amount | -40.7 | -5.0 | 2.2 | -1.5 | 8.4 | 8.4 | -3.4 | -11.2 |
| Long-term liabilities | 20.0 | 21.9 | 24.9 | 29.1 | 27.8 | 17.7 | 27.6 | 25.4 |
| Growth of the outstanding amount | -1.1 | 1.9 | 3.0 | 4.2 | -1.3 | -10.0 | 9.8 | -2.1 |
| C10 and C11 Agri-food sector | | | | | | | | |
| Total outstanding loans for the sector | 369.3 | 385.1 | 416.7 | 428.6 | 516.5 | 522.7 | 541.9 | 540.0 |

Note: Repayments are approximated by one fifth of the preceding year's outstanding volume for long-term liabilities and current liabilities are assumed to be repaid within one year.

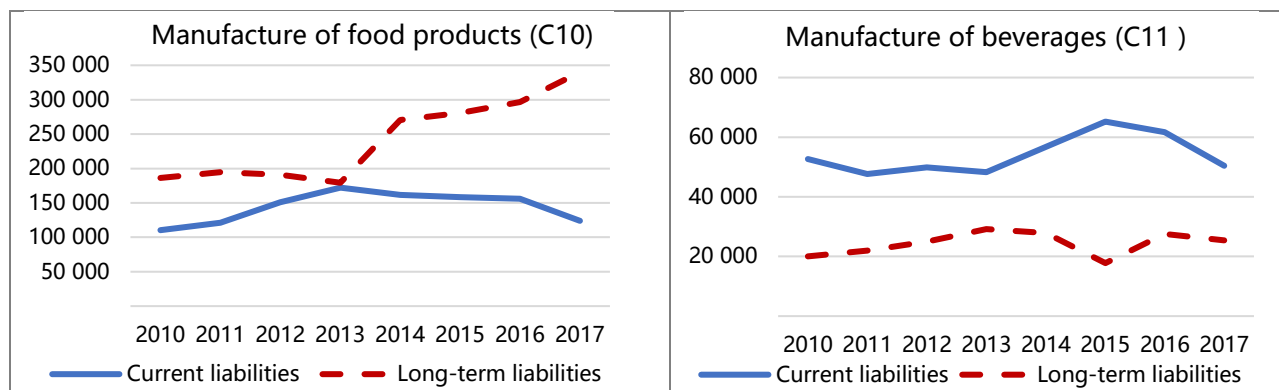
Source: calculations based on Statistics Estonia, 2017⁸⁷.

87 2018 data were not available.



Between 2010 and 2017, current and long-term liabilities have been quite stable for the beverage industry (Figure 24). With regard to the food segment, long-term loans increased substantially during the same period, although the trend shows important fluctuations.

Figure 24: Current and long-term liabilities in food and beverages industries, 2010-2017, EUR thousand



Source: calculations based on Statistics Estonia, 2017.

Constraints exist on the supply side of finance, even if the banking sector is well-developed and banks have sufficient credit resources. Some of these constraints qualify as market failures.

Financing start-ups and micro-sized enterprises at early development stage is considered too risky. This is mainly due to:

- **Insufficient collateral.** Commercial banks only consider collateral building in the urban areas such as Tallinn and Tartu and lands as valuable. Land and infrastructure outside these areas are not valued highly because of a very illiquid market and low demand. The fact that, unlike many farmers, agri-food companies do not usually have suitable real estate, such as arable land, is an issue to access credit.
- **Inadequate credit guarantees.** A set of guarantee instruments are in place to facilitate the access to credit to SMEs, however commercial banks deem them too expensive⁸⁸. This means that banks tend to take lower risks for smaller loans or refuse financing because of the project’s risks. The take-up of these instruments also seems to be very low in the agri-food sector.
- **Short business history of enterprises,** or high transaction costs. Given the short business history of young firms, commercial banks consider lending to them as highly risky and the interest rates offered are higher. Furthermore, small volumes of small business loans entail disproportionately high transaction costs for the bank. That is why not all banks are interested in providing loans to small-sized enterprises.

Overall, commercial banks are more oriented to large-scale clients operating in larger sectors. Banks have better knowledge of market trends in larger areas of the economy and are therefore in a better position to assess risks.

Banks are reluctant to take risks, **and providing credits to companies operating in the agri-food sector is considered highly risky because they are subject to price volatility and agricultural crises.** Therefore, as already mentioned, banks have set specific requirements such as profitable operating history, strong cash flow and adequate collateral. The insufficient cash flow is a consistent problem for SMEs access to finance. Additional difficulties are created by the low financial awareness of micro and small-sized companies, which

⁸⁸ The KredEx guarantee has a contract fee of up to 1% in addition to the 0.8% to 3.8% surety fee per annum.



is often reflected in the lack of cash flow forecasts. This problem cannot be addressed by the private sector and needs public intervention through awareness-raising measures⁸⁹.

In addition, as the biggest actors providing financing resources to agri-food businesses are large foreign banks, **the financing of Estonian companies is exposed to the external risks associated with the Nordic economy and banking groups.**⁹⁰

Based on the above analysis and considering the fact that the banking sector in Estonia is amongst the most concentrated in the EU, it appears that existing financing products and proposed financial instruments alone, without a proper support system, are insufficient for supporting the agri-food sector's business development. The small size of businesses, their vulnerability to market fluctuations, and their location in rural areas also limit loan availability.

89 Ernst & Young Baltic, 2014, Ex-ante evaluation of the Estonian Rural Development Plan 2014–2020 and the European Maritime and Fisheries Fund Operational Program 2014–2020, <https://www.agri.ee/sites/default/files/content/arengukavad/rahastusvahend-2014-2020-aruanne.pdf>.

90 Eesti Pank, 2018, Majanduse Rahastamise Ülevaade, <http://www.eestipank.ee/publikatsioonid/majanduse-rahastamise-ulevaade>.



3.4. Financing gap in the agri-food sector

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

Key elements of the financing gap in the Estonian agri-food sector

- The financing gap for the Estonian agri-food sector is estimated at EUR 169 million.
- The financing gap mainly concerns small-sized processing firms.
- The type of loans for which the gap is the largest are long-term loans.
- The drivers of the gap relate to (i) lack of collateral, (ii) Bank policy regarding long-term finance, (iii) non-viable business plans, (iii) low financial awareness of SMEs, and (iv) high risk for start-up financing.

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 Estonian firms (see Annex A.5 for more information) and the SAFE⁹¹ survey on SMEs. 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 firms⁹². As explained in section 2.2, 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 firm viability. In particular, we make the hypothesis that all enterprises which reported a stable (non-negative) turnover growth can be considered as viable.

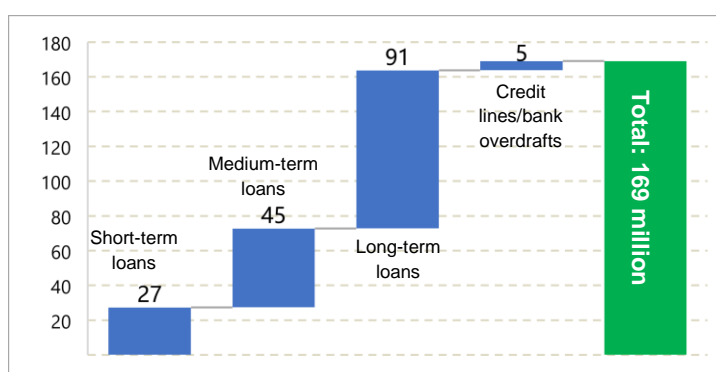
The financing gap for the Estonian agri-food sector is estimated at EUR 169 million (Table 22). Unmet financing needs are concentrated in specific segments of the sector. The financing gap mainly concerns small-sized firms. The type of loans for which the gap is the largest is long-term loans. Overall, the most constrained segments are medium and long-term loans for small-sized firms (Figure 25).

91 The SAFE survey successful application rate for bank loans, and for credit lines are used as proxies for the agri-food sector access to finance. Considering the particularly low loan application rates in the Agri-food survey (see Figure 21) in a small survey sample (50), the approval/rejection rates could not be calculated with sufficient accuracy.

92 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.



Figure 25: Financing gap by product in the agri-food sector, 2018, EUR million



Source: Calculation based on the SAFE survey 2018, and EUR 300 000, 500 000, 1 000 000 and 200 000 for short, medium, long-term loans and credit lines.

Table 22: Financing gap by firm size and product, 2018, EUR million

| | Total | Short-term Loans | Medium-term Loans | Long-term Loans | Credit lines/bank overdrafts |
|--------------------|---------------|------------------|-------------------|-----------------|------------------------------|
| Small-sized firms | 152.01 | 24.52 | 40.86 | 81.72 | 4.91 |
| Medium-sized firms | 14.11 | 2.28 | 3.79 | 7.59 | 0.46 |
| Large-sized firms | 2.97 | 0.48 | 0.80 | 1.60 | 0.10 |
| Total | 169.10 | 27.27 | 45.45 | 90.91 | 5.46 |

Source: Calculation based on the SAFE survey 2018, and assumptions of EUR 300 000, EUR 500 000, EUR 1 000 000 and EUR 200 000 for short, medium, and long-term loans and credit lines.

General drivers of the financing gap in the agri-food sector include⁹³:

- **Inadequate collateral.** The lack of collateral for guarantees available to small-sized businesses located in rural areas mainly stems from the low value of infrastructure in an illiquid rural estate market. This constraint is partially addressed by existing financial instruments. However, in some cases, banks consider the current guarantee instruments offered by KredEx⁹⁴ as too expensive.
- **Bank policy regarding long-term finance and non-sustainable business plan.** Banks prefer to offer short-term loans with refinancing facilities. This has an impact on the cash flow and overall sustainability of the business plan. In addition, stakeholders reported that due to risk considerations and the higher impact of transaction costs on smaller operations, banks would rather finance large-sized enterprises from more profitable sectors, than investing in micro and small-sized companies.
- According to capital providers, **low financial awareness of micro, small and medium-sized companies** is a problem, reflected by the lack of cash flow forecasts for investment projects.
- **High-risk for start-up finance.** This pertains to innovation and launch of new products as well as to the lack of business and credit history of new start-ups.
- **Difficulties financing large-scale projects with costs above EUR 10 million.**

93 For further discussion of each of these drivers, see the relevant demand or supply sections.

94 The KredEx guarantee has a contract fee of up to 1% in addition to the 0.8% to 3.8% surety fee per annum.



3.5. Conclusions

Between 2010 and 2017, the volume of loans supplied to the agri-food sector has increased with a minor slowdown in 2017. In 2017, the total outstanding loan volume to the sector was EUR 540 million.

The outstanding loan volume of the sector continued to grow even though, since 2013, investment levels have reduced among agri-food enterprises, affected by the negative performance of the agriculture sector and the Russian trade embargo. In relative terms, investments have reduced more in the beverage manufacturing segment than in food manufacturing. Labour constrained agri-food enterprises invest in modernisation and automation as well as capacity expansion to process larger shares of the domestic agricultural production before exporting.

Grants from the EAFRD are well sought by agri-food processors. The EAFRD loan instrument managed by RDF is being successful in supporting agri-food enterprises in accessing finance, showing a good take-up and appreciation among stakeholders. It has also involved commercial banks and shared the risk with them. Several other financial instruments exist in the country and provide access to various types of loan products and guarantees, but are tailored for agri-food businesses.

Yet, a **financing gap for agri-food enterprises remains and is estimated at EUR 169 million in 2018.** The financing gap concerns mainly small-sized firms and the gap is largest for long-term loans. General drivers of the financing gap in the agri-food sector include insufficient collateral, banks' negative risk perception of the sector and, for new entrants particularly, and limited supply of long-term loans. The lack of financial awareness in small-sized companies and market concentration in the banking market also play a role.

Based on the findings of this report, the following recommendations could be considered to improve the offer of financial instruments supporting the sector:

- The EAFRD loan instrument managed by RDF has proved successful in supporting agri-food enterprises to access finance, showing a good take-up and appreciation among stakeholders. Nonetheless, the continuity of such an instrument should be subject to an assessment of efficiency, impacts and achievement of targets.
- The existing public guarantee offering could be reviewed; for example, to analyse the adequacy of the available budget and the access conditions. The analysis in this report indicates that the uptake of such instruments in the agri-food sector is limited, while lack of collateral still represents one of the main constraints in the market. Stakeholders have also indicated that the pricing policy of the instruments is a critical element.
- New entrants need specific attention as their innovative ideas and lack of business history, combined with small, if any, levels of collateral have proved to be a problem for banks. As noted for the agriculture sector, both for guarantee and loan instruments, the opportunities offered by the new legal framework, such as the easier combination of financial instruments and grant support, might offer interesting opportunities to increase the effectiveness of financial instruments in supporting new entrants and small-sized enterprises.
- Specific support for large strategic projects (above EUR 10 million) could also be considered if there is sufficient critical mass of demand, such support could be provided through specific financial instruments. The provision of technical support to help small-sized enterprises in preparing their cash flow projections and business plan may also be considered, since limited financial knowledge among entrepreneurs has been signalled as a difficulty by interviewed financial institutions.



ANNEX

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A.2. Stakeholders interviewed

| Type of Organization | Name of Institution | Address and Website |
|-----------------------|-------------------------------------------------------|---------------------------------|
| Managing authority | Ministry of Rural Affairs | Tallinn www.agri.ee |
| Financial institution | Swedbank AS | Tartu www.swedbank.ee |
| Farmers' organisation | Estonian Farmers' Confederation | Saku www.taluliit.ee |
| Farmers' organisation | Estonian Chamber of Agriculture and Commerce | Tallinn www.epkk.ee |
| Financial institution | Luminor Bank | Tallinn www.luminor.ee |
| Farmers' cooperative | Farmers' cooperative Kevili | Tartu www.kevili.ee |
| Farmer | Tartu Agro AS | Tartu www.tartuagro.ee |
| Farmers' cooperative | Cooperative EPiim | Järva-Jaani www.epiim.ee |
| Farmer | Orgita Põld OÜ | Kasti www.orgita.ee |
| Farmer | Kanepi Aiand OÜ | Kanepi www.kanepiaiaand.ee |
| Farmer | Kindel Käsi OÜ | Unipiha www.eestimaasikas.ee |
| Paying agency | Estonian Agricultural Registers and Information Board | Tartu www.pria.ee |
| Financial institution | Rural Development Foundation | Viljandi www.mes.ee |



| | | |
|------------------|--------------------------|---------------------------------|
| Agri-Food | EPiim Tootmine AS | Järva-Jaani www.epiim.ee |
| Agri-Food | Salvest AS | Tartu www.salvest.ee |
| Agri-Food | Saaremaa Piimatööstus AS | Kuressaare www.saarejuust.ee |
| Agri-Food | Nõo Lihatööstus AS | Nõo www.lihavyrst.ee |



A.3. Methodology for financing 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 growth⁹⁵ 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 $j = \text{Short Term, Medium term, Long Term Loans, Credit lines}$.

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 $j = \text{Short – term, Medium – term, Long – term Loans, Credit lines}$.

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



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

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 33rd and 66th percentile, or below the 33rd percentile of the PPI index in the EU. We assume equal rates of rejections amongst small, medium and large-sized farms, and disentangle the share of farms with constrained in obtaining credit by financing product.

$$\text{N. of Farms rejected}_{ij}^{\text{viable}} = \text{Eurostat Farm population}_i * \text{Rejection Rate}_j^{\text{viable}}$$

$$\text{N. of Farms discouraged}_{ij}^{\text{viable}} = \text{Eurostat Farm population}_i * \text{Discouraged Rate}_j^{\text{viable}}$$

$$\text{N. of Farms in unmet demand}_{ij}^{\text{viable}} = \text{N. of Farms rejected}_{ij} + \text{N. of Farms discouraged}_{ij}$$

for $i = \text{Small, Medium, Large}$

and $j = \text{Short – term, Medium – term, Long – term Loans, Credit lines.}$

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.

$$\text{Financial Gap}_{ij} = \text{Application Size}_{ij} \times \text{N. of Farms in unmet demand}_{ij}^{\text{Viable}}$$

for $i = \text{Small, Medium, Large}$

and $j = \text{Short – term, Medium – term, Long – term Loans, Credit lines.}$

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 Estonia, Table 23 and Table 24 report the elements used in the calculation of the financing gap for the agricultural and agri-food sector, respectively.


Table 23: Elements for the calculation of the financing gap in the agriculture sector

| | | Short-term Loans | Medium-term Loans | Long-term Loans | Credit lines/ bank overdrafts |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------|-------------------|-----------------|-------------------------------|
| Lower bound: farms with a non-negative turnover growth and no cost increase | Share of respondents rejected by creditor or farmer | 0.38% | 1.13% | 0.42% | 0.21% |
| | Share of respondents that have not applied because of possible rejection | 1.05% | 1.88% | 1.26% | 0.00% |
| | Total (sum of rejected and discouraged) | 1.43% | 3.02% | 1.68% | 0.21% |
| Upper bound: farms with a non-negative turnover growth | Share of respondents rejected by creditor or farmer | 0.97% | 3.40% | 0.89% | 1.26% |
| | Share of respondents that have not applied because of possible rejection | 5.79% | 6.59% | 5.84% | 4.03% |
| | Total (sum of rejected and discouraged) | 6.76% | 9.99% | 6.73% | 5.28% |
| Total unmet demand: all farms | Share of respondents rejected by creditor or farmer | 1.06% | 3.57% | 1.18% | 1.34% |
| | Share of respondents that have not applied because of possible rejection | 6.17% | 6.97% | 6.22% | 4.41% |
| | Total (sum of rejected and discouraged) | 7.23% | 10.54% | 7.41% | 5.75% |
| Farms with constrained access to finance, lower bound | Small-sized farms | 40 | 84 | 47 | 6 |
| | Medium-sized farms | 42 | 89 | 50 | 6 |
| | Large-sized farms | 27 | 57 | 32 | 4 |
| Farms with constrained access to finance, upper bound | Small-sized farms | 188 | 278 | 187 | 147 |
| | Medium-sized farms | 200 | 295 | 199 | 156 |
| | Large-sized farms | 129 | 190 | 128 | 100 |
| Standard loan application size | Small-sized farms | EUR 13 144 | EUR 31 886 | EUR 87 937 | EUR 11 867 |
| | Medium-sized farms | EUR 16 654 | EUR 30 306 | EUR 95 485 | EUR 13 164 |
| | Large-sized farms | EUR 49 120 | EUR 77 124 | EUR 171 931 | EUR 70 107 |

Source: fi-compass survey.


Table 24: 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 overdrafts |
|-------------------------------------------------------|--------------------------------------------------------------------------|------------------|-------------------|-----------------|------------------------------|
| Firms with a non-negative turnover growth | Share of respondents rejected by creditor or firms | 2.31% | 2.31% | 2.31% | 0.00% |
| | Share of respondents that have not applied because of possible rejection | 11.0% | 11.0% | 11.0% | 4.00% |
| | Total (sum of rejected and discouraged) | 13.31% | 13.31% | 13.31% | 4.00% |
| Firms with constrained access to finance, upper bound | Small-sized firms | 82 | 82 | 82 | 25 |
| | Medium-sized firms | 8 | 8 | 8 | 2 |
| | Large-sized firms | 2 | 2 | 2 | 0 |
| Standard loan application size | Small-sized firms | EUR 300 00 | EUR 500 000 | EUR 1 000 000 | EUR 200 000 |
| | Medium-sized firms | EUR 300 00 | EUR 500 000 | EUR 1 000 000 | EUR 200 000 |
| | Large-sized firms | EUR 300 00 | EUR 500 000 | EUR 1 000 000 | EUR 200 000 |

Source: Calculation based on the SAFE survey 2018, and EUR 300 000, EUR 500 000, EUR 1 000 000 and EUR 200 000 for short, medium, long-term loans and credit lines.



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 25 reports the number of respondents by Member State.

Table 25: *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 26 reports the sample size per country.

Table 26: 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.

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