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

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DISCLAIMER

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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.
ACGF	Agriculture Credit Guarantee Fund
CAP	Common Agricultural Policy
EAA	Economic Accounts for Agriculture
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
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 Funds
EU	European Union
EU 24	The 24 EU Member States covered by the *fi-compass* '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
fi-compass survey[1]	Survey on financial needs and access to finance of 7 600 EU agricultural enterprises carried out by *fi-compass* in the period April-June 2018 and based on respondents' financial data from 2017.
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added

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

ha	Hectare
IACS	Integrated Administration and Control System
INVEGA	Investment and Business Guarantees
PA	Paying Agency
RDP	Rural Development Programme
SME	Small and medium-sized enterprise
SO	Standard Output
UAA	Utilised Agricultural Area
VIPA	Public Investment Development Agency

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EXECUTIVE SUMMARY

This study gives an insight into agriculture and agri-food financing in Lithuania by providing an understanding of the 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 are 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 done in the context of this study work. 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 Lithuania

Between 2010 and 2018, the investment volumes undertaken by the agriculture sector almost doubled. In 2018, the Gross Fixed Capital Formation[2] (GCCF) was EUR 640 million, depicting a positive investment trend in Lithuania over the last years, although starting from low levels. The ongoing structural change in the agriculture sector, along with the growing importance of large-sized farms, are driving the investment dynamic in the country. Investments are carried out in order to expand activities through the purchase of land, as well as the adoption of modern technologies through the purchase of additional machinery and improvements to facilities. Dominated by foreign owners, the pork sub-sector represents the largest share of investments, followed by the crop sub-sector. The demand for working capital is particularly high in relation to purchases of inputs (e.g. seeds or fertilisers for crop production). Many farms in Lithuania seek finance to keep the business afloat, with limited head room for investing in long-term tangible assets. The share of farmers that seek finance is higher than on average in other EU countries. In 2017, more than 45% of Lithuanian farmers applied for finance, compared to less than 30% in the EU 24.

The Common Agricultural Policy (CAP) supports investments directly through grants, as well as indirectly via increased access to finance. Direct payments (Pillar I) and rural development grants (Pillar II) play an important role in stimulating demand for finance. Besides contributing to the beneficiaries' income, they also serve as a form of collateral when farmers apply for loans. Investment support is a priority in the 2014-2020 Lithuanian Rural Development Programme (RDP). Between 2014 and 2020, EUR 360.6 million were committed under sub-measure 4.1 'Support for Investments into Agricultural Holdings'. This is a significant contribution to investment made by the Lithuanian agriculture sector, leading farmers to undertake investments that would not otherwise have been undertaken, and also to invest greater amounts than what would have been possible without the support.

The supply of finance is concentrated to three Scandinavian owned banks, which together control approximately 84% of the overall market. These banks have specialised expertise and products targeted at large-sized farms in the Lithuanian agriculture sector. The share of non-performing loans within the agriculture sector is among the lowest in the economy, which is indicative of the banks' risk averse approach to lending to the sector. Small loans are often provided by credit unions, who mainly finance small-sized farms. In addition to traditional loans from financial intermediaries, agriculture entities often use commodity credits from input suppliers (such as suppliers of fertilisers or machinery) based on contracts for future re-payment in kind. This financing method is one of the main sources of external financing for farmers and small businesses. According

2 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.

to interviews with banks, financial institutions consider agriculture as an increasingly attractive sector. And its volume of financing is expected to increase. However, banks' interest is foremost directed to large-sized farms.

Financial instruments for agriculture are implemented in Lithuania through the Agricultural Credit Guarantee Fund (ACGF). There are five financial instruments: (i) individual guarantees for credits, (ii) portfolio guarantees for loans for working capital and/or the acquisition of biological assets, (iii) loans for agriculture machinery and equipment, (iv) support for guarantee payment compensations and (v) support for loan interest compensation. The highest uptake of preferential loans is for short-term loans. According to the analysis in the report, stakeholders have a positive opinion concerning the usefulness of the financial instruments, but the overall amount of resources allocated to the instruments is considered too limited. Approximately 85% of the agriculture producers who were asked by banks to provide a guarantee for a loan used a public guarantee.

In 2018, the total outstanding loan volume to the agriculture, fishery and forestry sectors was approximately EUR 300 million. Despite the limited volume of the financial market for agriculture, the market has grown significantly since 2012. This growth is related to the implementation and pay-out of the 2014-2020 RDP support, and the growth of the portfolio instrument covered by the ACGF. Despite this positive trend, small-sized farms, young farmers and new entrants face difficulties in accessing finance.

The study shows that there is a potential for further financial instruments, with a financing gap for agriculture estimated between EUR 962 million and EUR 2.2 billion. A large share of the gap can be attributed to farms below 20 hectares (ha)[3]. Interviewed stakeholders from both banks and representatives of the agriculture sector, suggest that access to finance is more complicated the smaller the size of the farm. Furthermore, approximately 30% of the overall gap may be attributed to young farmers. The type of loans for which the gap is the largest are long-term investment loans.

The estimated market gap consists of two separate components. The first component the estimated aggregate volumes of loan applications submitted in the past year by viable enterprises, which were rejected by banks or which translated into loan offers refused by the applicants due to unacceptable lending conditions. The second component of the gap relates to the estimated aggregate volumes of loan applications that are not submitted by farmers considered viable, due to the farmer fearing a possible rejection, whereby he/she is discouraged from applying for a loan.

Several factors that cause viable loan applications by farmers to be rejected, refused or farmers to be discouraged from applying, have been identified. The key constraints on access to finance are farmers' lack of financial management skills and access to collateral. Also the lack of business data and business history, particularly amongst young farmers and new entrants, is an important explanation for the gap. In addition, the supply of finance is highly concentrated, with banks adopting a selective approach to clients and applying higher interest rates. Banks have also shown a reluctance to work with small-sized farms. Young farmers and new entrants face additional constraints due to their lack of assets to use as collateral, and their lack of business and credit history.

RECOMMENDATIONS

- A review of existing instruments should be undertaken to assess how they might better meet the needs of smaller farms, young farmers and new entrants. The sector consists mainly of small-sized farms (82% of farms are below 20 ha), which have a potential to invest more. Although the existing public guarantee system facilitates access to loans on preferential terms, small-sized farms, young farmers and new entrants continue to face difficulties in accessing finance due to their lack of collateral assets and business history. The opportunities offered by the new legal framework for EAFRD funded financial instruments (e.g. greater ease of combining financial instruments and grant support, or the possibility to finance the purchase of land be young farmers) might offer interesting opportunities to increase the effectiveness of the instrument towards these segments. More generally, some stakeholders indicate that the adequacy of the currently available budget of the financial instruments is also indicated as a possible issue by stakeholders.

3 The *fi-compass* survey, on which the estimations are based, divided farms in three size categories: small-sized (below 20 hectares), medium-sized (20-100 hectares), large-sized (above 100 hectares).

- Long-term loans are rarely used. Almost half of the liabilities of the sector consists of short-term loans, often provided by credit unions. Loan application rejection rates are also the highest for long-term loans However, the ongoing structural changes in the sector require long-term financing. Thus, financial instruments (guarantees or loans), which could also be financed by the EAFRD, to address this problem, could be helpful.
- High cost of financing is also an obstacle, in particular for small-sized farms. Instruments with a higher impact on interest rates (e.g. risk sharing loan funds) might be considered for future policy actions, including in combination with grant support.
- Application and administration procedures for existing instruments administered by the ACGF could be simplified and digitalised. To save time and reduce costs for applicants and administrative staff, data requests could be linked with already functioning official registers and databases.
- Technical support to improve financial literacy of farmers, particularly those with small-sized farms, could help overcome some of the current constraints on access to finance. Such support could be delivered through a training and advisory facility under the EAFRD/RDP.

Financing gap for the agri-food sector in Lithuania

The investment dynamic in the agri-food sector in Lithuania shows a positive trend. During the period 2014-2018, investments increased by approximately 15% to reach EUR 185 million in 2018, representing almost 22% of the total investment in the Lithuanian manufacturing sector. Over this period, the number of enterprises with foreign direct investments increased by 42.5% and the average foreign direct investment per agri-food enterprise rose by 30%, with aggregated foreign direct investment in the Lithuanian agri-food sector reaching EUR 585.6 million by the end of 2018.

Lithuanian agri-food enterprises' demand for finance is mainly driven by the necessity to invest in capacity expansion to increase economies of scale, to reduce costs, and to improve productivity. In addition, the need for modernising and improving production standards in response to changing consumers' demands is an important driver of the search for finance. A root cause of this demand is the low productivity of the agri-food-sector. In the period 2014-2018, despite the increase in labour productivity, the annual productivity per employee remained below the EU 28 average. Further growth in labour productivity is needed to maintain profitability in a context of increasing input costs. Improvements in labour productivity are expected to come from investments in new technologies and advanced equipment. In addition, enterprises also need short-term financing for working capital to buy raw materials for processing, such as milk and grains. According to the study survey of the agri-food sector, more than 33% of bank loan applications were directed to inventory and working capital.

The supply of finance is provided by a group of financial intermediaries including banks and credit unions serving the agri-food sector. The market currently offers products for investment loans, leasing for machinery and equipment, and working capital financing, such as credit lines and working capital loans. The high concentration of the banking sector impacts on the supply of financial products to the agri-food sector, leading banks to be more selective with their clientele. Credit unions mostly supply short-term finance. For companies operating in the agri-food sector and not directly linked with agriculture by ownership, the state-owned financial entity, Investment and Business Guarantees (INVEGA), provides support in a similar way to the ACGF. INVEGA manages financial instruments financed by the European Structural and Investment Funds (ESIF), allowing small and medium-sized enterprises to start or expand their activities with a small loan and through access to guarantees. For the current RDP programming period, as of April 2020, the Lithuanian government had not set up a financial instrument supported by the EAFRD that targets the agri-food sector.

The overall growth of investment in food production companies is also supported through grants under the EAFRD. For the 2014-2020 programming period, an allocation of EUR 83.8 million has been made to support investment in the processing, marketing and/or development of agricultural products (sub-measure 4.2 'Support for the processing, marketing and/or development of agricultural products of the RDP'). The demand for grants is significant and the requests for financing of a high number of applications could not be satisfied due to a limitation of budgetary resources. Although demand for grants differ from the demand for bank loans, this process supports the findings of a potential high unmet demand for finance from the sector.

Although overall lending to the agri-food sector has increased over the last few years, a significant constraint of the supply of finance to small agri-food firms has been identified in the report. Rejection rates of loan applications from the agri-food sector are relatively high for small-sized enterprises. The reasons for banks to reject loan applications from the sector include: (i) the high risks associated with the sector, leading banks to request high collateral levels, whereby lack of collateral of the sector becomes an issue, (ii) the lack of credit history, providing obstacles for start-ups, and (iii) inadequate business plans.

According to the results of this study, the financing gap for the agri-food sector is estimated at EUR 20.2 million. Almost 60% of the overall gap can be attributed to small-sized firms and start-ups that appear to experience particular difficulties in accessing finance. The financing gap for small-sized firms is calculated to be EUR 12.1 million. The reasons for small-sized firms representing a large part of the gap are attributed to the high entry barriers for small-sized companies, and new entrants, in terms of lack of collateral and business history, or the lack of knowledge and understanding of the financial products.

RECOMMENDATIONS

The following recommendations to improve the current offer of financial instruments could be considered:

- The portfolios of the ACGF and INVEGA could be scaled-up to ensure support to more actors active in both the agriculture and agri-food sectors.
- To improve access to finance among small agri-food enterprises, the existing financial instruments, administered through ACGF and INVEGA could be reviewed and simplified. The application and administration procedures could be digitalised, for example. To save time and reduce costs for potential users and administrative staff, data requests could be linked with already functioning official registers and databases.
- Dissemination of information on the different preferential loan products available through INVEGA for enterprises from the agri-food could be enhanced.
- To ease access to the credit market, technical assistance to improve firms' financial literacy could be provided, with a focus on small and new enterprises. This could be achieved by enhancing the financial support provided by ACGF or INVEGA through advisory services.

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 Lithuania. 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.

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

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

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

The financing gap for each of the two sectors is 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 Lithuanian agriculture sector

- In 2018, Lithuania had 128 100 farms, 60 000 of which were below 5 ha and 82% of them were less than 20 ha.
- 15% of the farming population is below the age of 40 years and this share has been decreasing since 2013.
- In 2018, the average income per farm below 20 ha was approximately EUR 4 000, excluding subsidies.
- The gross agricultural production amounted to EUR 2.4 billion in 2018, with a gross value added of EUR 1.1 billion.
- 61% of the Lithuanian farms are mixed farms, 29% are specialised in crop production and 7% specialising in livestock farming (dairy, pork). Cereal production is the main income generating activity amongst the agriculture sector.

The Gross Value Added (GVA) for the agriculture sector is volatile. In 2018, the agriculture production amounted to EUR 2.4 billion and has shown a relatively stable trend since 2013. For the same year, the GVA was EUR 1.1 billion[4]. The GVA's level fluctuated in the period 2008-2018, from EUR 500 million in 2008 to EUR 1.1 billion in 2018. This volatility is driven by the fluctuation in the value of intermediate consumption. In 2018, the GVA decreased by 28% compared to 2017[5].

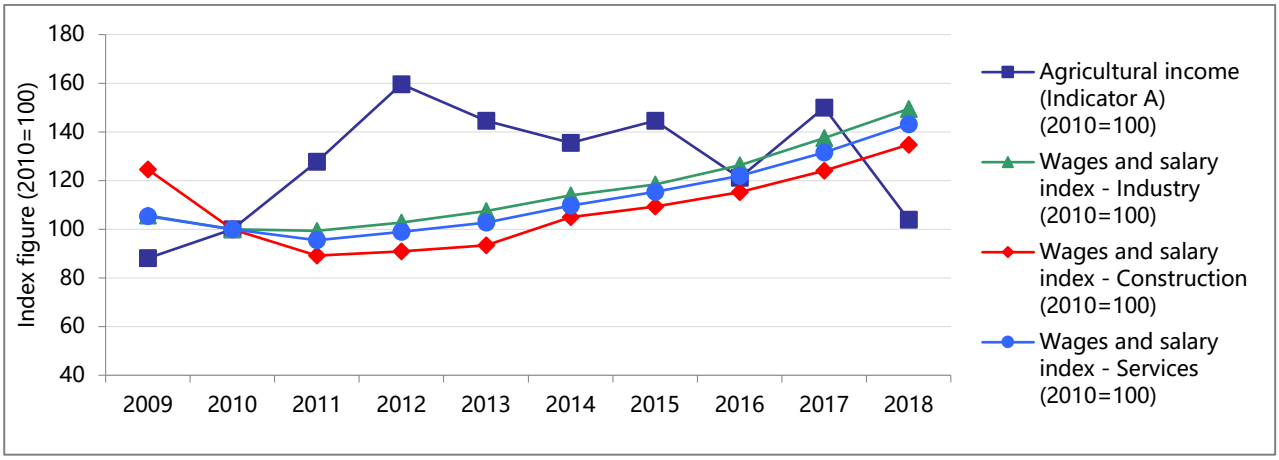
Lithuanian farms have low productivity levels compared to other EU 28 Member states. In 2018, the gross agricultural production of Lithuania was EUR 810 per ha of Utilised Agricultural Area (UAA). It is one of the lowest in the EU 28. In Denmark, where production conditions related to climatic conditions are similar, this indicator is four times higher. This difference is explained to a large extent by the fact that the selling prices for agriculture products in Lithuania are lower than in other countries[6]. In 2018, the average annual net income without subsidies was approximately EUR 4 000 for farms below 20 ha, whilst the average income for farms over 150 ha was approximately EUR 50 000. In Lithuania, farms with an annual economic size over EUR 4 000 are considered commercial farms.

In the period 2009-2018, the evolution of agriculture income has been negative. After a steep increase until 2012, income levels decreased continuously, contrary to the wage and salary index of the industry, and the construction and services sectors (Figure 1). This is partly explained by the evolution of input and output prices, as depicted in Figure 2. Output prices have decreased significantly since 2011-2012, and faster than input prices.

The evolution of the revenue and cost structure over the past 15 years of the Lithuanian agriculture sector is illustrated in Figure 3. Again, the sector has gone through significant changes. On the revenue side, whilst the share of costs of labour, fertilisers, plant/animal protection, rents, and other costs have increased to varying extents, the cost of feeding stuffs has decreased significantly, and so have taxes. On the revenue side, the income from animal output has almost halved, whilst the revenue from crop output has compensated for the losses on the animal side. The share of revenue stemming from subsidies, as well as from non-agricultural activities have also increased between 2016 and 2018 compared to that in 2004-2006.

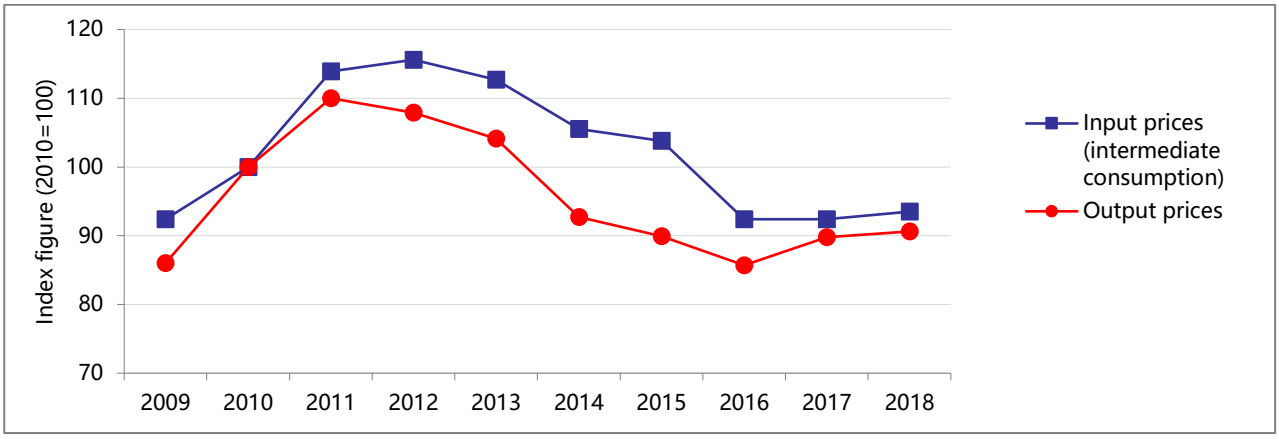
4 Gross value added at basic prices corresponds to the value of output (at basic prices) less the value of intermediate consumption.
5 Eurostat, 2019, https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/DDN-20191028-2.
6 Lithuanian Institute of Agrarian Economics, 2018, Agriculture and Food Sector 2017.

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



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

Figure 2: Evolution of agricultural input and output prices, 2009-2018



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

Significant structural changes are taking place in Lithuania. In 2018, there were 128 100[7] farms in total, which was a reduction of 10% compared to the number of farms in 2014. In 2018, farms below 5 ha represented 46.8% of the total farm sector, and farms below 20 ha represented 82%[8].

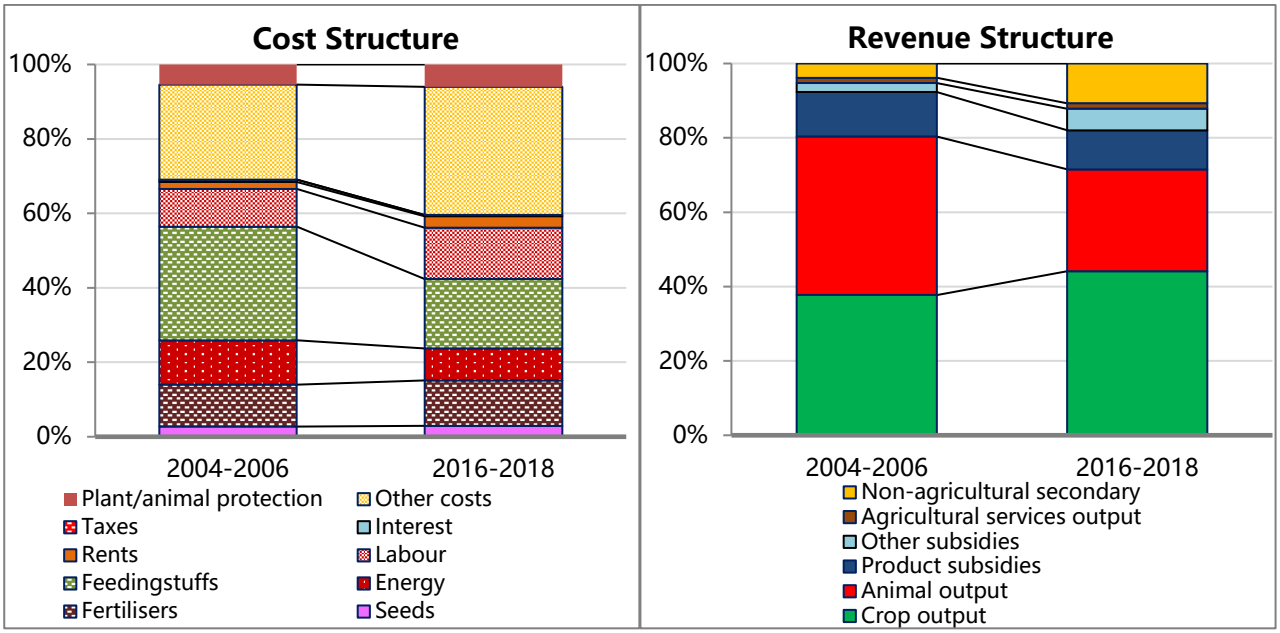
This ongoing change is characterised by two tendencies: (i) the enlargement of farms and (ii) the retirement of farmers from agriculture activities. The number of small-sized farms has decreased the most. Between 2014 and 2018, the number of farms with an UAA below 5 ha decreased by 15%, and those with an UAA of between 5.1 and 10 ha by 12.5%. At the same time, the number of farms above 50 ha increased by 9%. In 2018, the average farm size was 22.7 ha[9]**.** Of the total number of UAA in Lithuania, 85% are registered under the Integrated Administration and Control System (IACS), and thus, subject to public support under the CAP.

7 Data from the Simplified Direct Payments Information System, AIRBC.

8 The farm structure of Lithuania is important to bear in mind for the forthcoming analysis in this report, where the *fi-compass* survey results will be analysed. The analysis of the survey divided farms into small-sized farms (below 20 hectares), medium-sized farms (20-100 hectares), and large-sized farms (>100 hectares). Hence, in the case of Lithuania, 82% of the farms fall in the category of small-sized farms as defined on a European level. However, in the understanding of the national context, a small-sized farm is considered to be smaller than 5 hectares, rather than below 20 hectares.

9 Data from the Simplified Direct Payments Information System, AIRBC.

Figure 3: Agricultural income – only cost and revenue structure in Lithuania, 2004-2018



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

The share of young farmers is low and on the decline. The share of young farmers, under the age of 40 years old is 15%, whilst 39% of farmers are of retirement age at 65 years or older, and 46% are aged between 40 and 65[10]. Compared to 2013, the number of young farmers has decreased by 10%, and the number of farmers aged between 40 and 65 years old has increased by 15%.

Demographic challenges impact rural areas through a fast-paced population decline. During 2008 and 2017, the population of Lithuania dropped by 16%, registering the largest decline in the EU 28. A large part of it is explained by international migration. Rural regions are depopulating the most rapidly[11].

Mixed farms are the most common type of farms and cereal production is the main agriculture income generating activity in the country. The distribution of farms according to the main economic activity under development is as follows: 61% are mixed agriculture, 29% in crop production and 7% are livestock farms[12]. In the period 2013-2016, cereal and rapeseed farms remain highly specialised and 90% of the output for these sectors was generated by specialised farms. In terms of production, cereals comprised the largest portion of the production value (in 2018, approximately 32% was cereals, followed by 17% of livestock (cattle, pigs and poultry) and approximately 16% were dairy[13].

Statistical factsheet Lithuania, 2019
More data on agriculture indicators from Lithuania can be found in the **Statistical Factsheet Lithuania 2019** of the Directorate-General for Agriculture and Rural Development, Farm Economics Unit and in the Annex A.4 Data from the agriculture statistical factsheets

10 According to Farms Register data on January 1, 2019.
11 Lithuanian Institute of Agrarian Economics, 2018, Agricultural and Food Sector 2017.
12 According to the Farmers' Register, January 1, 2019.
13 European Commission; DG AGRI, 2019, Statistical Factsheet for Lithuania, https://ec.europa.eu/info/food-farming-fisheries/farming/facts-and-figures/markets/production/production-country/statistical-factsheets.

2.2. Analysis of the demand side of finance 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 296 Lithuanian 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 Lithuanian agriculture sector

- In 2018, the Gross Fixed Capital Formation (GFCF) was EUR 640 million and the investments undertaken have almost doubled in volume over the previous decade.
- The pronounced ongoing structural transformation sees medium and large-sized farms growing and driving the investment dynamic.
- Investments are motivated by (i) the expansion of agriculture activity (purchase/rental of land); (ii) investments in modern technologies to increase production efficiency and reduce costs; and (iii) improvement of standards in response to consumer demands, and to access the EU market.
- Bank loans in Lithuania are primarily used to finance working capital and investments in machinery. The demand for working capital is significantly higher in Lithuania compared to other EU 24 countries.
- Investment support grants under the RDP facilitate investments undertaken by the agriculture sector. The grants are often accompanied by a bank loan. Thus, the policy measure also drives the demand for finance.
- The share of Lithuanian farmers expressing concerns relating to access to land and finance is more than twice as high as the EU 24 average.
- In 2017, according to the *fi-compass* survey, 46% of Lithuanian farmers applied for finance, which is significantly higher than the EU 24 average of 30%. This includes 18% of farmers obtaining financial resources from private individuals (e.g. family members and friends).
- Despite the high share of Lithuanian farmers applying for finance, almost 20% of the farmers state that they have been discouraged from applying for finance due to the fear of possible rejection.
- The loan application rejection rate is above 50% for several of the loan maturities. This is a common complaint from farmers, particularly from farms below 20 ha. The high rejection rates make Lithuania a distinctive case compared to the results found for the rest of the EU 24.
- The unmet demand for finance in the agriculture sector is estimated to be EUR 3 billion.
- The main constraints in access to finance that have been identified are the following:
  - Banks have limited appetite for working with the agriculture sector as it is perceived as a high-risk sector, particularly because of the dominant number of small-sized farms.
  - Banks loan conditions for small loans are in general unfavourable.
  - The high level of indebtedness (often debt with suppliers) is one reason provided by banks when rejecting loan application.
  - Young farmers and new entrants have substantial issues to obtain finance, due to their lack of credit history, business history, and lack of collateral.
  - Some small-sized farms lack financial literacy and lack business data, thereby making it difficult for the banks to assess the farms creditworthiness. As a result, small-sized farms have more difficulties in accessing finance.

2.2.1. Drivers of total demand for finance

Over the past decade, Lithuanian agricultural investments have almost doubled in volume. In 2018, the Gross Fixed Capital Formation (GFCF) was EUR 640 million[14]. Over the last few years, the GFCF represents approximately 70-75% of the GVA. In 2016-2017, the GFCF spiked (Table 1). The increase of investment activity was accompanied by a significant increase of the total outstanding loan volume (see section 2.3.2). The investment peak relates to the first year of activity of the current RDP through which the EAFRD financing is channelled, as well as to the increase of activity of the Lithuanian Agricultural Credit Guarantee Fund (ACGF).

Table 1: Gross Fixed Capital Formation in Lithuanian agriculture sector, 2010-2018, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Agricultural Products	60	58	24	55	40	68	117	72	76
Animals	47	45	12	46	26	45	97	55	61
Plantations	13	14	12	9	13	23	19	17	15
Non-Agricultural Products	303	437	375	549	482	529	540	581	564
Materials	238	269	242	335	293	321	322	330	287
Buildings	42	146	118	203	180	199	209	239	262
Other	23	22	15	11	9	8	9	12	15
Total GFCF	363	495	399	603	522	597	657	652	640

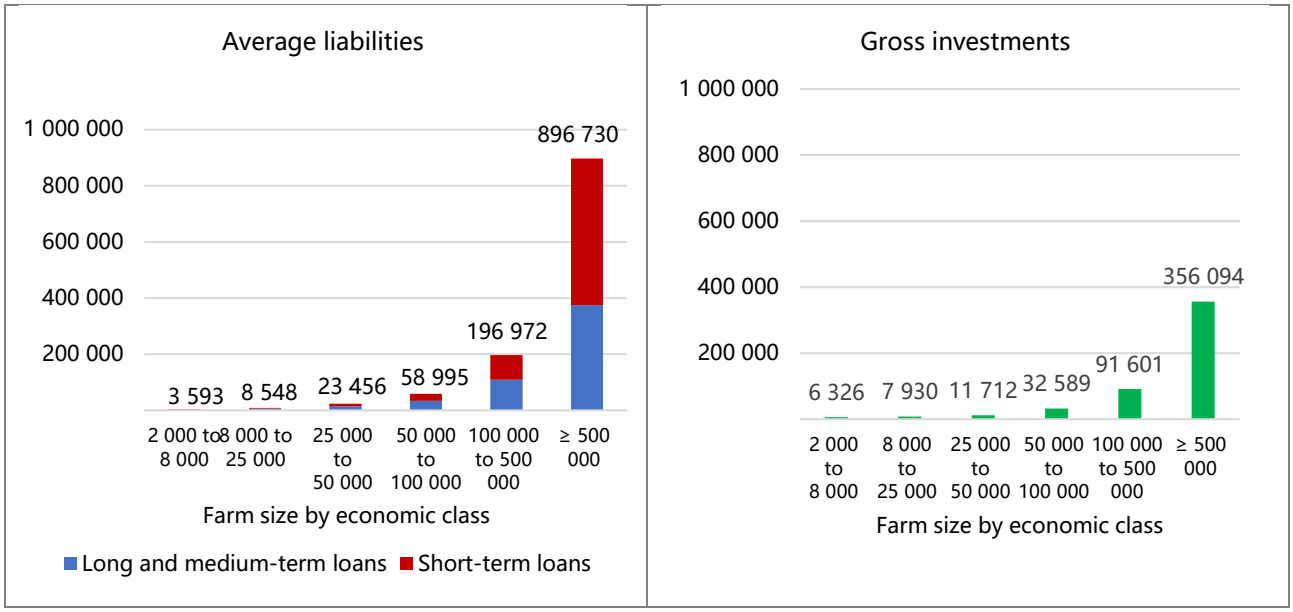
Source: Eurostat, 2019, Economic accounts for agriculture.

The bulk of the investments were directed towards buildings and machinery rather than direct agricultural assets such as livestock and plantations [15]. To a great extent, investments for plants were related to seedlings of berry plants and fruit trees. With regards to livestock, investments are focused on cows and breeding sows[16].

Large-sized farms drive the investments undertaken and the pronounced ongoing consolidation process is another important investment driver. As discussed in section 2.1, farms below 5 ha are decreasing in numbers, and the number of farms over 50 ha are increasing. Hence, the pronounced ongoing structural transformation leads to a growing number of medium and large-sized farms, thereby driving the investment dynamic**.** Very large-sized farms hold significantly more liabilities and invest strikingly more [17] than large and medium-sized farms[18] (Figure 4). In addition, investments undertaken, and the liabilities held by the farms below a Standard Output[19] (SO) of EUR 50 000 are very low. In 2018, the vast majority of Lithuanian farms invested very limited amounts, bearing in mind that the average annual net income for farms below 20 ha in Lithuania was EUR 4 000 (see section 2.1), and that these farms had an average total output below EUR 9 000.

14 Eurostat, 2019, Economic accounts for agriculture, table eaa01.
15 Statistic Lithuania, 2018, Economic Accounts on Agriculture.
16 Interviews with farm union representatives.
17 Standard Output above EUR 500 000.
18 Farms with a Standard Output, SO, between EUR 100 000 to EUR 500 000.
19 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.

Figure 4: Average liabilities and gross investment by Lithuanian farms across economic size classes in 2017, EUR



Source: *FADN*[20]*, 2019.*

The investments undertaken and the demand for finance is driven by:

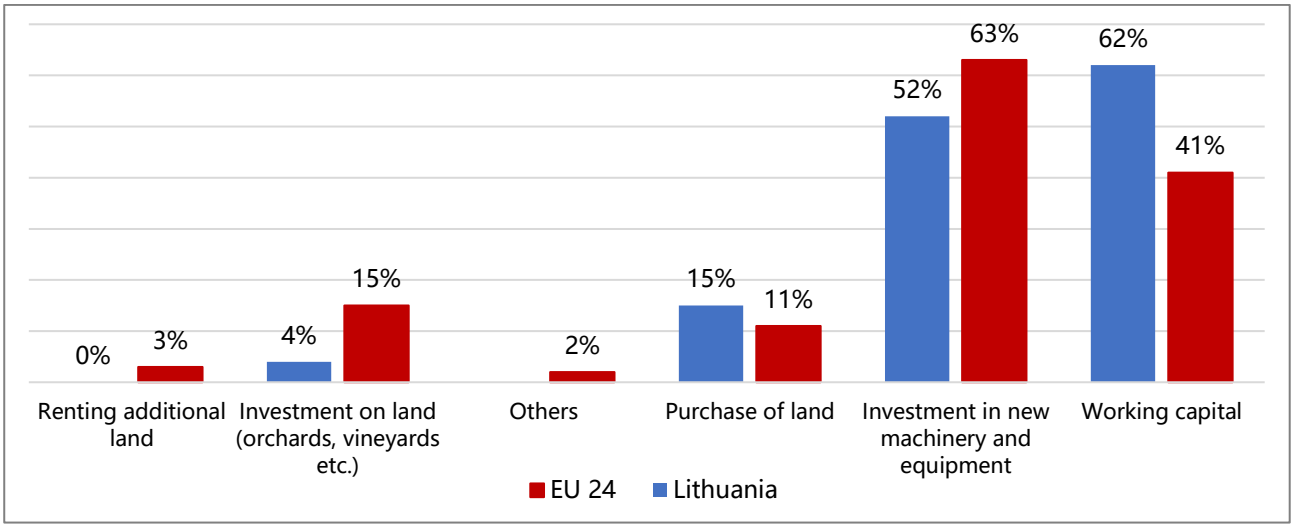
- expansion of agriculture activity (purchase/rental of land);
- investments in modern technologies to increase production efficiency and reduce costs;
- improvement of standards in response to consumer demands, and to access the EU market[21]; and
- working capital needs.

The first three drivers call for medium and long-term finance for equipment, investment in infrastructure and technical facilities. According to the *fi-compass* survey, 52% of the farm loans approved in 2017 in Lithuania were invested in new machinery, equipment or facilities (Figure 5). Even though the needs for these investments are high, the share of farmers demanding loans for this purpose was lower than the EU 24 average. In 2017, 15% of the loans were related to land purchase.

The demand for working capital is particularly high in Lithuania, making the purchases of farm supplies an important driver of demand for finance. For large-sized farms, more than half of the liabilities are short-term loans (Figure 4). In the *fi-compass* survey, farmers indicated that 62% of loan applications had the purpose of financing working capital (Figure 5). These loans are used for the purchase of farm supplies such as seeds, fertilisers and pesticides, which is another important driver of demand for finance in Lithuania. Farmers also require short-term financing for the rearing of livestock[22].The share of loan applications with the purpose of covering working capital needs is significantly higher than the EU 24 average of 41%, and higher than the demand for loans undertaken in order to invest in machinery, equipment and buildings. This reflects the squeezed economic margins of the agriculture sector, leaving farmers with little head room for considering investing in more long-term, tangible assets[23].

20 Note: The FADN survey covered 61 090 Lithuanian farms in 2017, or about 50% of the sector. The other half was too small to be surveyed. Gross investments = the difference between purchased and sold assets.
21 Interviews.
22 Ibid.
23 Interviews with Ministry of Agriculture and farmer's representatives.

Figure 5: Purpose of bank loans in the agriculture sector in 2017



Source: *fi-compass* survey.

There are differences in the level of investments and the economic development of the various agricultural sub-sectors. Investments in the pork sub-sector, for example, are motivated by cost efficiencies and expansion of production. The intensive livestock farms (pigs and poultry), along with cereal and rapeseed farms, have the highest average liabilities, whereas the dairy sector has low liabilities. The total agriculture output of pig and poultry farms only correspond to respectively 5.8% and 5.1% of the total national agriculture output, but their assets and liabilities are the highest, followed by farms specialising in cereals and rapeseed growing (Table 2). In 2017, the average liabilities of intensive livestock farms were EUR 72 856, driven by strong investments by these sectors over the last years. The pig sub-sector is strongly dominated by Danish owners, with large-sized farms, which are the ones to undertake the investments[24]. They invest in improving the efficiency of the production, in order to increase competitiveness on the global market. They also invest in expanding the production.

Also, farms producing cereals and rapeseed have high average liabilities of EUR 50 927 and most of the cereal farms are large-sized farms. The main drivers behind the investments in these sub-sectors is the modernisation of farm activity aimed at improving efficiency, as well as compliance with environmental standards[25].

The dairy sub-sector has a low financial leverage, partly due to a borrowing capacity dented by the recent sectorial crisis. The liability level for the dairy sub-sector is low compared to the rest of the livestock and the cereals sub-sectors. In 2017, the average annual liability of a dairy farmer was EUR 9 645. The dairy sub-sector is characterised by small-sized farms, with farm managers close to, or already past, the retirement age. During the last decade, the number of milking cows has been constantly decreasing, especially amongst small-sized farms, and the milking cows have been partially replaced by suckling cows. As a result, the current demand for finance from this sub-sector is low. Most importantly, the Russian import embargo, which was put in place some years ago and which severely limited the market access for dairy products from the EU, affected the Lithuanian dairy sub-sector severely and put a cap on the investments undertaken by it[26].

24 Interviews with Ministry of Agriculture.
25 Interviews with Ministry of Agriculture and farmers' representatives.
26 Interviews with agricultural representatives.

Table 2: Average annual balance statement by farm type category in Lithuania in 2017, EUR

Sub-sectors	Total assets	Long-term loans	Short-term loans	Total liabilities	Net worth	Liquidity	Solvency %
Cereals, rapeseed	211 346	26 742	24 185	50 927	160 419	2.5	24.1
Field crops	96 783	8 283	7 005	15 288	81 495	4.7	15.8
Horticulture, vegetables	121 550	5 479	5 390	10 869	110 681	7.5	8.9
Dairy	86 463	6 596	3 049	9 645	76 818	8.1	11.2
Grazing animals	85 305	6 381	2 611	8 992	76 313	10.4	10.5
Pigs poultry	298 715	55 542	17 314	72 856	225 859	6.4	24.4
Mixed: field crops, grazing animals	105 568	9 695	4 955	14 650	90 918	6.1	13.9
Mixed: other	46 806	3 779	827	4 606	42 200	21.1	9.8

Note: Liquidity: current assets divided by current liabilities; Solvency: liabilities-to-assets ratio.
Source: FADN, 2017.

Besides modernisation, ensuring compliance with standards has been an important investment driver. Investments are mainly related to expanding the activities and improving the cost efficiency of the production, but they are also undertaken in order to comply with EU regulatory standards on animal welfare, quality, and hygiene.[27]

Direct payments (CAP funds from Pillar I) have an impact on the financing capacity of Lithuanian farmers and support their business survival. On average, EUR 1 billion of CAP support (Pillar I and Pillar II) is earmarked per year. The rural development support for 2014-2020 equals approximately EUR 2.1 billion. The financial support contributes to farmers income levels, maintain their operations, and contributes to their competitiveness. As a result, the support facilitates the undertaking of investments, and also contributes to an increase in demand for loans compared to a situation without support. In addition, payments from Pillar I serve as a guarantee for bank loans. Direct payments provide a basic income, and are therefore an element that banks consider when assessing the lending risk. Farms receiving direct payments are considered less risky and thus more attractive clients with an additional and stable farm income.[28]

EAFRD investment support plays a vital role in stimulating investments in the agriculture sector. In the period 2014-2020, over 30% of the RDP envelope is devoted to support of investments in agriculture holdings. On average, over EUR 70 million[29] per year is granted to farmers seeking to invest in their holdings. According to the Managing authority, EUR 360.6 million were committed to finance investment projects (with an average grant amount of EUR 70 900) supported under sub-measure 4.1 'Support for Investments into agricultural holdings' as of March 2020, of which EUR 291 million were paid out by early March 2020.[30] Interviewees have also confirmed that the investment support is not only of great importance to Lithuanian farmers, but is by far the most popular type of financing under the RDP. The ex-ante assessment for the development of an EAFRD-funded financial instrument [31] also highlighted the important role of the investment support in stimulating investments undertaken in the country.

27 Interview with farm representatives and the Ministry of Agriculture.
28 Interviews with banks and Ministry of Agriculture.
29 Interviews with National paying agency.
30 By end April 2020, the execution rate for Measure 4, including it all sub-measures, is 62.5%.
31 Recommendations on the implementation of financial instruments under the Lithuanian Rural Development Programme 2014-2020 (RDP 2014-2020) based on the ex-ante evaluation of financial instruments, 2014, Final report. Prepared by experts from ESTEP Vilnius and European Social, Legal and Economic Projects for Lithuanian Ministry of Agriculture.

More than one third of the applications for investment support under M4.1 have not been approved for a grant, signalling a potential large unmet demand for financing, although not all these non-supported applications would have been eligible**.** Between 2014 and March 2020, a total of EUR 588 million was requested by 7 545 applicants, of which 5 086 had their applications approved, implying that 2 459 applicants had their requests for investment support turned down. According to interviews with the Ministry of Agriculture, representatives of farmer organisations, and other stakeholders, to a large extent this is due to an insufficient budget, and signals a large unmet demand for financing amongst Lithuanian farmers.

The investment support was mostly for purchase of new agricultural machinery and equipment used for the cultivation of crops such as tractors, grain harvesters, cultivators and other agricultural machinery, as well as milking equipment. It was also granted to construct and renovate buildings. The most supported sub-sector was the dairy sector[32].

Similarly to the investment support for farm modernisation, the demand for grants by young farmers overrun the available budget with around 50% of the young farmers that applied for start-up support had their requests turned down. By March 2020, under sub-measure 6.1 'Business start-up aid for young farmers', 2 754 applications were received, of which 1 399 were not supported[33] (worth EUR 73.6 million), indicating the need for such financing and its importance for the sector. By early March 2020 subsidies of EUR 55.8 million were committed and EUR 46.2 million were paid to young farmers.

Table 3: Lithuania, March 2020, 2014-2020 RDP implementation for sub-measures 4.1 and 6.1

Sub-measures	Amount requested from all applications (EUR million)	Amount provided by the grant calls under the RDP (EUR million)	Amount not satisfied (EUR million)	Number of received applications	Number of non-approved applications	Number of approved applications
4.1 Support for investments in agricultural holdings	588.1	360.6	227.5	7 545	2 459	5 086
6.1 Business start-up aid for young farmers	129.4	55.8	73.6	2 754	1 399	1 355

Source: Ministry of Agriculture, 2019. Preliminary data.

Note: The total amount requested 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.

EAFRD investment support is the catalyst for undertaking investments, and also leads to a higher demand for credit, reflected in the statistics on total outstanding loan volume. Many farmers would invest in the farm only if they are granted investment support. The approval of investment support also serves as a good indicator for banks, making them more prone to approve loan applications from farmers with investment support.

Therefore, investment support plays a pivotal role in farmers' decisions to apply for credit, whereby farmers use bank loans to provide the required down payments needed to co-finance investments. The aid intensity is usually 40% for investment support. If these resources are provided from the farmer's own funds, then he/she

32 Data from national paying agency.

33 Various reasons for rejecting the applications under sub-measures 4.1 and 6.1 were mentioned by the Managing Authority, such applications being incomplete, not responding to the eligibility criteria, not qualifying through the selection, etc. See, also Table 3.

needs to justify these funds with a statement from the tax authorities. Therefore, it is often easier for a farmer to accompany the grant with a loan to provide the down payment, as all documentation is official and there is no need for an additional proof.

As a result, for the years where there have been high pay-outs of investment support measure, 2016 and 2017 in particular, the total outstanding loan volume reported by the central bank of Lithuania, has also showed a significant increase (see section 2.3.2).

In addition to grants, preferential loans and guarantees are provided to farmers from financial instruments financed through national resources (in line with State aid rules). See section 2.3.1.2 for more details.

In 2014, an ex-ante assessment for the use of EAFRD financial instruments was carried out for Lithuania in order to prepare the grounds for the instrument to be implemented. The main findings can be found in the box below. The managing authority has not yet programmed such instrument in its RDP 2014-2020.

Main findings of the ex-ante assessment for the use of inancial instruments in Lithuania for the agriculture and agri-food sectors[34]

- The study states that the financial demand is directly related to the availability of investment support from the RDP.
- A high demand for financing for the modernisation of agriculture, processing of agricultural products, forestry, development of rural economic activities (investment projects) is noted, in combination with the observation that the supply of RDP funds for the new period was decreasing, which encourages the search for more efficient ways of financing these projects (comparing programming period 2007-2013, to the programming period 2014-2020).
- Private credit companies such as banks and credit unions are increasingly trusting agricultural entities, and willing to lend. Access to credit for farmers and agri-food businesses is assessed to be easier than before the 2008/2009 economic crisis, and it is stated that farmers with a history of managing a farm do not face constraints in accessing credit. Before the crisis, access to credit for farms was limited to mortgages, and large-scale financing to medium and large-sized farms.
- Access to finance for small-sized farms, and for small agri-food businesses and start-ups is more constrained than for larger, more established farms and firms.
- A high unmet demand for funding for investment projects in the agriculture sector was identified. Between 2015 and 2020, the investment gap was estimated to be in the range of EUR 87 million to EUR 145 million (difference between financing for supply and demand for finance from agriculture, forestry, food production and other rural businesses).
- The use of financial instruments to support the following four RDP sub-measures is recommended: 4.1 ‘Support for investments in agricultural holdings’; 4.2 ‘Support for investment in the processing, marketing and / or development of agricultural products’; 6.4.1 ‘Support for investments for the creation and development of economic activities’; 8.6 ‘Investments in forestry technologies and in processing and marketing of forest products’. The financial instruments would continue the practice of combining soft loans and grants (subsidies) with guarantee and guarantee fee reimbursements, by widening the list of support measures and final beneficiaries of financial instruments.
- The financial instruments would continue the practice of combining soft loans and grants (subsidies) with guarantee and guarantee fee reimbursements, by widening the list of support measures and final beneficiaries of financial instruments. This would be a gradual move towards greater relative use of financial instruments in the RDP framework and would therefore likely ensure a smooth implementation of financial instruments.

34 ESTEP Vilnius and European Social, Legal and Economic Projects, 2014, ‘Recommendations on the implementation of financial instruments under the Lithuanian Rural Development Programme 2014-2020 (RDP 2014-2020) based on the ex-ante evaluation of financial instruments’, Final report.

National support is another trigger for modernising the Lithuanian agriculture sector and is mainly focused on biofuel production and increasing crop insurance coverage. The availability of national aid is contributing to increasing the demand for finance by ensuring that farmers stay in business[35] and by steering farmers in a certain direction, helping to modernise Lithuanian agriculture. In 2017, the total national aid amounted to EUR 28.8 million. The largest share of state aid (EUR 15.1 million), was directed towards the development of the biofuel production. Based on interviews, the conversion of farmers from production of sugar beets to biofuels (cereals or rape seed growing) can be one explaining factor for the investments undertaken into machinery.

For the same year, EUR 2.9 million (a combination of national and RDP financing[36]) were used for the compensation of insurance premiums[37]. The use of crop insurance in Lithuania is not widespread today, only one insurance company offers crop insurance. Availability and use of insurance products is one of the key elements for banks when deciding about providing credit to the farm operations. That is why using existing products and developing new insurance products, is a priority for the Lithuanian agriculture sector.

35 In addition, in 2017, special compensation payments were granted after the sectorial crisis. During 2015-2016, milk producers received special support to cope with losses due to Russia's import embargo. In 2016, EUR 42.1 million was disbursed, whilst EUR 52.47 million in 2015. This special support ended in 2017 with a total payment of EUR 22.0 million. Another special support was disbursed for the pork sub-sector, in order to compensate losses arising from the African swine fever. In 2017, Lithuanian farmers were compensated at a total rate of EUR 522 800, of which 50% stemmed from national funding, compared with EUR 963 200 in the previous year. Another particular event that affected farmers in Lithuania in year 2017 was heavy, long-term rain. A total of EUR 18 million were allocated for farmers who suffered from rainfall and flooding (crops insurance is not often used in Lithuania).

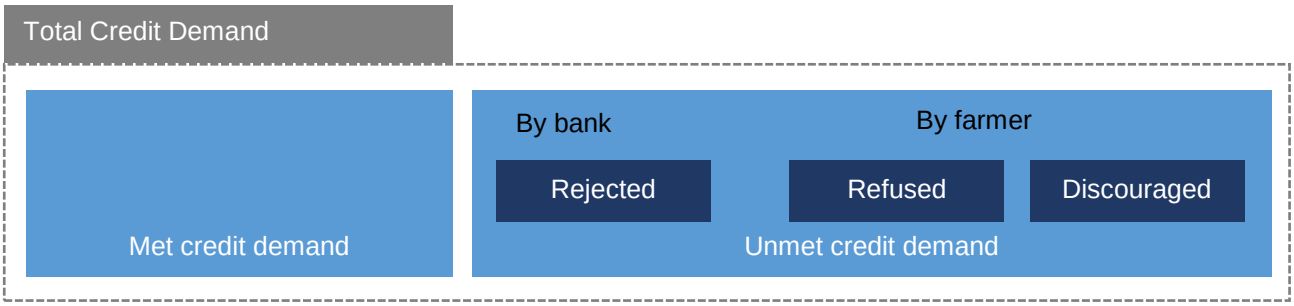
36 The RDP financing is provided under M17 Risk Management, sub-measure 17.1. 'Insurance of crops, animals and plants'.

37 In addition to biofuel production and partial refund of insurance premiums for farmers, support is also granted for livestock breeding; acquisition of animals; animal by-products handling; safeguarding of certified national heritage products; production of qualitative agricultural and food products; promotion of popularisation and sales; agricultural advisory services; performance of applied and international research; and, know-how transfer and information activities, to mention a few activities.

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 institutions, offers of credit refused by farmers, alongside cases when farmers are discouraged from applying for credit due to an expectations of rejection or refusal (Figure 6).

Figure 6: Schematic overview of the demand side of agriculture sector



Source: Ecorys, 2019.

Based on the results of the *fi-compass* survey, the unmet demand for the agriculture sector in Lithuania is estimated at EUR 3.0 billion.

As of 2014, the financial market for agriculture has grown significantly. Between 2014 and 2018, the outstanding loan volume to the sector expanded by 50%[38]. In 2017**,** the total outstanding loan volume to the sector amounted to EUR 317 million[39] (see section 2.3.2 for more details). Even so, the appetite for additional external financing was substantial. According to the *fi-compass* survey, 45.4% of Lithuanian farmers applied for finance in 2017, which is significantly higher than the EU 24 average of 29.6%. However, this includes a significant share of farmers requesting finance from other private individuals.

According to the *fi-compass* survey results, approximately 15% of the respondents asked friends and family for financing during year 2017. This would amount to a demand for private finance in the sector between EUR 57.8 million and EUR 115.7 million[40]. According to interviewees from the agriculture sector and from the Ministry of Agriculture, it is common to turn to friends and family for help with financing. This does not require any paperwork and is based on a trusting relationship that many farmers do not have with banks, whereby it may be an easier way to obtain money for some segments of the agriculture sector, such as managers of small-sized farms, who usually have less financial education.

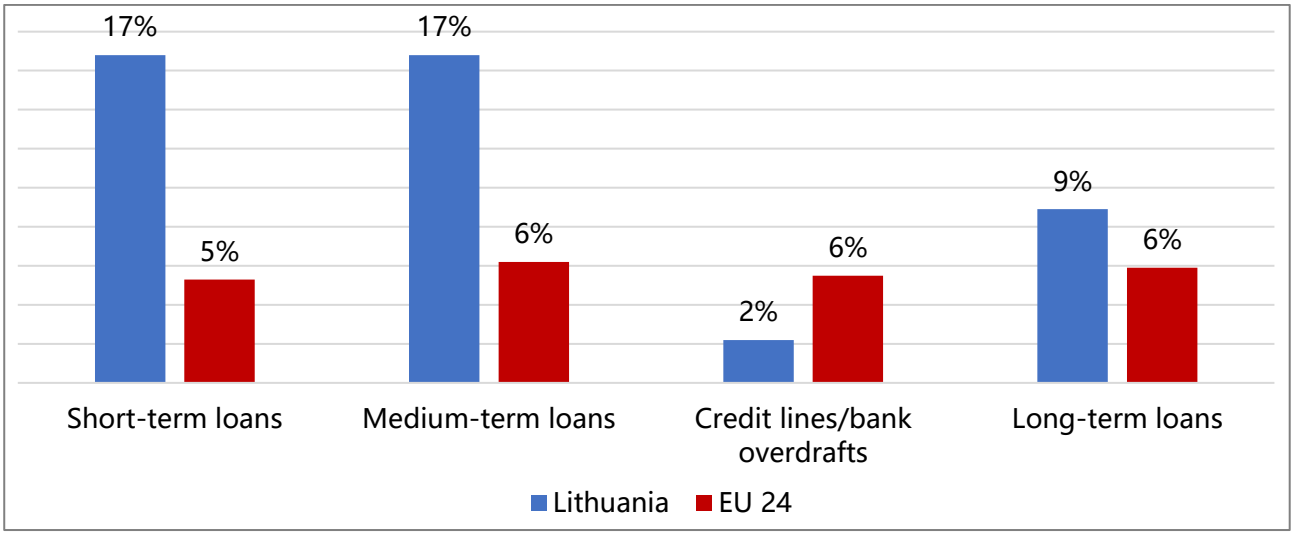
Short-term loans below 18 months duration **and medium-term loans** from 18 months to five years **were the most popular products, with 16.8% of Lithuanian farmers applying for each of them**. This is more than three times higher than the EU 24 average. The Lithuanian farmers demonstrated the lowest interest for credit lines and bank overdrafts, for which the application rate was the lowest amongst available products at 2.2%. The long-term loans longer than five years were applied for by 8.9% (Figure 7). As discussed under section 2.2.1, working capital (short-term) loans are highly utilised in Lithuania, as many farmers are taking up loans in order to pay for their daily business activities rather than investing in long-term assets, many have no head room for considering investing in more long-term tangible assets.

38 Bank of Lithuania, 2019, Loans to Non-financial Corporations by Economic Activity.

39 This include the total amount of credit held by the agriculture sector by banks in Lithuania, i.e. loans disbursed in year 2017, as well as loans disbursed previous years and not yet repaid.

40 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.

Figure 7: Farms applying for finance in 2017, by financing product

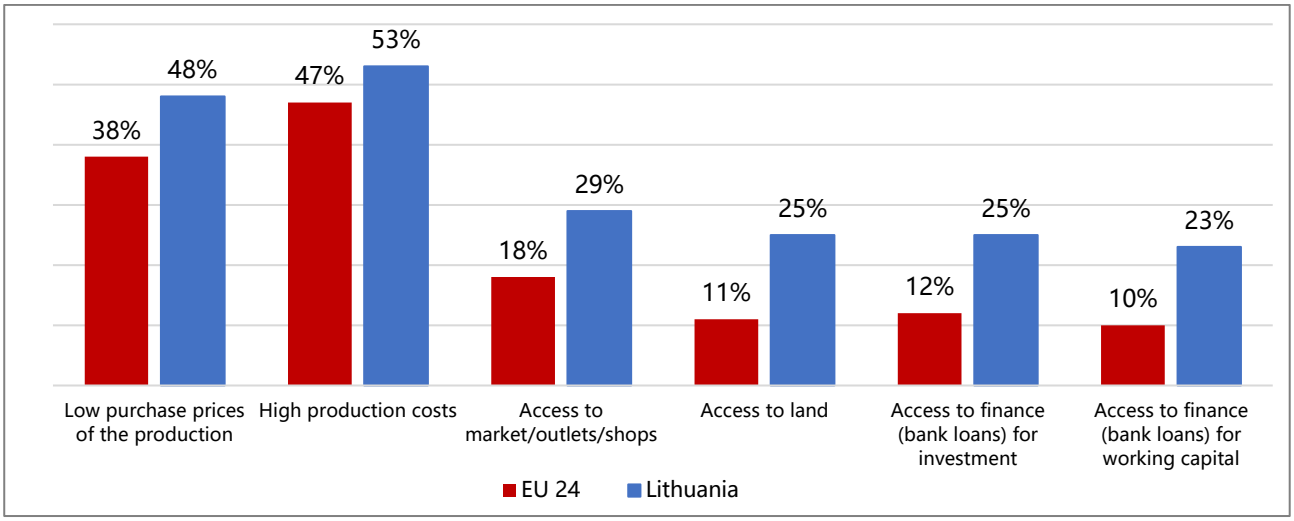


Source*: fi-compass* survey.

Suppliers provide working capital of a significant magnitude. Agriculture producers in Lithuania have different possibilities of obtaining financing for working capital purposes: not only from banks, but also from credit unions (see section 2.3.1.1), fertiliser suppliers or machinery providers. According to interviewees, some large agri-tech companies, who are also operating their own agricultural production business, provided numerous services to farmers, such as advisory services, provision of seeds and fertilisers. These companies accept alternative payment forms, such as payment in kind (e.g. cereals, etc.) or delayed repayment, with usually an interest rate of approximately 1% per month. These credit lines are difficult to measure or quantify, as they do not appear in official statistics, however they are generally perceived as methods to decrease the farmers' need for bank financing for working capital. However, high debt levels with suppliers do present, sometimes, difficulties for farmers trying to access loans from banks.

Access to finance is considered a major obstacle for one quarter of the Lithuanian farmers. According to the *fi-compass* survey, 25% of the respondents' considered access to loans for investments, and 23% considered access to loans for working capital, as problematic. This is significantly higher than for other EU 24 countries and signals that Lithuanian farmers experience rather strong difficulties in accessing finance. However, the biggest issue outlined by the Lithuanian farmers was the costs of production, followed by low selling prices, both of which are an indication of the squeezed profits experienced by the sector, as discussed in section 2.2.1. Additionally, almost one third of Lithuanian farmers considered access to market outlets to be problematic, whilst 25% found access to land an issue. Overall, and for all the factors analysed, Lithuanian farmers found them more problematic than what the average situation in the EU 24 is (Figure 8).

Figure 8: Difficulties experienced by farmers in 2017

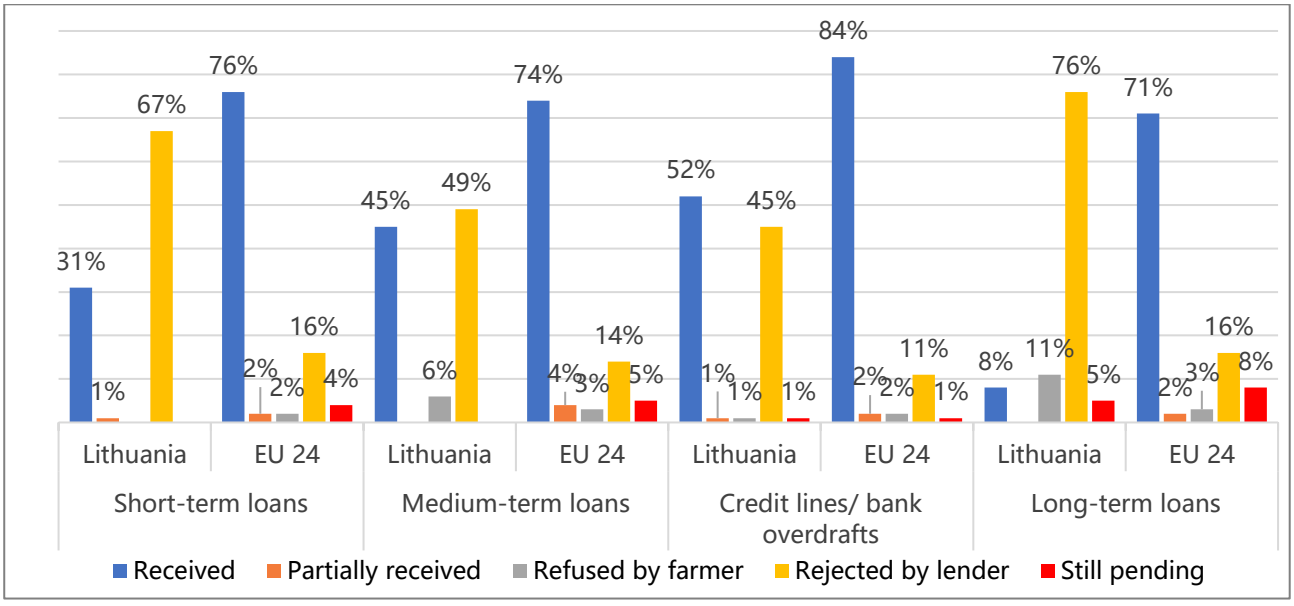


Source: *fi-compass* survey.

The rejection rate for farmers' loan applications is very high in Lithuania, pertaining to a large extent to small-sized farms. According to the *fi-compass* survey, in 2017, the rejection rates for loan applications were very high (Figure 9). Only 8% of the applications for long-term loans were accepted, whereas 76% of the loan applications were rejected. Approximately 11% of the loan offers made by banks were refused by the farmer because the costs and interest rates were too high; a share which is also rather significant when compared to the rest of the EU 24. For medium-term loans, 49% were rejected, 45% of the applications were approved, and 6% farmers refused the loan offer. For short-term loans, 67% of the applications were rejected, the highest number across the various loan products. The majority of the rejections relate to small-sized farms.

These results are striking and make Lithuania stand out in the European context. However, stakeholders interviewed are not surprised by the results, confirming that a very common complaint from farmers, particularly small-sized farms, is the difficulty in accessing finance from banks.

Figure 9: Results from applications for finance in the agriculture sector in 2017

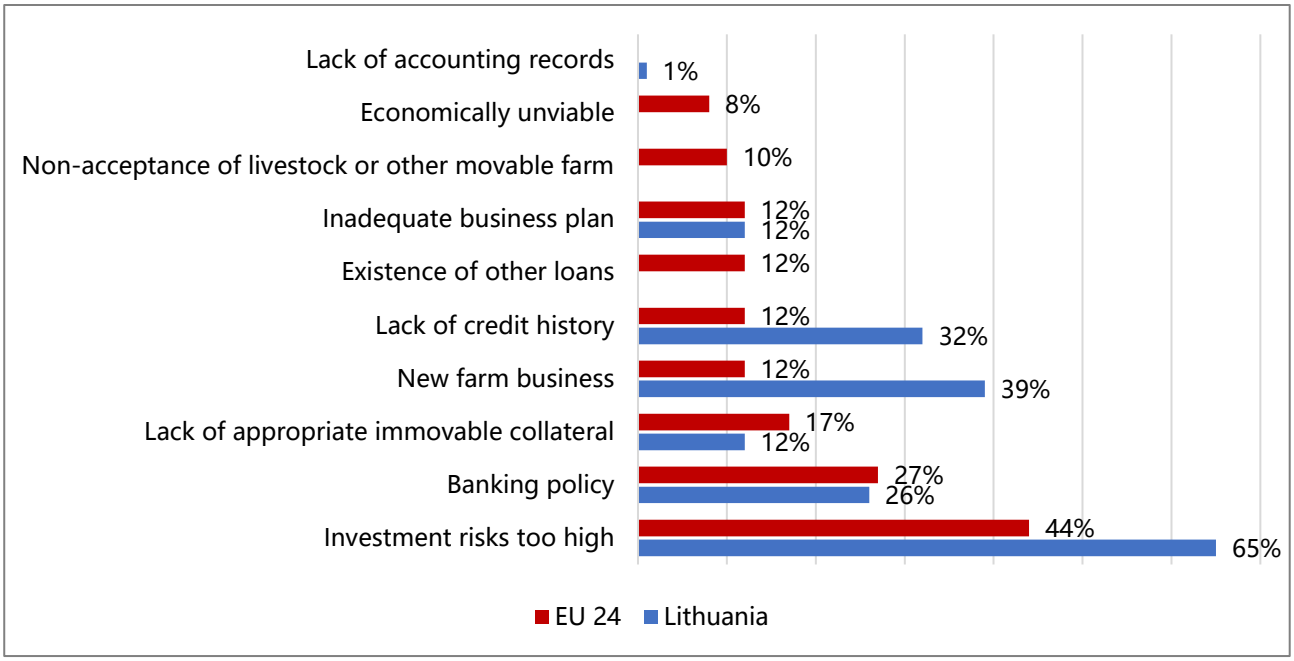


Source: *fi-compass* survey.

High investment risk is the main reason for financial institutions to reject the loan applications from agriculture businesses, according to the *fi-compass* survey:

- 65% of farmers replied that the banks rejected their application due to a too high investment risk;
- 39% answered that the new farm business was considered too risky; and
- 32% mentioned the lack of credit history as the reason for rejection, signalling important difficulties for young farmers and new entrants more in general (Figure 10).

Figure 10: Reasons for applications' rejection in the agriculture sector in 2017



Source: fi-compass survey.

Interviews with stakeholders confirm the findings of the *fi-compass* survey, although the risk element perceived by banks stems from the characteristics of the applicant rather than from the investment project. Several stakeholders, representing both the agriculture sector and the Government, agree on the fact that the main issue for the banks is that they consider it too risky to finance the agriculture sector, particularly small-sized farms.

Other reasons for rejections highlighted during the interviews, although linked to the level of risk pertained by lending to the sector, include:

- The limited understanding and ability of farmers to manage financial cash flows, especially small-sized farms.
- **Poor credit history and reputation, or existing debt to banks and suppliers**. Very often banks reject applications because of the customer's high financial obligation level, such as debts to suppliers.
- **Weak business plans and/or lack of business data and accountancy**, especially small-sized farms.
- **Lack of collateral**, especially for small-sized farms and young farmers.

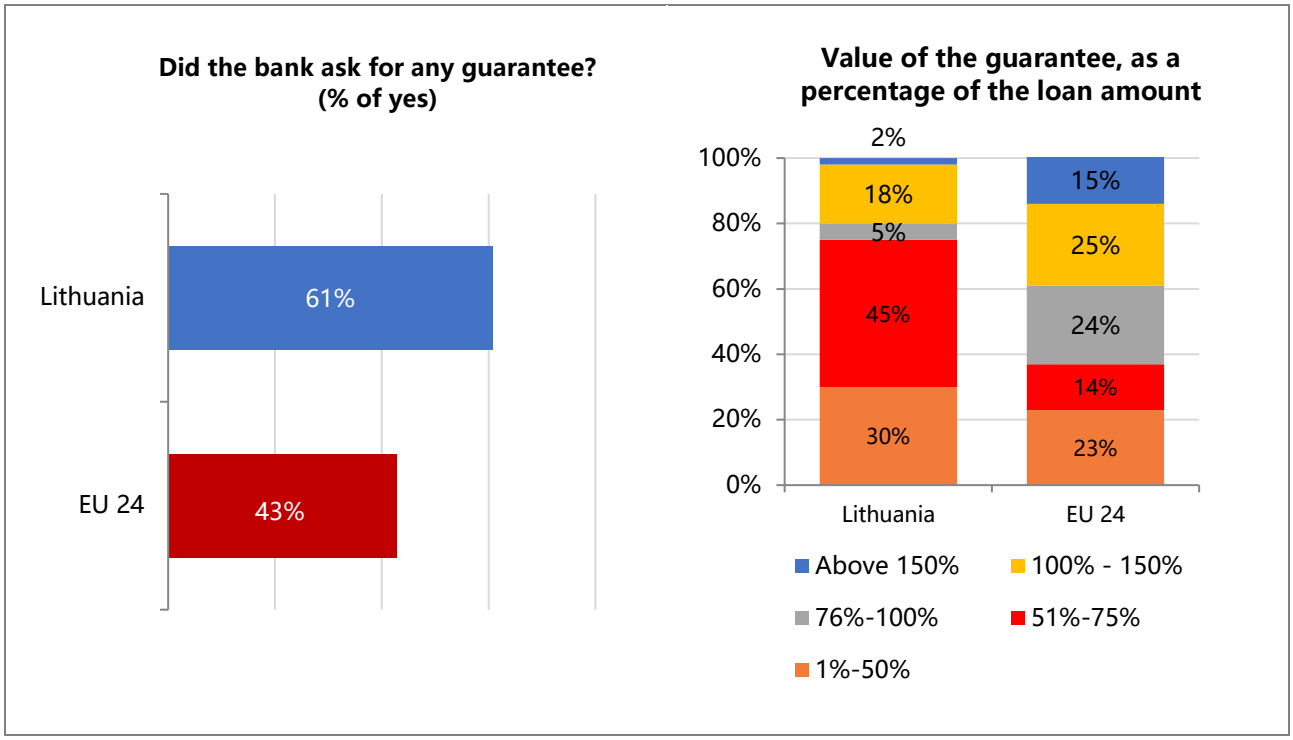
The unfavourable conditions for small loans signal the limited interest by banks in working with small-sized farms and is likely to be an important reason for the refused loan offers. The relatively high interest rates (>8%) for bank loans below EUR 50 000 are likely to lead many farmers to turn down the loan offers made to them[41]. According to interviewees representing the agriculture sector, most banks in Lithuania are not interested in working with small credit amounts. The reason is the high administrative expenses required if

41 Information provided through interviews with farm organisations, 2019.

something goes wrong and the farm goes bankrupt. Hence, the conditions for a small loan for an agriculture client are usually comparable to short-term consumption loans, such as the conditions applying when a client borrows to buy a consumption good (fridge, TV etc.). For these loans, the interest rate is more than 10% plus administration costs. In many cases, it is too expensive for a farmer to accept such conditions. Moreover, the paperwork and procedures for the application are also complicated. Credit unions are more flexible for these types of loans, and that is the reason why the majority of small-sized farms prefer this type of financial provider (see section 2.3.1.1).

According to the *fi-compass* survey results, **banks requested nearly 61% of the loan applicants to provide a guarantee,** (Figure 11). Approximately 75% of Lithuanian farmers responded that the value for the guarantee they were asked to ensure is up to 75% of the loan amount. Hence, although a higher share of Lithuanian farmers is asked to provide a guarantee, on average, the value of the guarantee provided in relation to the loan amount requested, is lower than for the EU 24. This is likely to be due to the shorter maturities of the loans generally requested in Lithuania, as shorter maturities usually require less collateral. According to interviewees, agricultural land, farm buildings, farm animals, tractors and other machinery can be used as collateral.

Figure 11: Information related to guarantees requested by farmers, 2017



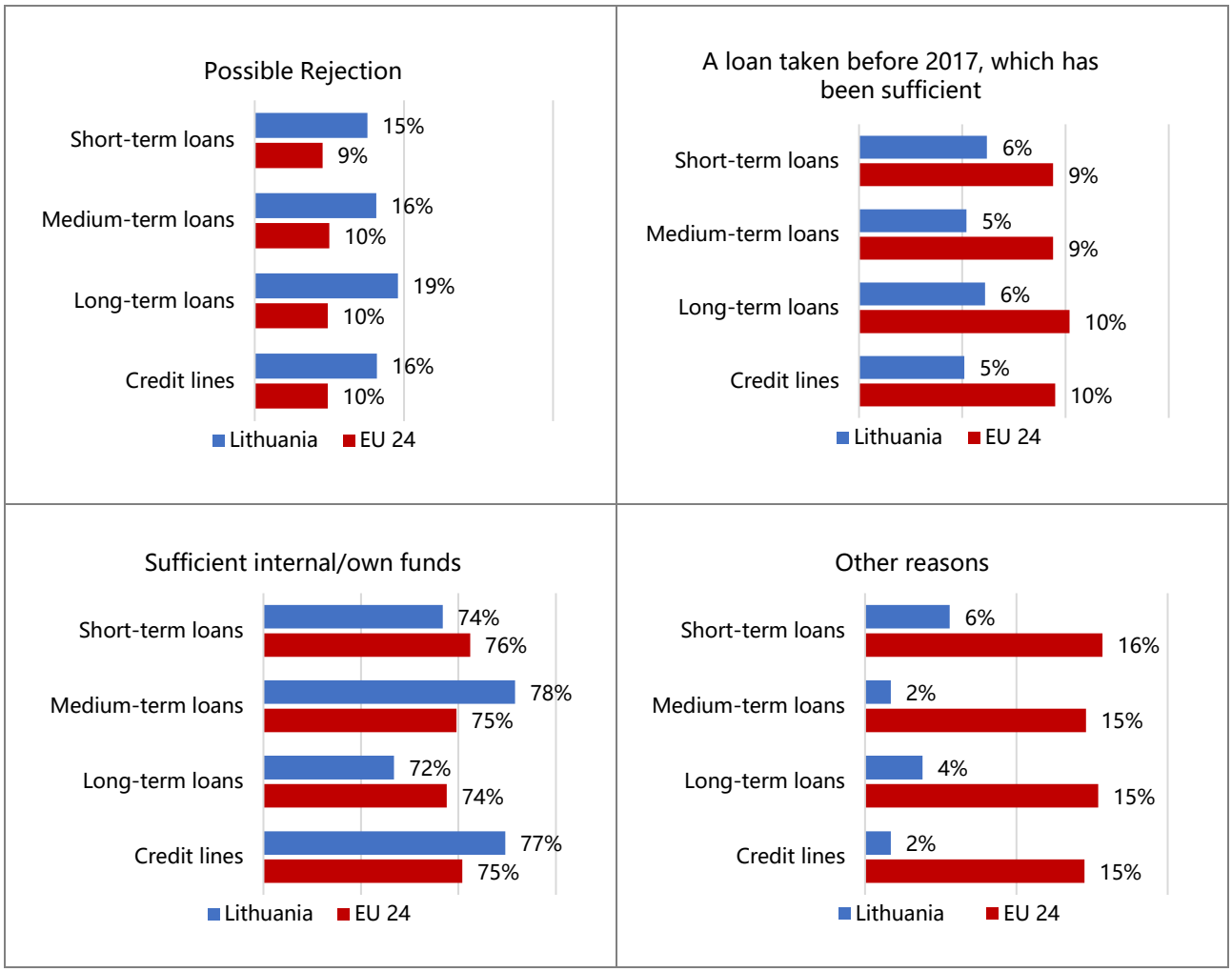
Source: fi-compass survey.

Lack of accurate official data on actual business performance may also be a hindering factor in accessing finance. In Lithuania, the share of farms that are a formal legal company is very low. Most of the time, farmers are treated as individual persons who have an agricultural production. Hence, their income and costs from agricultural production, as well as their agricultural property, are included in the personal income and expense declarations. This makes it more challenging for financial institutions to assess business performance. Furthermore, it creates an incentive for farmers to misreport their farm's financial situation in official financial documents compared to the real business situation, in order to avoid taxes. In order to improve

the situation, a sophisticated accounting system was introduced in 2017, the results of which are still not evident[42].

The share of farmers stating that they have been discouraged from applying for finance is twice as high as for the EU 24. According to the *fi-compass* survey, the main reason for not applying for a loan in 2017 was sufficient own resources (Figure 12). A high share of respondents stated that they did not apply for a loan due to the fear of being rejected. Whilst responses vary depending on the maturity of the financial product (between 15.1-19.2%), this share is almost twice that of the EU 24 average. The high discouraged rates are recorded despite the high level of Lithuanian farmers applying for finance, approximately 45%. In 2017, the total share of the farmers that was interested in obtaining additional finance was approximately 60-65%**.**

Figure 12: Reasons for not applying for loans in the agriculture sector in 2017



Source: fi-compass survey.

Limited financial knowledge is a major reason why farmers are discouraged from applying for finance[43]. The lack of financial literacy amongst the agriculture sector is a major reason why farmers' loan applications are rejected, but it is also an explaining factor as to why farmers are discouraged from applying for loans due to the fear of being rejected. According to interviews, many farmers simply lack knowledge on how to prepare business plans and other necessary documents, or they lack information on what products

42 In 2017, the Bank of Lithuania, the Ministry of Finance, the Ministry of Education and the State Social Insurance Fund Board launched a joint public financial literacy programme, expected to run until 2021. The programme will also target the agriculture sector.

43 Interviews.

would be available and respectively suitable for them to apply for. Few have some form of professional education.

Despite the government's efforts to strengthen capacity and advice for the Lithuanian farmers, the majority of the agriculture sector is still lacking know-how on agricultural finance. According to interviews, farm holders of small-sized farms often do not undertake informal discussions before officially applying for a loan. Large-sized farms hire consultants to take care of their accountancy, and to prepare a business plan and other documents for credit institutions. However, small-sized farms do not have the resources to hire such services.

The existing agricultural advisory service (partly financed through the EAFRD) provides support on numerous issues; even tailor-made consultancy is possible to obtain. These services include financial training, help with preparing applications for RDP measures, and support on how to approach banks. However, some interviewees' were of the opinion that small-sized farms benefit less from these services, as it is not easy to incentivise small farms to participate.

The unfavourable loan conditions, in combination with the difficulty to manage unforeseeable risks, hinders small-sized farms' investments. Small farms have, in general, less margins for dealing with unforeseeable risks than large farms, and together with the unfavourable loan conditions for small loans this is likely to be a factor discouraging farmers from applying for loans. Additionally, small-sized farms may be discouraged from applying because they are afraid of taking on financial commitments whilst not being sure about their abilities to repay the loan. Weather conditions are a key determinant of the annual financial need of the agriculture sector, both small and large farms. This additional layer of risk creates difficulties for farmers to plan and manage their incomes and costs, and farmers may therefore be discouraged from taking the bank finance to support investments[44].

The lack of crop insurance may lead banks to reject loan applications. The use of crop insurance in Lithuania is not widespread today as only one insurance company offers crop insurance, which is available to the cereals sub-sector. Uptake of an insurance product is an important element for banks, when deciding about providing a credit for the farm operations. Even if cereal farmers receive direct payments, which serve as a basic guarantee for banks on the client's ability to repay the loan, thereby facilitating cereal farmers' access to credit, the lack of uptake of crop insurances signals a riskier client to the banks, thereby diminishing their interest in lending to him/her.

According to the *fi-compass* farm survey, approximately 17% of the rejections and 30% of the discouraged applications are from young farmers. According to interviews with banks' representatives, banks are not willing to finance new entrants if their competence and/or experience is limited, hence without a proof of previous management of a farm. Furthermore, young farmers and new entrants usually do not have access to a collateral that is suitable for the bank. The financing of young farmers and new entrants is only possible when an external source such as an additional person/farmer/company steps in to provide a guarantee. Also, young farmers sometimes have new farming ideas with potentially high returns on investments, but as they are outside the scope of traditional farming, banks are hesitant to lend them money, as it is associated with high risks due to their lack of expertise.

44 Interviews.

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 Lithuania 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 Lithuanian agriculture sector

- The banking sector in Lithuania is dominated by three Scandinavian owned banks, who together control approximately 84% of the market. Banks operating in Lithuania have been profitable and remained resilient to external shocks.
- The market currently offers financial products that are specifically targeted at the agriculture sector such as investment loans, leasing of agricultural machinery and equipment, direct payment loans and interest-rate subsidies, as well as financing of working capital, such as credit lines and working capital loans.
- The credit provided to the agriculture sector is growing. In 2018, the total outstanding loan volume to agriculture, forestry and fisheries was approximately EUR 300 million, which is approximately 3.5% of all outstanding loans. The increase compared to year 2012 was estimated at 73%.
- For loans to the agriculture sector, the interest rates are on average about 4-6% for investment loans, higher than for other economic sectors. For short-term loans, interest rates are often above 10%.
- The Agricultural Credit Guarantee Fund provides guarantees to credit institutions and leasing companies, implementing financial instruments to the agriculture sector. However, the outreach of the financial instruments has been limited.
- All interviewed stakeholders agreed that the main issue in order to make the preferential loans available to more farmers are not related to the functioning of the existing instruments, but to the lack of resources available for the instrument.
- In addition to the loans from financial intermediaries, agriculture entities use commodity credits. Hence, capital goods such as seeds, chemicals, and spare parts of equipment are settled after the sale of the harvest, and deducted from the payment to the supplier.
- Credit to the agriculture sector is available from banks and credit unions. All banks are working with the sector, but the bank most specialised in agriculture is Luminor.
- The banks' appetite for working with small-sized farms is limited, reflected in unfavourable loan conditions for small loans.
- Credit unions are important players. They show more flexibility than banks (i.e. no requirement of collateral), although their product offer is generally more expensive than products offered by commercial banks. They provide foremost small loans (below EUR 50 000) and are often contracted by small-sized farm managers.
- The constraints identified to the supply of finance in Lithuania include: (i) the high concentration of supply, which is likely to lead to high selectivity of the clients, and (ii) higher interest rates applied to small loans, and a demonstrated reluctance on the side of the banks to work with small-sized enterprises.

2.3.1. Description of finance environment and funding availability

2.3.1.1. Finance Providers

Three Scandinavian owned banks control more than 80% of the bank market. In 2019, six banks and seven foreign bank branches were active in Lithuania. However, the Lithuanian banking sector is dominated by the subsidiaries of large Scandinavian banks, of which the three largest banks – SEB, Swedbank and Luminor, are fully owned by their parent legal structures in Sweden and Norway. The sector shows a large degree of concentration as these three banks control 84% of the market (Table 4). The other three banks - AB Šiaulių bankas, UAB Medicinos bankas and AB 'Citadele' bankas, are considerably smaller and are owned by groups of local and foreign investors. In addition to the banks, 64 credit unions operate in Lithuania[45], with assets amounting to EUR 707.1 million, or 2.5% of total assets for the banking sector in April 2019. The Lithuanian Government has no ownership stake in the banking sector.

Table 4: Main banks in Lithuania in 2019

Bank Name	Asset share within banking sector (%)
Swedbank, AB	32.7
AB SEB bankas	27.5
Luminor	23.7
AB Šiaulių bankas	7.8
AB Citadele bankas	1.1
Foreign Bank Branches	5.5

Source: Bank of Lithuania, 2019. Note: The table covers the main banks, whereby the shares do not add up to 100%. Market shares by banks with small market shares are not reflected.

Concentration is higher in the agricultural finance sector, with Luminor being regarded as the most active bank in agricultural lending. Historically, a major part of the agriculture sector were customers of Luminor[46]. Luminor presently maintains this leadership despite changes in the name and ownership. The other large banks, such as SEB, Swedbank followed by AB Šiaulių bankas and UAB Medicinos bankas also work with the agriculture sector, although precise market shares have not been obtained. Luminor, as well as Swedbank and SEB, have staff with agriculture expertise who only work with the farming sector.

2.3.1.2. Financial Products

Various products targeting the agriculture sector are available on the market. According to interviews, as well as publicly available information from banks and credit unions[47], the market currently offers products that are specifically targeted at the agriculture and the agri-food sectors, such as investment loans, leasing of machinery and equipment, and specifically for the agriculture sector, loans that advance the direct payments. Products to finance working capital, such as credit lines and working capital loans, are also available.

Table 5 below provides an overview of the products available and the corresponding conditions. Information on interest rates and loan size is based on interviews and assumptions. Interest rate information is not publicly available. The loan size is very much related with the economic size of the applicant. The table does not include loan administration costs, which for banks and credit unions could be 0.5-1% of the amount, or higher according to interviews. Fast credit companies and lending platforms are included in the table, although not discussed amongst the main providers in the previous section. This is a booming business in Lithuania and theoretically farmers could use their financing, although this is not believed to be the case to a great extent.

45 As of April 1, 2019.

46 Under the Soviet Union, this bank was called Žemės ūkio bankas (Agricultural bank) and maintained this name for a while after Lithuania regained independence.

47 At the beginning of 2019.

Some of the lending platforms are not asking for collateral, but they are charging high interest rates and high administration costs (ranging between 0.15 and 0.6 % per month).

Table 5: Overview of financial products and conditions available to the Lithuanian agriculture sector

Type of Product	Purpose	Providers	Maturity	Interest Rate	Average Loan size EUR
Investment loans	Capital investments	Banks	Medium and long-term loans	3-4%	EUR 50 000-200 000
		Credit unions	Medium and long-term loans	3-4%	EUR 30 000-50 000
		Fast credit companies, lending platforms	Mostly medium and long-term	6-18%	EUR 10 000-50 000
Working capital loans	Working capital	Banks	Short-term loans	+10%[48]	From EUR 2 000 up to 50% monthly sales volume
		Credit Unions	Short-term loans	+8%	EUR 10-20 000
		Input suppliers	Short-term loans	Usually 1% per month	EUR 10-20 000
		Fast credit companies, lending platforms	Short-term loans	6-18 %	EUR 2-5 000
Interest Rate-Subsidised Loans	Working capital and capital investment	Agricultural Credit Guarantee Fund through commercial banks and credit unions	Short, medium and long term.	Compensates 80% of interest rate	EUR 120 000 family farms 250 000 Agricultural companies (2018)

Source: Interviews with bank representatives, 2019.

Medium-term investment loans for capital formation on non-agriculture assets such as machinery, equipment, buildings, and structural facilities account for an important part of the loan volume[49]. This type of loan is most commonly applied in conjunction with investment support under the RDP. These investment loans are generally offered mostly with a medium-term maturity, i.e. two-three years. Investment loans with long-term maturity are less commonly offered. The interest rate varies from bank to bank, depending on the size of the loan and the maturity, but is currently between 4-6%[50].

To support day-to-day operations, there is a long tradition of providing loans in the form of a credit line for working capital. These are offered with short-term maturity on a 12, 15 or 18 months duration. This overdraft facility enables the farmer to overcome seasonal or cyclical challenges, common to agriculture. Similar to a regular checking account, the credit line for working capital enables daily withdrawals and deposits. The interest rate for this type of financial product is significantly higher compared to other types of loans.

The uptake of different products varies throughout the year. Short-term loans of working capital and credit lines have a higher uptake in the spring. Medium and long-term loans investment loans, generally used for

48 When banks are not interested in providing relatively small loans (below EUR 10 000), they instead offer consumption loan for which interest rate could be more than 10%, plus additional administration costs.

49 Interviews.

50 Interview with representatives of banks.

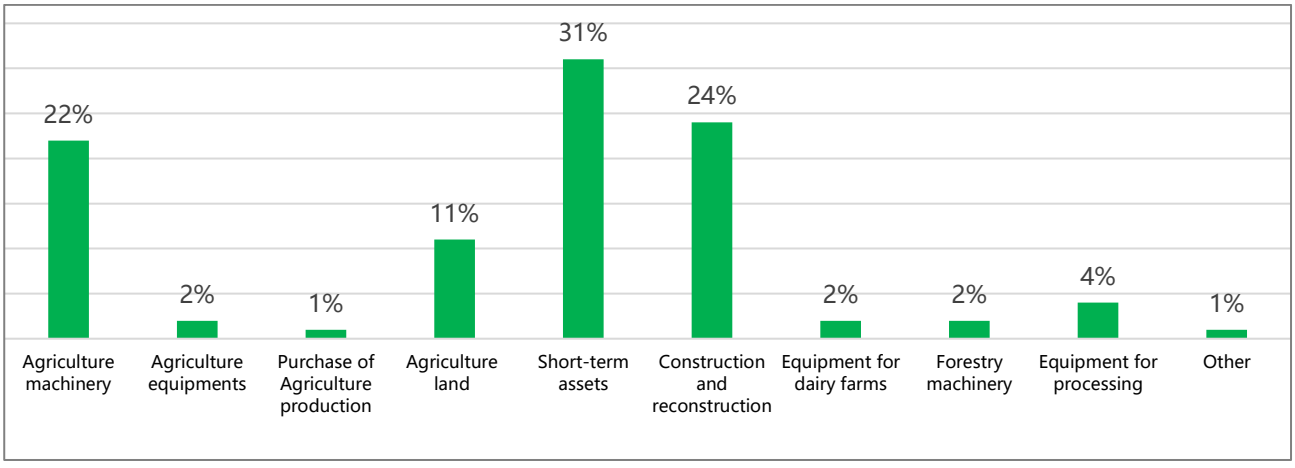
purchasing of agricultural vehicles or land, are used throughout the full year, but with a stronger demand in the autumn/winter.

In Lithuania, smaller loans are provided by credit unions and their funding to the sector is constantly increasing. Credit unions generally show more flexibility towards the clients and adapt to their needs. Since credit unions already have a long history of cooperation with the agriculture sector, they are very familiar with the specifics of the sector, which reduces the lending risk and the required interest rate[51]. For the same reasons, they do not always require a collateral. However, due to their small amount and the higher impact of administrative cost, the loans provided by the credit unions are more expensive (high interest rates) than larger loans from banks with longer maturity. According to interviews, on average, a loan granted by a credit union to a farmer amounts to approximately EUR 20 000. The interest rate for loans below EUR 50 000 are claimed to be in the range of 8-12%. Therefore, larger agriculture producers/companies are often obtaining finance from commercial banks, whereas credit unions provide more loans to smaller farms.

In addition to traditional loans from financial intermediaries, agriculture entities often use commodity credits from suppliers. Hence, capital goods, such as seeds, chemicals, spare parts for equipment etc., are settled after the sale of the harvest, and deducted from the payment to the supplier. This financing method is one of the main sources of external financing for farmers and small businesses[52]. Although accurate data is not available, it is assumed that these credits represent almost 50% of the financial liabilities of farms.

Over the past 20 years, the ACGF has provided EUR 410 million in guarantees. In rural areas, this has enabled the implementation of investment projects for EUR 900 million[53]. In 2018, the ACGF provided guarantees to a value of EUR 42.7 million, an increase compared to 2014 when the value was EUR 12.4 million. Between 2014 and 2018, the total value of guarantees provided was EUR 200 million, and the peak was noted for the year 2016 at EUR 77.8 million[54]. The ACGF is specialised in agriculture, agri-food, and businesses in rural areas and enables their access to finance and business development. Approximately 76% of the total guarantees were provided to farmers. The rest of the guarantees went to rural businesses.

Figure 13: Purpose of guarantees provided by the Agricultural Credit Guarantee Fund in Lithuania, 2014-2018



Source: Agricultural Credit Guarantee Fund, 2019.

51 The better the sector is known, the more accurately the risk of a particular project can be assessed. Hence, the possibility of non-performing loans decreases, which reduces the interest rate.

52 Ligita Gaspareniene, Rita Remeikiene, Alius Sadeckas & Viktoras Chadyšas, 2019, A Preference for Corporate Borrowing in Alternative Markets over Borrowing from Banks under the Impact of Monetary Policies: a Lithuanian Case, Economic Research-Ekonomska Istraživanja, 32:1, 1903-1921, DOI: 10.1080/1331677X.2019.1638288.

53 Data from Agricultural Credit Guarantee Fund.

54 Data from Agricultural Credit Guarantee Fund.

The ACGF runs several different financial instruments, highest uptake of preferential loans is for short-term loans[55]. The ACGF is managing financial measures for the agriculture sector, which in the current programming period 2014-2020 are fully financed by national resources. For other sectors, including the agri-food sector, financial instruments are managed by the financial entity, Investment and Business Guarantees (INVEGA). In addition, the Public Investment Development Agency (VIPA) implements and administers financial instruments for public sector investments for improvement and development of public infrastructure, public services modernisation, and projects of public interest.

The ACGF manages and offers five products, three of which are typical financial instruments (1 to 3):

1) Issues individual guarantees to financial institutions and leasing companies for credits (leasing) granted to entities engaged in agriculture, food, forestry, rural development and fisheries;
2) Issues portfolio guarantees to credit institutions for loans for working capital and/or the acquisition of biological assets. Portfolio guarantees can be granted for loans provided for small-sized enterprises active in primary production and also for cooperatives active in livestock, milk, berries, fruit and / or vegetable sub-sectors;
3) Offers loans for agriculture machinery and equipment. Loans are provided for agriculture entities engaged in primary production;
4) Administers support for guarantee fee subsidy;
5) Administers support for loan interest subsidy.

The majority of the preferential loans taken up by Lithuanian farmers in terms of number of beneficiaries is formed by short-term loans, mostly used for covering operational costs. See Table 6 for an overview of the existing instruments managed by ACGF. Annex A.7 Information on specific financial instrumentsprovides information on some specific financial instruments.

55 All information related to financial instruments is provided from the Lithuanian Ministry of Agriculture, unless otherwise indicated.

Table 6: Overview of financial instruments offered by the Agricultural Credit Guarantee Fund in Lithuania

Advantages	Individual guarantees to financial institutions and leasing companies for credits (leasing) granted to entities engaged in agriculture, food, forestry, rural development and fisheries	Portfolio guarantees to credit institutions for loans for working capital and/or the acquisition of biological assets	Loan Interest Compensation	Guarantee payment compensations	Loans for Agricultural Machinery and Equipment
a. Benefits provided to the agricultural producer	• Guarantees to financial institutions and (or) leasing companies are up to 80% of the outstanding credits (credit lines, leasing, factoring). • Guarantees provided for financially sound and commercially feasible projects and to the economic entities that are not considered to be undertakings in difficulty.	• Granted for loans provided for small-sized enterprises active in primary production and for cooperatives active in livestock, milk, berries, fruits and / or vegetables sectors. • 80% loan portfolio guarantee • Loan administration fee up to 0.5% • Interest rate up to 5%	• Up to 80% loans, leasing interest compensation • Compensations for small and medium size enterprises engaged in primary production and other activities in rural areas. • Max interest rate compensated – 4% for investment credits, 6% for working capital credits.	• Up to 80% guarantee fee compensation • Compensations for small and medium size enterprises engaged in primary production and other activities in rural areas	• Loans are provided for agricultural entities engaged in primary production. • Interest rate up to 5% (bank's margin up to 3%)
b. Purpose and maturity of the preferential loans	• Guarantees can be provided for loans, leasing for investment; • Guarantees for loans, credit lines, factoring for working capital • Maturity not limited • Loans or leasing up to EUR 1-160 000. • Guarantee fee is up to 7% of the guaranteed amount.	• Portfolio guarantees can be provided for loans, credit lines for working capital • Loan maturity up to 3 years • Loan size up to EUR 150 000 for small farmers and up to EUR 300 000 for cooperatives	• Interest is compensated for investment loans and leasing. 3 years loan period • Interest is compensated for working capital loans, credit lines, factoring. 2 years loan period.	• Guarantee fee is compensated for investment loans and leasing with guarantee	• Loans for investment (agricultural machinery and equipment) • Loan maturity up to 6 years • Loan size up to EUR 70 000 (75% – financial instruments' funds, 25% – credit union funds)

c. Total budget available for the instrument	Guarantees are provided from Agricultural Credit Guarantee Fund resources accumulated from guarantee fees.	Budget form state national resources EUR 4.20 million	Annual budget about EUR 0.7 million. Compensations from state national resources	Annual budget about EUR 0.35 million. Compensations from state national resources	EUR 2.01 million
d. Starting date	1997	2018-05-30	2004	2004	2019-10-10
e. Management	Managed by Agricultural Credit Guarantee Fund	Managed through one bank selected by public procurement procedure	Managed by ACGF[56]	Managed by ACGF	Managed through 5 credit unions
f. Potential access to preferential loans through each instrument		Approximately 300 farmers have access to loan portfolio guarantees			Approximately 100 farmers will have access to preferential loans[57]
g. The current uptake of loans	Guarantees (see Annex A.7 Information on specific financial instruments, Table **19**) 190 beneficiaries	26 farmers have EUR 0.56 million loans with portfolio guarantees	(See Annex A.7 Information on specific financial instruments, Table 21) 341 beneficiaries	(See Annex A.7 Information on specific financial instruments, Table 20) 73 beneficiaries	The instrument has just started (3 applications received as of November 2019)

Source: Agricultural Credit Guarantee Fund.

56 For loans. For credit lines without guarantees interest compensations are administrated by municipalities.

57 Possibly can be more as the first issued loans are smaller than EUR 70 000.

Overall, stakeholders are positive to the functioning of the financial instruments, but resources are too limited and the groups with most difficulties in accessing finance are not adequately targeted. All conducted interviews confirm that the financial instruments are of significant importance for the agriculture sector and influence the supply of finance to the sector. The guarantees provided helped farmers to overcome situations of lack of collateral, and the subsidised interest rates makes the loans more affordable to the farmers

However, the uptake of existing financial instruments in Lithuania is rather low, even if the number of beneficiaries using financial instruments has increased slightly over the last few years due to the recent review of credit interest compensation and market tendencies. According to the Ministry of Agriculture, the reason for this is that farmers are more interested in obtaining grants than credits.

According to agriculture stakeholders, too few farmers are served by the instruments for the moment, due to limited resources. All stakeholders interviewed agreed that the main issue in order to make the preferential loans available to more farmers is not related to the functioning of the existing instruments, but to the lack of resources available for the instrument. Thus, in order to increase the guarantee instrument's impact, additional support is needed. **It is also particularly important to address the needs of small-sized farms and new entrants**.

In addition, the instruments could be made more flexible, and require less administrative work. In order to increase the number of successful applicants, the number of documents requested by the applicant should be limited, and the banks/credit unions could obtain these from official databases instead, from places such as the land register, farm register, real estate register and similar. Bank interviewees pointed out that in the future, it would be particularly important to allow state support for land purchasing loans, as land prices are high and the repayment period is long.

2.3.1.3. Description of the financing market

Banks operating in Lithuania have been profitable and remained resilient to external shocks. However, concentration within the sector is high, leading banks to be more selective of their clientele. The Lithuanian banking sector has outperformed many EU banking sectors in terms of key financial performance indicators. In 2018, the profitability of banks operating in the country increased notably, their asset quality continued to improve, and the resilience to shocks remained high. Hence, banks have the resources necessary to provide loans to the agriculture sector.

On the other hand, concentration in the banking sector rose further and was amongst the highest in Europe, thus increasing the systemic importance of individual banks. Greater concentration has allowed banks to be more selective in terms of their clientele. This in turn leads banks to request higher interest rates for clients who are not priority clientele. As an example, interest rates for short-term loans, of low volumes, are usually significantly higher for the agriculture sector, than loans accessible for other economic sectors.

The share of non-performing loans for the agriculture sector is one of the lowest in the economy, which is likely to signal banks' limited interest in taking risks. In 2018, the share of non-performing loans granted to businesses decreased from 5.1% to 4.1%. The share of non-performing loans in agriculture is one of the lowest in the economy[58]. This could be interpreted in two ways: (i) that the sector should be attractive to banks due to the low share of farmers failing in meeting their repayment requirements, or (ii) that the risk taken by banks for the agriculture sector is lower than that for the rest of the economy. In the case of Lithuania, according to interviews, it is more likely to be the second option. Banks are hesitant, or even unwilling, to lend to the agriculture sector, because of the high risks associated with the sector, and this affects small-sized farms, and farms without access to collateral such as young farmers and new entrants[59].

Banks have specialised expertise and products for the agriculture sector, but this is targeted to the large-sized farms. The agriculture sector faces higher risks compared to other economic sectors, due to the specificity of the activity which is highly dependent on weather conditions and other variable and external factors. Therefore, according to bank interviews, specific expertise within the banks exists in order to

58 Banking Stability Review, 2019.
59 Interviews.

understand the customers' needs, as well as specific bank products. According to stakeholder interviews, the expertise of the banks is targeted to the larger, economically strong farms. Banks in Lithuania do not have a specific policy for the agriculture sector, however, the credit risk evaluation differs compared to that for other sectors and so does the potential collateral evaluation[60].

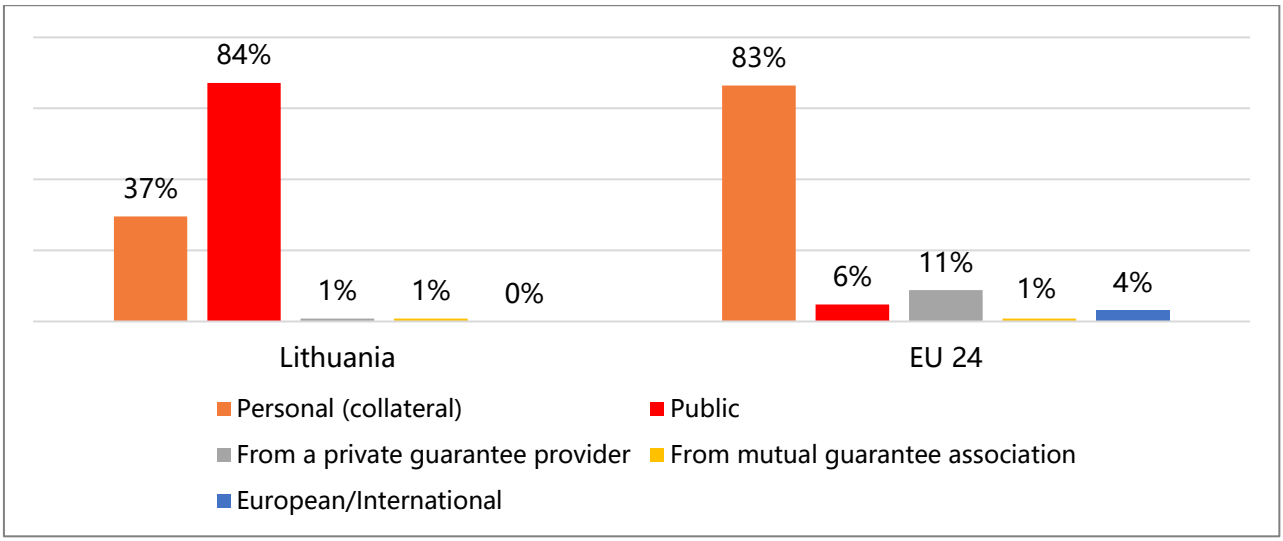
The three main criteria for loan application assessment are related to:

- the applicant, such as the company's balance sheets, credit history, quality of the business plan;
- the sub-sector[61]; and,
- the area in which the applicant operates, main economic activity of the applicant, available information on local economic conditions, bank risk assessment, market trends.

In addition, and as discussed in section 2.2.1 regarding the demand for finance, banks are more positive when assessing loan applications from farmers, companies and projects that have obtained RDP support (compliance with RDP eligibility criteria proves that the project is of higher quality and economically viable). Thus, if the loan application is aimed at complementing a grant from the EU, the chances are higher that the application will be approved.

The provision of public guarantees improves farmers' access to finance. According to the *fi-compass* survey, amongst the farmers requested to provide a guarantee, 61% of those having had their loan applications approved, 84% used public guarantees as collateral, whereas approximately 37% used personal assets as collateral. Hence, many farmers use a combination of personal assets and public guarantees as collateral. This is very different compared to the EU 24, whereby 83% of farmers used personal guarantees, and only 6% public guarantees (Figure 14). The high share of farmers in Lithuania using public guarantees is due to the guarantees provided by the ACGF and the banks' desire for their loans to be backed up by it. However, the number of farmers with an uptake of these guarantees is limited (see section 2.3.1.2).

Figure 14: Type of guarantees used by Lithuanian farmers in 2017



Source: fi-compass survey.

60 In cases where agricultural land is used as collateral, banks usually do not ask for collateral valuation/assessments from external experts because they use an internal evaluation/assessment scheme where the land value is assessed according to market price.

61 Banks are not discriminating the agriculture sector, but they are assessing sector specifics. For example, asking for a loan for building an office is going to be assessed differently than a loan in agriculture. The assessment also differs depending on what sub-sector the loan is intended for, e.g. horticulture, cereal production or milk production.

Interest rates for loans to the agriculture sector are higher than the average interest rates for other economic sectors. The cost of borrowing for new loans of non-financial corporations increased from 2.3% to 2.8% in March 2019. In the meantime, EURIBOR remained in negative territory, whilst banks' interest expenditure decreased[62]. For investment loans to the agriculture sector, interest rates are approximately 4 - 6 % depending on the size and the maturity. For small bank loans of between EUR 10 000-EUR 30 000, interest rates could be over 10%, which is why small farmers often use loans from credit unions, where the interest rates start at 8%. The higher interest rates to the agriculture sector signals the risks banks associate with borrowing to the sector.

62 Lithuanian Bank, 2019.

2.3.2. Analysis of the supply of finance

In 2017, the total outstanding loan volume to the primary sector in Lithuania was EUR 317 million[63] and the supply of credit is on a positive trend. Between 2012 and 2017, the total supply of credit to the agriculture, fishery and forestry sector grew significantly (+83%) (Table 7). The highest supply of new loans was noted for years 2016 and 2017, amounting to EUR 119 million and EUR 104 million respectively. This growth is correlated with the payments of investment support from the 2014-2020 RDP[64] and the growth of the portfolio instrument covered by the ACGF. However, the rapid expansion slowed down in the second half of 2017 and the total outstanding loan volume has remained stable since then.

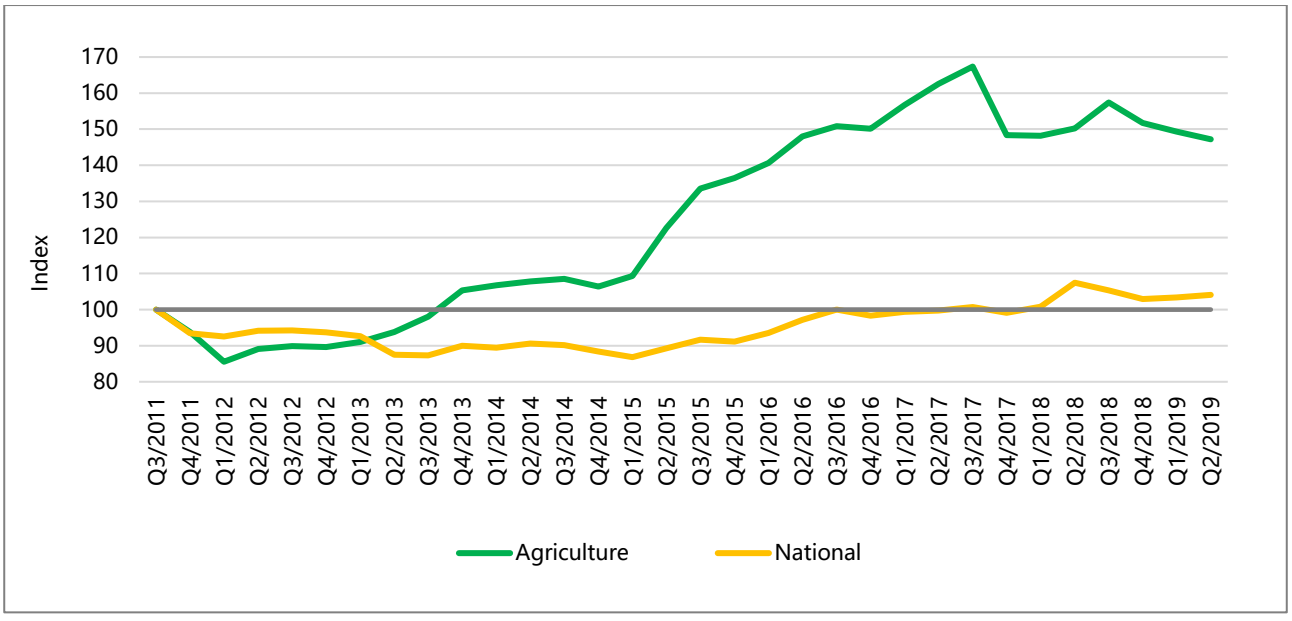
Table 7: Total outstanding loans to non-financial corporations by industry, balances at the end of the first quarters, 2012-2019, EUR million

Year	2012	2013	2014	2015	2016	2017	2018	2019
Total outstanding loans, total economy	7 739	7 748	7 485	7 262	7 826	8 316	8 433	8 646
Total outstanding loans: agriculture, forestry and fisheries	173	184	215.8	221	284.3	316.8	299.6	302
% all loans	2.23	2.24	2.87	3.04	3.63	3.81	3.55	3.49

Source: Lithuanian Bank, 2019.

Figure 15 presents the relative growth of the total outstanding loan volume to the agriculture, forestry and fishery sector compared to the total national economy. It shows that, in particular for years 2016 and 2017, there was a peak in loans supplied to the agriculture sector.

Figure 15: Growth index of outstanding loan volumes in Lithuania, 2011-2019



Source: Based on Bank of Lithuania, 2019.

63 Lithuanian Bank, 2019, https://www.lb.lt/en/loans-to-non-financial-corporations-by-economic-activity. The figures include agriculture, forestry and fisheries, but most loans are used for primary agriculture sector.

64 The largest amounts for investment support was paid out for year 2016 and 2017.

According to interviews with the banks, financial institutions consider agriculture as an increasingly attractive sector, and the volume of financing for this sector is expected to increase in the future[65]. However, banks interest is foremost directed to large-sized farms. Banks and credit unions have sufficient assets to issue loans to the agriculture sector and the attitude of credit institutions, especially banks, to farmers and agriculture companies has changed, rather positively, over recent years. These entities have gained confidence and farmers, who have a business history are no longer confronted with significant difficulties in obtaining a loan, according to interviewed banks. This is in line with the ex-ante assessment findings from 2014, whereby one of the conclusions was that banks and credit unions are increasingly trusting agriculture entities and willing to lend. Access to credit for farmers and agri-food businesses was assessed to be easier than before the 2008/2009 economic crisis, and it is stated that farmers with a history of managing a farm do not face constraints in accessing credit. Before the crisis, access to credit for farms was limited to mortgages, and large-scale financing to medium and large-sized farms[66].

According to representatives of commercial banks, **the agriculture sector has always invested steadily, even during the economic crisis**. Farmers and agriculture companies in the country are increasingly focusing on business development and productivity through investments in technology and to the upgrading of infrastructure. Seeing the experience of farmers and the success of company projects, banks tend to continue to provide the necessary funding.

However, this information is in contrast to the interest rates information obtained, whereby **higher interest rates are charged for the agriculture sector than for other economic sectors**, signalling the risks banks associate with borrowing to the sector. Additionally, when contrasting this information to the information provided by interviewees from the agriculture sector, it seems as if the commercial banks' focus is limited to large-sized farms. It can therefore be assumed that the growing interest shown from the banks, and the increasing lending documented, goes mostly to large-sized enterprises.

New entrants, small-sized farms, and young farmers experience significant problems in accessing credit, and the dairy sub-sector faces more problems in accessing finance than any other sub-sectors. The majority of the interviewees underlined that farmers with a lack of credit history and collateral are viewed to pose problems for credit institutions. Banks consider them to be risky clients, and they are very careful with providing them credit. To address the issues faced by these groups, the ACGF was established in 1998, as discussed above, however, its outreach has been limited.

Banks are particularly careful with providing loans to the farms specialising in dairy due to the low milk price and the generally low profitability of the sector, especially of small-sized farms[67], which typically dominate the Lithuanian dairy production.

Large-sized agriculture companies can benefit from the funding offered by banks, whilst there is a lack of funding for small-sized farms in the agriculture sector. In 2014, this problem was further identified in the ex-ante assessment for the use of financial instruments, and the ACGF also underlined this during an interview.

65 According to interviews with banks.

66 ESTEP Vilnius and European Social, Legal and Economic Projects, 2014, 'Recommendations on the implementation of financial instruments under the Lithuanian Rural Development Programme 2014-2020 (RDP 2014-2020) based on the ex-ante evaluation of financial instruments', Final report.

67 Interviews.

2.4. Financing gap in the agriculture sector

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

Key elements of the financing gap in the Lithuanian agriculture sector

- The financing gap is estimated between EUR 962 million and EUR 2.2 billion.
- The financing gap can largely be attributed to small-sized farms.
- The financing gap for young farmers is estimated between EUR 236 million and EUR 626 million. Young farmers account for a significant share of rejected and discouraged applicants.
- The product for which the unmet demand is the highest is long-term loans.
- The key constraint in access to finance is the lack of financial data and lack of financial management skills, as well as the lack of collateral for guarantees. In addition, the supply of finance is highly concentrated, leading to strong selectivity of the clients from the side of the banks, and higher interest rates applied. Banks have also showed a high reluctance to work with small-sized farms.
- Young farmers and new entrants face additional constraints due to their lack of credit history, business history and lack of collateral.

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

Financing gap = Number of farms X percentage of firms that are both financially viable and have unmet demand X average loan volume

All the calculations are based on the results of the *fi-compass* survey for Lithuanian farms and statistics from Eurostat (see Annex A.5 TG I: *fi-compass* survey for more information). The methodology used for calculating the gap is described in Annex A.3 Methodology for financing gap calculation.

The financing gap arises from unmet financing demand from economically viable farms[68]. 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 bound:

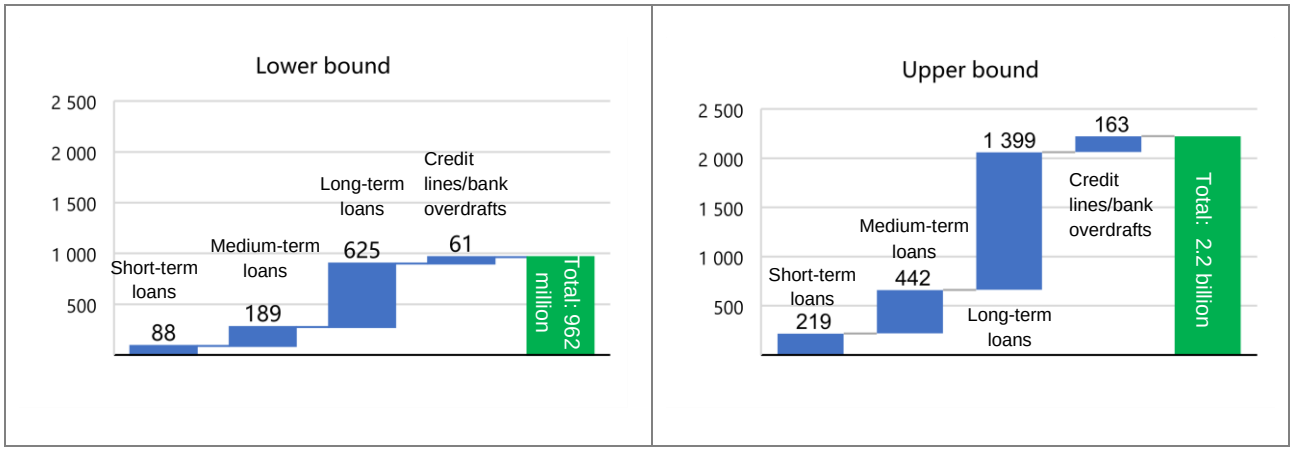
- The **lower bound** gap is calculated under the hypothesis that only enterprises which reported a stable (non-negative) turnover growth and no cost increase in the previous year can be considering as viable;
- The **upper bound** gap is calculated under the hypothesis that all enterprises which reported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

The financing gap for the Lithuanian agriculture sector is estimated between EUR 962 million and EUR 2.2 billion (Figure 16). The gap is the largest for long-term loans (above five years), but also significant gaps for medium (18 months to five years) and short-term loans (below 18 months) have been recorded.

68 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.

A large share of the gap can be attributed to farms below 20 ha (Table 8). These farms account for more than 80% of the agriculture sector in Lithuania. However, important gaps are also noted for the medium and large-sized farms (Table 8). The existence of a financing gap for the agriculture sector in Lithuania was not put into question by any of the stakeholders interviewed for the study, as access to finance for farmers is a well-recognised problem in Lithuania[69].

Figure 16: Financing gap by product in the agriculture sector, 2017, EUR million



Source: fi-compass survey.

Table 8: Financing gap by farm size and product, 2017, EUR million

		Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Upper bound	Small-sized farms	1 537.5	138.0	313.0	991.5	95.0
	Medium-sized farms	404.7	42.8	72.8	263.4	25.8
	Large-sized farms	281.3	38.4	56.5	144.6	41.9
	Total	**2 223.5**	**219.2**	**442.2**	**1 399.4**	**162.6**
Lower bound	Small-sized farms	667.2	55.1	133.6	443.0	35.5
	Medium-sized farms	175.5	17.1	31.1	117.7	9.6
	Large-sized farms	119.7	15.4	24.1	64.6	15.7
	Total	**962.4**	**87.5**	**188.8**	**625.2**	**60.8**

Source: fi-compass survey.

General drivers of the gap include the lack of financial know how and the lack of collateral, particularly amongst small-sized farms, young farmers and new entrants. The rejection levels for loan applications are significant for Lithuania in comparison to other EU 24 countries. According to the analysis of available data and interviews with banks, farmers' organisations and other stakeholders, important reasons for rejecting credit applications include:

69 The ex-ante assessment for the use of EAFRD financial instruments identified a high demand for funding for investment projects in the agriculture sector. According to the ex-ante evaluation, between 2015 and 2020, the investment gap was estimated to be in the range of EUR 87 million to EUR 145 million (difference between financing for supply and demand for finance from agriculture, forestry, food production and other rural businesses).

(i) The high risks banks' associate with lending to the agriculture sector, linked to the income situation for the sector in general. This leads banks to ask for high collateral, or impose high interest rates, whereby the loans become difficult to access for many agriculture producers, in particular small producers.

(ii) The already high financial commitment level of the client, including debt with suppliers.

(iii) Characteristics of individuals, particularly related to low financial understanding. The lack of knowledge amongst farmers related to financial issues have been highlighted as a significant constraint by stakeholders.

(iv) Lack of an accountancy system, or business data, for small-sized farms, as many farmers include their agricultural income in their personal tax statement, whereby it is difficult for banks to assess the economic performance of the farm.

The supply of finance is highly concentrated as mentioned in the previous sections, whereby the banks can be very selective of their clients. Although the banks are demonstrating an increasing interest in the agriculture sector as such, this interest is mostly related to the large-sized farms. The small-sized farms are associated with high risks. Small loans have high interest rates, making it difficult for small-sized farms to access financing from banks.

In addition, the lack of business history and credit history is an additional constraint for young farmers and new entrants. Approximately 30% of the overall gap may be attributed to young farmers. Between 1.32% and 22.6% of rejected and viable loan applications came from applicants below the age of 40 years (depending on the loan maturity). Similarly, between 31.4% and 50% of the discouraged applicants were young farmers. Using this information to provide a different breakdown of farms with constrained access to finance, **the financing gap for young farmers is estimated between EUR 236.3 million and EUR 626.3 million**. The fact that young farmers represent a large part of the gap can be explained by the lack of credit history and business history, together with the lack of financial knowledge, or business management skills, as highlighted by the interviewed young farmers' representatives and other stakeholders.

The limited business skills of small to medium-sized farm managers is a major impediment in accessing finance and a driver of discouraged applications. The context of expanding supply of finance has driven up demand for loans in recent years, but many farms are not operating under a legal structure and they lack accountancy and cash flow projection capacity. Gross investment levels by farm size suggest that medium-sized farms still have an untapped potential for credit supported investments. This challenge cannot be addressed by the supply side solely through a lower cost of capital or more guarantees. The constraint of low financial skills is compounded by the overall combination between personal finance and farm balance sheets. The lack of understanding on how to draft business plans and other documents for loan applications is an important challenge for small-sized farms (i.e. present information related to farm performance such as balances, formats of business plans, and present evidence of ownership such as land lease, title, registration and other information required in order to be able to apply for collateralised loans), and has been underlined by interviewees representing the Government, farmers associations and banks.

A limited supply of long-term financing contributes to the gap. The farm consolidation dynamic pushes farmers to grow by purchasing not only land and assets but also by taking over entire farms. However, these operations cannot be optimally financed through short or medium-term financing. The rejection rates for long-term loans recorded in the *fi-compass* survey is one of the highest in the EU 24.

2.5. Conclusions

This report has identified a number of constraints, on both the demand and the supply side of the financing market for the agriculture sector in Lithuania, which cause viable loan applications by farmers' to be rejected or refused, or farmers to be discouraged from applying. Although the supply of finance to agriculture has expanded in recent years in Lithuania, key financing challenges remain ahead of the sector's ongoing structural transformation.

The analysis shows that difficulties in access to finance, particularly for small-sized farms and young farmers, leads to a financing gap in the range of EUR 962 million to EUR 2.2 billion. Considering the overall limited value of the market, the gap is likely to be closer to the lower bound. Even so, the unmet demand is estimated to be substantial due to very high rejection levels for bank applications, and due to the high share of farmers' being discouraged from applying for loans due to the fear of being rejected. The largest share of the gap can be attributed to long-term loans of small-sized farms below 20 ha.

The banks have limited appetite for providing finance to the small-sized farms. Banks' loan conditions for small loans are in general highly unfavourable. The high level of indebtedness to the suppliers is one reason provided by banks to why loan applications are rejected. Also, young farmers and new entrants have substantial issues with obtaining finance, due to their lack of credit history, business history, and lack of collateral. Additionally, small-sized farms lack financial know how, and many times present business plans which are not of sufficient quality, they also lack business data, whereby possibility of assessing the creditworthiness of the farm is limited. As a result, the banks willingness to lend money is curved.

Encouraging farmers to participate in financial training sessions could increase farmers' possibility of obtaining loans. Several stakeholders have underlined that particularly smaller farms are in need of acquiring financial skills, related to knowing how to apply for a loan, how to submit information relating to farm performance (balance sheet, business plans), how to show evidence of ownership (land lease, title, registration) and information required in order to be able to apply for collateralised loans. Therefore, additional technical support to support the training of farmers on financial literacy could be considered. According to interviews, Lithuania has a well-functioning system of advisory services in place, including on financial training, which is already operational. However, the issue is related to how to incentivise small farms to participate in the trainings.

Dedicating additional financial resources to existing or new financial instruments, including from EAFRD resources, could help close the financing gap by allowing banks to take greater risks and enlarge their farm client base. Besides addressing the problems on the demand side, additional efforts could be spared on the supply side, stimulating banks' willingness to assume greater risks. The study clearly shows that banks do not demonstrate a major interest in providing finance to small-sized farms. Several financial instruments are already in place, providing agriculture producers with preferential interest rates and with a substantial part of the guarantee requested by banks. However, the outreach of these instruments has been limited, linked to the limited budgetary resources dedicated to the instruments, and/or to the limited interest from farmers. In addition, some stakeholders have underlined that the access to the loans is considered burdensome. The application process could be simplified in order to reduce the barriers to accessing the preferential loans. Based on the interviews conducted, the Ministry of Agriculture is planning to set up an additional financial instrument within the framework of the future 2021-2027 CAP Strategic plan. This instrument should, in line with the findings from this study, be targeted to young farmers and small-sized farms.

In order to alleviate the unmet demand for finance in Lithuania, several **recommendations** for public interventions are suggested:

- A review of existing instruments should be undertaken to assess how they might better meet the needs of smaller farms, young farmers and new entrants. The sector consists mainly of small-sized farms (82% of farms are below 20 ha), which have a potential to invest more. Although the existing public guarantee system facilitates access to loans on preferential terms, small-sized farms, young farmers and new entrants continue to face difficulties in accessing finance due to their lack of collateral assets and business history. The opportunities offered by the new legal framework for EAFRD funded financial instruments

(e.g. greater ease of combining financial instruments and grant support, or the possibility to finance the purchase of land be young farmers) might offer interesting opportunities to increase the effectiveness of the instrument towards these segments. More generally, some stakeholders indicate that the adequacy of the currently available budget of the financial instruments is also indicated as a possible issue by stakeholders.

- Long-term loans are rarely used. Almost half of the liabilities of the sector consists of short-term loans, often provided by credit unions. Loan application rejection rates are also the highest for long-term loans However, the ongoing structural changes in the sector require long-term financing. Thus, financial instruments (guarantees or loans), which could also be financed by the EAFRD, to address this problem, could be helpful.
- High cost of financing is also an obstacle, in particular for small-sized farms. Instruments with a higher impact on interest rates (e.g. risk sharing loan funds) might be considered for future policy actions, including in combination with grant support.
- Application and administration procedures for existing instruments administered by the ACGF could be simplified and digitalised. To save time and reduce costs for applicants and administrative staff, data requests be linked with already functioning official registers and databases.
- Technical support to improve financial literacy of farmers, particularly those with small-sized farms, could help overcome some of the current constraints on access to finance. Such support could be delivered through a training and advisory facility under the EAFRD/RDP.

3. PART II: AGRI-FOOD SECTOR

3.1. Market analysis

Key elements on the Lithuanian agri-food sector
• In 2018, the share of GVA created by the Lithuanian food, beverage and tobacco industry accounted for 3.2% of the total GVA generated in the country. • In the period 2014-2018, the average turnover generated from sales of Lithuanian enterprises engaged in the manufacture of food products and beverages increased by 2.9%. The grain processing sub-sector registered the largest output growth in that period. • In terms of sales, the manufacturing of dairy products is the leading sub-sector, followed by meat processing, which also has the highest number of enterprises and employment. The grain sub-sector has had the most significant growth since year 2014. • At the end of 2018, 969 enterprises engaged in the manufacture of food products and beverages operated in Lithuania. • Amongst the enterprises operating in the manufacture of food products and beverages, 53.7% are small-sized enterprises with less than 10 employees, whilst large-sized enterprises with more than 250 employees account for only 4%. • Most of the enterprises manufacturing food products and beverages are located close to the major cities. • Since 2004, the balance of foreign trade in agricultural and food products has been positive.

Food and beverages production is one of the largest Lithuanian manufacturing industries. In 2018, the share of GVA created by the Lithuanian food, beverage and tobacco industry accounted for 3.2% of the total GVA created in the country. Since 2010, this share has fluctuated between 3.2% and 3.9%.[70] According to the data of Statistics Lithuania, at the end of 2018, 969 enterprises engaged in the manufacture of food products and beverages operated in Lithuania. Additionally, in 2017, 612 natural persons with business certificates were involved in the manufacture of food products, however, the turnover generated by these persons constituted only 0.2% of the total turnover of the enterprises engaged in food manufacture. Between 2014 and 2018, the number of employees in the sector has been relatively stable, i.e. between 42 000 and 43 000. Also, the sales on the domestic market and the export value has been stable over the period analysed (Table 9). Most of the enterprises manufacturing food products and beverages are located close to the major cities. For example, at the end of 2018, 26.6% of all these enterprises operated in Kaunas County, and 23% in Vilnius County.

Table 9: Entities of manufacture of food products and beverages in Lithuania and their sales in 2014–2018

Indicators	2014	2015	2016	2017	2018
Number of employees	42 843	42 480	42 051	42 279	42 159
Sales in domestic market (EUR million)	2 501.6	2 483.8	2 417.0	2 600.9	2 561.2
Export value, EUR million	1 768.3	1 656.3	1 699.8	1 801.0	1 823.8

Note: VAT and excise duty incl.
Source: Statistics Lithuania, 2019.

70 Statistical yearbook of Lithuania, 2019, Lithuanian Statistics.

In Lithuania, 53.7% of all enterprises operating in the manufacturing of food products and beverages are small enterprises, which consist of 10 employees or less[71]. Enterprises with more than 250 employees accounted for 4% and employed almost 46.7% of all the employees involved in the sector. In the period 2014 and 2018, the average turnover increased by 2.9%. This was mainly the result of a decrease in the number of enterprises whilst the total output market size grew. The maintenance of domestic and foreign markets and the search of new markets will assure the development of the food and beverage industry in the future.

In the agri-food sector, the main production is from milk, meat and grains processing, mirroring the agriculture production pattern. Dairy products manufacturing has the highest sales value in the sector, followed by meat processing, which also has the highest number of enterprises and employment of people. The cereal processing sub-sector is, by all parameters, the 3rd biggest sector. Between 2014 and 2018, on one hand, the number of enterprises engaged in the manufacture of grain mill products, starches and starch products dropped by 8%, although the output was growing substantially for the same period. On the other hand, the number of new enterprises within the sector for fruit and vegetable processing, increased the most by 31.7%[72] during the same period.

The food and beverages industry is export oriented and Lithuania has a positive trade balance. Owing to the small domestic market and to a comparatively higher supply than demand, Lithuanian agriculture and food products are oriented towards exports, except for meat production where the production is not sufficient to meet domestic demand. In 2018, the export of agriculture and food products totalled EUR 4.9 billion which was an increase of 1.6% compared to 2017, whilst the import amounted to EUR 3.9 billion which was also an increase of 2.6% compared to the previous year. Since 2004, the balance of foreign trade in agriculture and food products has been positive, in 2018, it remained almost the same and totalled EUR 1 billion compared to 2017.[73]

Between 2014 and 2018, the grain processing sub-sector registered the largest output growth, with 47% more wheat flour and 22% more prepared mixed animal feed. In 2018, exports of Lithuanian cereal grains to EU Member states comprised 1.03 billion tonnes, representing 48.0% of the total export of these products. The rest of the cereal grain exports went to Third countries, largely to Saudi Arabia, Nigeria and Turkey. 77% of milling products were exported to the EU. In 2018, imports of cereal grains increased by 8.4%, reaching up to 382 400 tonnes, whilst imports of milling products increased only by 0.8%[74].

71 Lietuvos žemės ir maisto ūkis, 2018. Kolektyvas: R. Melnikienė – vadovė [et. al.].V, 2019, Lietuvos agrarinės ekonomikos institutas: 216 p.; iliustr., lent., reziumė (angl.) ISSN 2029-4980 (online), ISSN 1822-5101.

72 Ibid.

73 Ibid.

74 Ibid.

3.2. Analysis of 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 Lithuanian enterprises, as well as interviews with key stakeholders in the agri-food sector combined with national statistics.

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

- In 2018, investments in tangible assets are on a positive trend and amounted to EUR 185 million, which is an increase by 15% compared to 2014.
- The demand for finance by Lithuanian enterprises in the agri-food sector is driven by production expansion, investments in improving efficiencies, modernisation, and improving standards in response to consumer demands, therefore enabling them to compete on the EU single market.
- In 2018, according to the Agri-food survey, 23% of the agri-food enterprises considered access to market a problem. Accessing finance for investments and for working capital were considered problematic by 4% and 3% of enterprises respectively.
- Also, for the agri-food sector, the investment support provided from the EAFRD is an important investment driver. Approximately half of the applicants for processing and marketing support from the RDP did not receive the requested support, pointing to an important share of firms with an unmet demand for finance.
- The Agri-food survey confirms that approximately one third of the overall demand for finance from the agri-food sector is not satisfied. The unmet demand for finance is estimated to approximately EUR 21 million.
- To a very large extent, Lithuanian agri-food enterprises finance their investments and undertakings through their own resources. This is due partly to historical investment patterns of Lithuanian firms, and also reflects the low level of financial literacy amongst the managers of small-sized enterprises of the sector.
- Rejection rates from loan applications from the agri-food sector are relatively high, particularly for small-sized enterprises with 50 or less employees.
- Important reasons for banks to reject loan applications from the agri-food sector include: (i) the high risks associated with the sector, leading banks to ask for high collateral, (ii) the lack of credit history which provides particular obstacles for start-ups, and (iii) the insufficient quality of business plans.

3.2.1. Drivers of total demand for finance

Between 2014 and 2018, approximately EUR 162.5 million has been invested annually in tangible assets of the food and beverages sector[75]. Over the same period, the investment in food and beverages increased by approximately 15% (Table 10). This positive trend resulted in approximately EUR 185 million invested in 2018, which accounted for 21.7% of total investment in the Lithuanian manufacturing sector. In 2018, the average annual tangible investment per enterprise in the sector was EUR 191 000.

75 Lietuvos žemės ir maisto ūkis, 2018, Autorių kolektyvas: R. Melnikienė – vadovė [et. al.]. V, 2019, Lietuvos agrarinės ekonomikos institutas, 216 p.; iliustr., lent., reziumė (angl.) ISSN 2029-4980 (online), ISSN 1822-5101.

Table 10: Capital investment in Lithuanian manufacturing and manufacture of food products and beverages in 2014–2018

Indicators	2014	2015	2016	2017	2018
Manufacturing, EUR million	614.8	715.5	784.2	845.5	852.2
Manufacture of food products and beverages, EUR million	157.9	117.2	181.7	170.9	185.1
Share in manufacturing, %	25.7	16.4	23.2	20.2	21.7

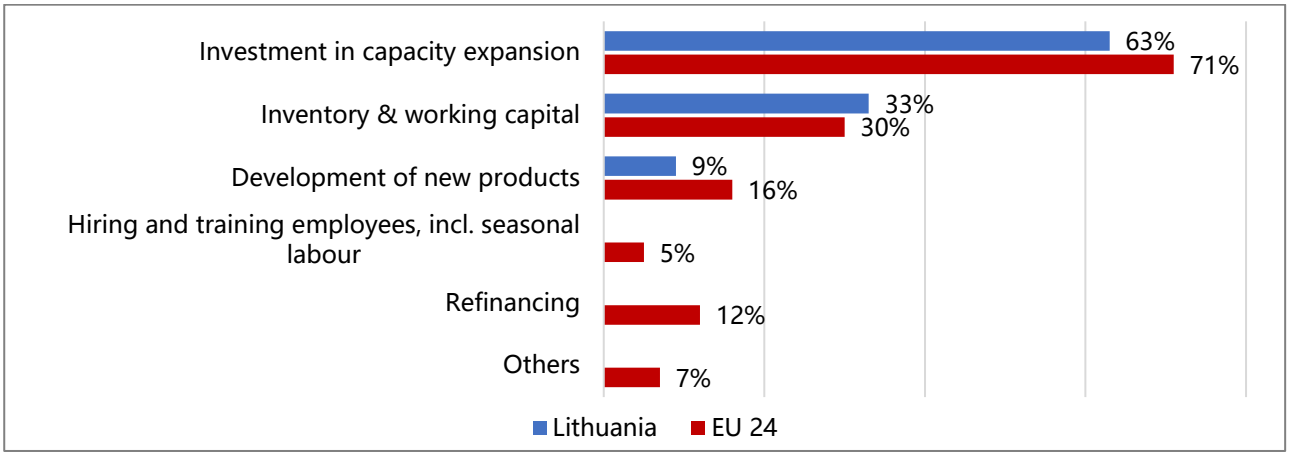
Source: Statistics Lithuania, 2019.

The Lithuanian agri-food enterprises' demand for finance is driven by investment in capacity expansion. In 2018, the largest share of investments was allocated to the acquisition of processing equipment, buildings, machinery and other technical facilities. According to the Agri-food survey, more than 60% of the bank loan applications were made for capacity expansion purposes, 33% were directed to inventory and working capital and only 9% to the development of new products (Figure 17). These preferences in the Lithuanian firms' investment decision were confirmed by interviews with relevant stakeholders.

In addition, the need for modernising and improving production standards in response to changing consumer demand is an important dynamic, which is driving agri-food enterprises investments in Lithuania, underpinned by the quest for competitiveness within the EU market. This calls for both medium and long-term financing products, combined with the investment support provided by EU financed projects.

Working capital is mainly needed for the purchase of raw material for processing such as milk, animals and grains, and developing processing and value. It is mostly financed through short-term loans. In the past, food processors were often delaying payments to farmers in order to finance their working capital. Recently, national legislation has been adopted, following the EU wide initiative intending to rebalance the power of the food chain. To a greater extent, farmers are now in control of payment terms. This has helped farmers but has put the food processing industry in a more delicate and riskier situation, whereby demand for working capital can be expected to increase.

Figure 17: Purpose of bank loans in the agri-food sector in 2018



Source: Agri-food survey.

Investments are also driven by strategies to cope with the low productivity and profitability experienced by some segments of the sector. A large productivity gap remains between Lithuanian agri-food enterprises and those in other EU countries. This potential creates further incentive for investments.

Despite the increase in labour productivity of the sector between 2014 and 2018, the annual productivity per employee is significantly behind the average in other EU countries. Agri-food enterprises have identified further growth in labour productivity as a way to cope with increasing input costs and maintain profitability. This growth is expected to come from investments in new technologies and advanced equipment. In 2018, the value added per hour of work in the manufacture of food products was EUR 19.1, this

is 8.5% more than in 2014. Labour productivity in 2018 in the agri-food sector was higher than in the manufacture sector and the national average by 5.5% and 20.1%, respectively compared to 2014. Despite this positive trend, the Lithuanian agri-food sector underperformed compared to other EU countries. For example, the value added per employee in the sector is four times higher in the Netherlands than in Lithuania[76].

Between 2013 and 2017, investments were also boosted by profitability gains in certain sub-sectors. In 2017, grain mill products, starch production and prepared animal feed recorded the highest net profit[77]. According to the Lithuanian Department of Statistics, profitability increased for the production of food products and flour products, whilst it decreased for the production of meat and meat products, processed fruit, berry and vegetable products, and other food and beverages (Table 11).

Table 11: Agri-food sector financial indicators, 2013-2017

Manufacturing sub-sector	Net profit margin		Total liabilities ratio		Debt ratio		Acid-test ratio	
	2013	2017	2013	2017	2013	2017	2013	2017
Meat & meat products	0.40	0.20	0.53	0.69	0.65	0.59	0.75	0.85
Fish & fish products	1.70	5.80	0.40	0.51	0.72	0.66	0.73	1.12
Products of processed fruit, berries & vegetables	4.30	2.60	0.72	0.73	0.58	0.58	0.82	0.85
Animal and vegetable oils and fats	n. d.	1.00	1.44	0.58	0.41	0.63	1.32	0.84
Dairy products	n. d.	2.90	n. d	1.49	n. d	0.40	n. d.	1.11
Products of the milling industry, starch	n. d.	5.40	0.42	0.73	0.70	0.58	0.26	0.62
Bakery and farinaceous products	1.80	2.60	1.02	0.89	0.50	0.53	0,99	1,01
Other food products	5.80	3.50	1.03	1.25	0.49	0.44	0.72	1.02
Prepared fodder	n. d.	3.60	n. d	0.78	n. d	0.56	n. d.	0.87
Beverages	4.0	3.40	0.98	1.96	0.51	0.33	1.07	1.32

Source: Statistics Lithuania, 2019. Note: Net profit margin: revenues minus all costs, over revenues, Debt ratio: total liabilities over total assets; Acid test ratio: most short-term assets over most short-term liabilities.

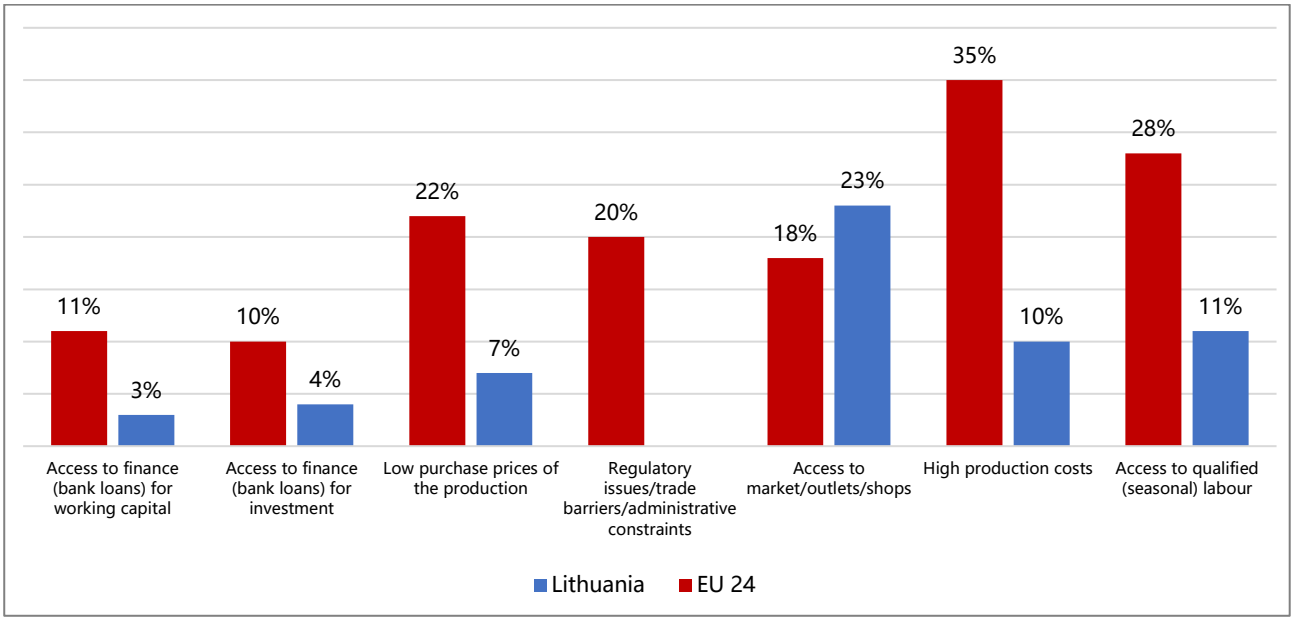
Market access is the main constraint of Lithuanian agri-food enterprises. Expanding sales abroad is often the best alternative to growth, however it is complicated, whereby lack of market access is a break on the finance demanded[78]. In 2018, 23% of enterprises declared access to market to be the main difficulty experienced in the year, compared to the EU 28 average of 18% (Figure 18). According to interviews, the competition between food processors on the local Lithuanian market is fierce, and the large supermarkets are dictating the price levels. As the Lithuanian market is small, many companies have to look abroad in order to grow their business. However, the Lithuanian food production is not very competitive on the world market. The positive trade balance for the agri-food sector signals that Lithuania has comparative advantages in exports. However, according to interviewees, Lithuanian food producers are having difficulties in establishing themselves abroad. Often, the Lithuanian brands are not well-known outside the country. Where they were well-known, for example in Russia, imports have to a large extent come to a halt for political reasons. Lithuanian businesses are finding new markets in Western Europe, the US, the East Asia, etc., but the process is time consuming and significant resources have to be invested on a new market in order to succeed. For small-sized companies, it is impossible to set aside these resources in order to grow abroad. Even for the large-sized companies it is difficult, as in the world market, they are still small actors, and hence their relative competitiveness in entering markets such as China, is limited. The problem in market access is a natural break to the growth that can be experienced by the sector, and as such also a break on the demand for finance.

76 Eurostat, 2019, CBS statistics.
77 Manufacturing of fish and fish products is also a highly profitable sub-sector, but out of the scope of this report.
78 Agri-food survey.

Start-ups have difficulties in establishing themselves on the Lithuanian market, due to the already tough competition on the local market, the high level of bureaucracy, and due to the low economic margins experienced by the sector. The local agri-food market is not very large, and competition is high. There is a large choice of different food products, and consumers have high requirements related to quality, often looking for farm made products. In addition, cumbersome rules and administrative requirements are in place for food companies. Large-sized companies have the resources to deal with this, but for smaller companies, this may present an important obstacle to advancing your business. According to interviews with Government representatives, the high level of bureaucracy is a big obstacle to start a small-sized company and to test a new idea in the agri-food sector. On top of that, the fact that the economic margins of the sector are limited, means many entrepreneurs are not interested in investing in the sector. Banks are aware of the market developments, whereby they are also hesitant to lend to start-ups in the sector. This means that a start-up that wants to be profitable needs to have not only access to finance, but also needs a very good and unique idea, to produce a high value-added product, which can be profitable and competitive both on the local and international markets.

With regard to the difficulties in accessing qualified labour (experienced by 11% of the survey respondents), interviews with the Ministry of Agriculture confirm the deficit of employees faced by Lithuanian enterprises operating in food processing. This is due to the relatively low wage situation in Lithuania, leading qualified workers to look for job opportunities abroad.

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



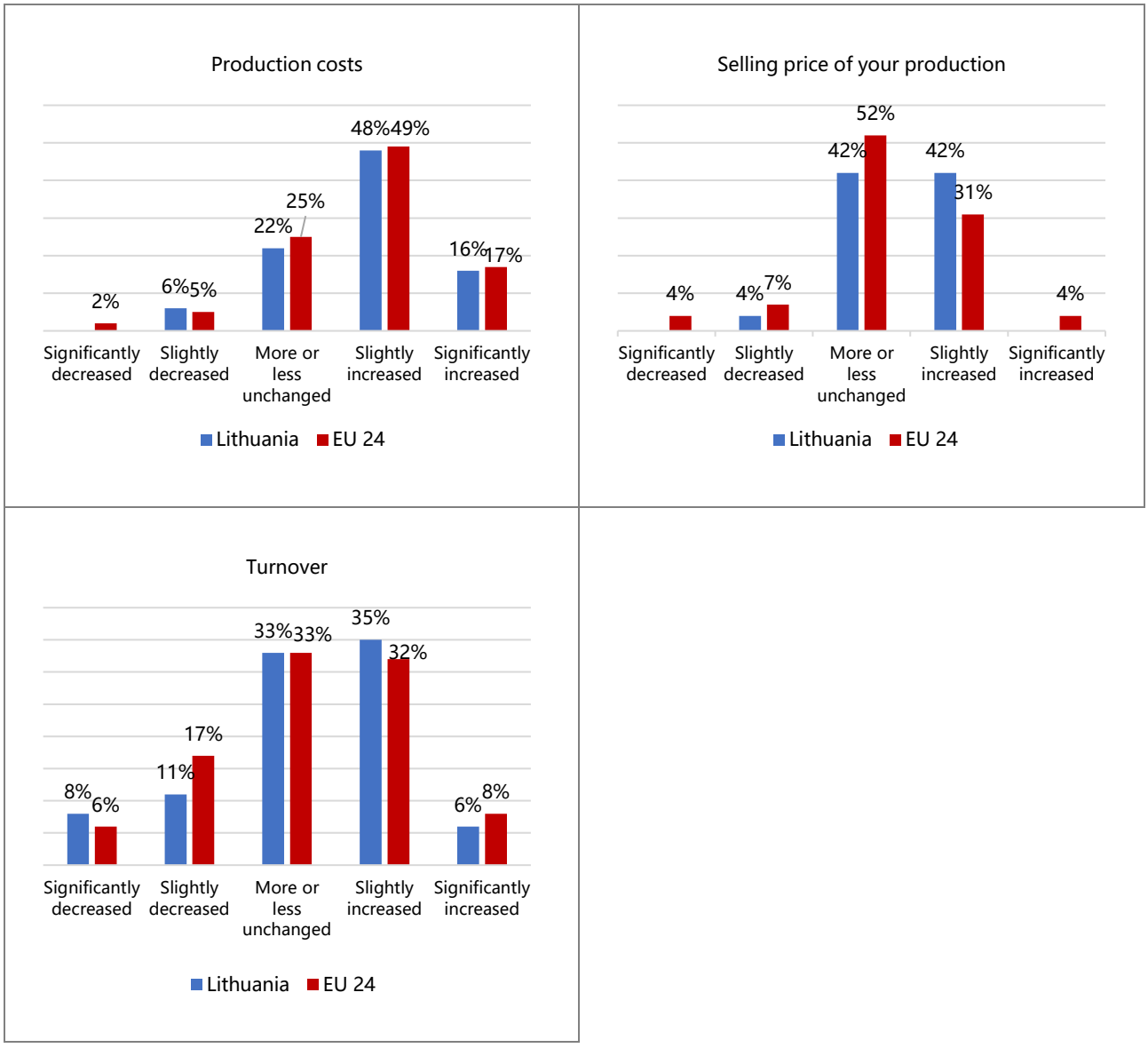
Source: Agri-food survey.

Access to bank loans was reported as problematic by some of the survey respondents. Access to bank loans for investment has been reported as problematic by 4% of the enterprises, whilst access to finance for working capital constituted a problem for 3% (Figure 18). Interviews with the agri-food sector representatives confirm that the difficulties constraining the access to finance are mainly due to bank requirements such as the need for own financing and collateral, whilst the main reasons behind the constrained access to finance for working capital are insufficient amounts granted and short maturity.

Overall, 2018 was a relatively stable year for the agri-food sector in terms of economic indicators. The Agri-food survey reveals that 10% of Lithuanian enterprises found production costs to be a challenge, which is less than a third of the EU 24 average of 35%. 7% of Lithuanian firms were also challenged by low purchase prices (against the 22% at EU 24 level, Figure 18).

In 2018, although producer price index of output in manufacture of food products and beverages was higher than in the previous years, purchasing prices related to firms' costs were lower. The Agri-food survey shows that whilst selling price increased for approximately 42% of the enterprises, an increase in production costs was experienced by 64% of the firms (Figure 19).

Figure 19: Changes in key economic indicators of agri-food enterprises in 2018



Source: Agri-food survey.

The growth of investments undertaken by the agri-food industry is supported by grants from the Lithuanian RDP, but less than 50% of applications were granted support, pointing to an existing unmet demand. Looking at the RDP information provided by the Managing Authority for the applications under sub-measure 4.2, in the 2014-2020 programming period, about 132 applications had been received and the amount requested was EUR 104.6 million. In total, less than 25% of the applications have not been supported[79] (equal to EUR 24.4 million). This points to an existing potential unmet demand from the agri-food sector for financing.

79 Various reasons for rejecting the applications were mentioned by the Managing Authority, such applications being incomplete, not responding to the eligibility criteria, not qualifying through the selection, etc.

Table 12: Lithuania: RDP 2014-2020 implementation of sub-measure 4.2, by March 2020

Sub-measure	Amount of the approved applications (EUR million)	Amount non-approved (EUR million)	Amount requested from all applications (EUR million)	Number of received applications	Number of approved applications	Number of non-approved applications
4.2. Support for investment in the processing, marketing and / or development of agricultural products	80.2	24.4	104.6	132	101	31

Source: Ministry of Agriculture, 2019. Preliminary data based on total public financing.

Note: The total amount requested 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.

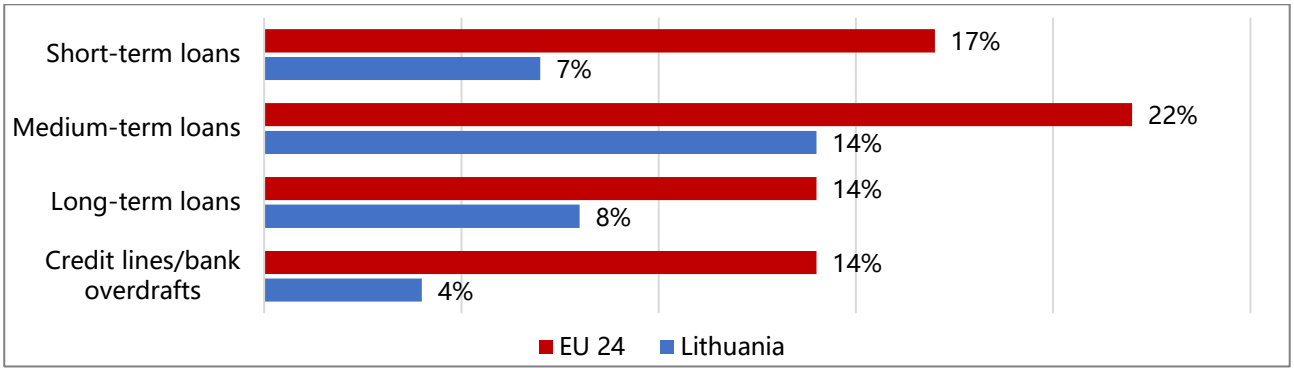
3.2.2. Analysis of the demand for finance

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

Based on the Agri-food survey, the unmet demand for the agri-food sector in Lithuania is estimated at EUR 20.6 million.

Overall, the share of Lithuanian agri-food firms applying for credit is lower (30%) than the EU 24 average (46%). Amongst the enterprises requesting finance in 2018, medium-term loans were the most sought financing product. Approximately 15% of the enterprises requested loans with a duration from 18 months to 5 years, a percentage lower than the EU 24 average (22%), 4% made requests for credit lines or bank overdraft, whilst 8% and 7% of Lithuanian agri-food enterprises firms applied for long-term loans and short-term loans, respectively (Figure 20). This result is aligned with the investment drivers mentioned in section Drivers of total demand for finance.

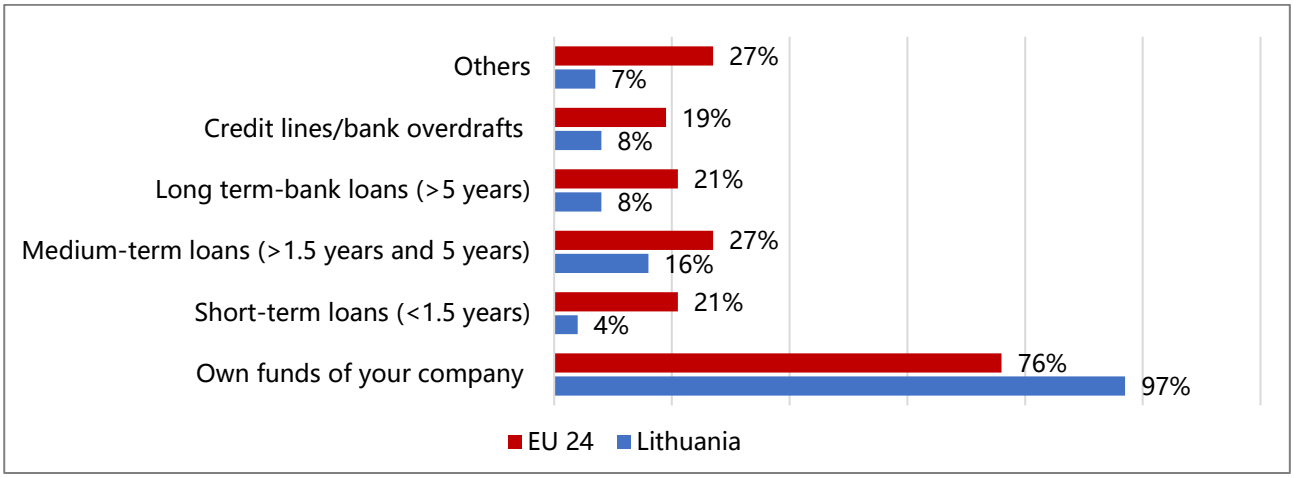
Figure 20: Agri-food enterprises applying for finance in 2018, by financing product



Source: Agri-food survey.

Own funds have a very important role for the agri-food enterprises in Lithuania. In 2018, the share of Lithuanian enterprises that considered own funds to be the most important source of financing was higher than the EU 24 average. Own resources was the most important source of finance in the last three years for 97% of the firms (Figure 21). Evidence from a survey carried out by the Bank of Lithuania[80] shows that 43% of companies (from all economic sectors) finance their activities exclusively from internal resources. This is especially the case for small-sized and service companies. Compared to them, large and industry-related companies are borrowing more actively. Hence, the agri-food sector depends to a much greater extent on own resources than companies from other economic sectors.

Figure 21: Most important financing instruments to agri-food enterprise in 2018



Source: Agri-food survey.

The history of Lithuania explains the large dependency on own resources by Lithuanian enterprises, as well as the problems related to preparing adequate business plans. According to interviewees from the Ministry of Agriculture and academics, the tendency amongst companies to use a high amount of internal resources to pay for investment activities is not unique to the agri-food sector, but is significant for the whole economy, and is linked to the history of Lithuania. In the past, private businesses were not officially allowed, but even so, different small-sized enterprises existed. Everything that private, small processing entities invested was then financed from own savings, family and friends. This attitude to some extent persists in the sector, and also means that the process of preparing a business plan, in order to apply for a bank loan, is by parts of the sector considered as a major hurdle and inconvenience. As a result, they may abstain from applying for bank financing.

Even so, the need for external financing is growing. Evidence shows that the business loan portfolio of banks is growing steadily and more financial products are emerging on the market (see section 3.3.1.2 for details)[81]. Businesses are actively looking for funding opportunities and this also applies to the agri-food sector. Approximately 35% of the companies surveyed by the Bank of Lithuania's survey[82], actively used financial products at the time of the survey, an increase from 19% 5 years ago, with the most common sources of external financing being leasing, bank loans, credit lines and trade credit. Of the companies seeking bank finance, approximately 70% were successful.

80 Bank of Lithuania, 2019, Corporate Survey Overview. The survey was commissioned by the Bank of Lithuania in March 2019. Responses were received from 501 companies operating in Lithuania. The survey interviewed managers or financiers of companies, broken down by main activity and number of employees. Two-thirds of the respondents were companies with up to 49 employees, the other half with 50 and more employees.

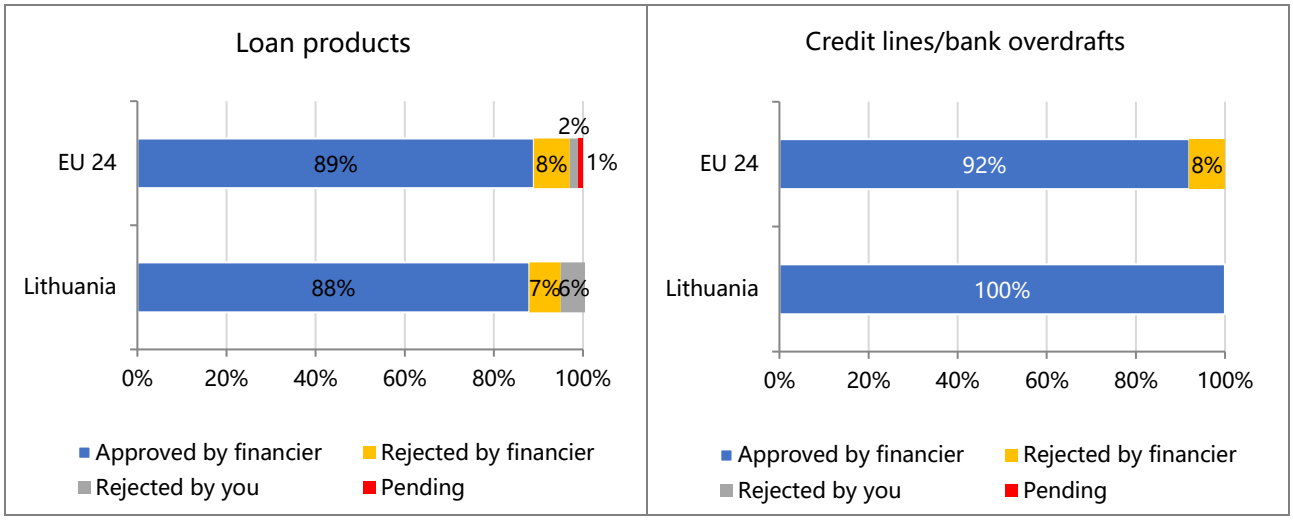
81 Survey of the Bank of Lithuania, 2019.

82 Bank of Lithuania, 2019, Corporate Survey Overview.

Rejection rates of loan applications for the agri-food sector in Lithuania are similar to those for the EU 24. However, the share of refused loan offers is substantially higher for Lithuania. According to the Agri-food survey, in 2018, 7% of the loan applications were rejected by the financier, whereas 6% of the loan offers made were turned down by the agri-food company, due to the high costs associated with the loan. According to the SAFE survey[83], 21% of the applications for bank loans by Lithuanian firms were rejected in 2018, whilst the rejection rate for credit lines and overdraft applications was 16%. In the Agri-food survey, no rejections for credit line and bank overdraft applications were reported, as no respondent reported to have applied for this product.

Hence, comparing the Agri-food survey results to the SAFE survey results, it seems as if the rejection rates for the agri-food industry may be underestimated. Interviewees have not provided any reasons to believe that the agri-food sector experiences more preferential access to finance than other industries.

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



Source: Agri-food survey.

Rejection levels are likely to be even higher for small-sized enterprises and start-ups. According to a survey conducted by the Bank of Lithuania in 2019[84], approximately 50% of the small-sized enterprises indicated an increasingly difficult access to finance, with an increasing number of rejected applications for new credit. Between 2017 and 2018, in the small business segment, the percentage of rejected applications increased from 40% to 61%. The total percentage of rejected applications increased from 22% to 27%. Also, in 2014, the ex-ante assessment for use of EAFRD financial instruments came to the conclusion that the main problem of financing for the agri-food sector is for small-sized businesses and start-ups[85] (see box, section 2.2.1). In an interview, the ACGF also pointed to the funding gap for small-sized businesses.

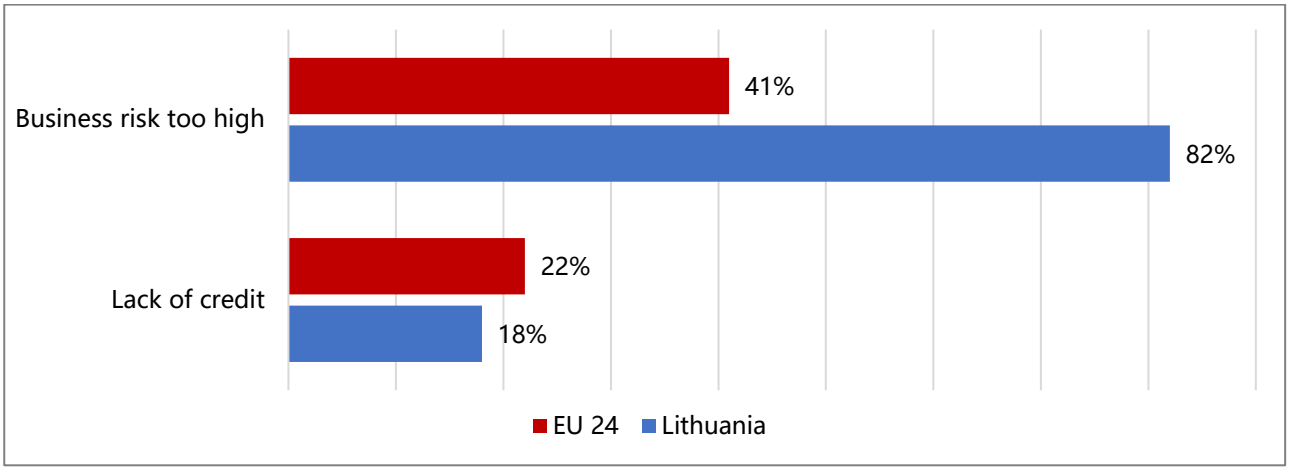
Lack of credit history and high business risks are the two most frequent reasons for rejections according to the Agri-food survey. 82% of the respondents reported that the bank had turned down the loan application due to the fact that the business risk was considered too high, compared to 41% for the EU 24. In addition, 18% declared that lack of credit history was the reason provided by the bank for rejecting the loan offer. This reason was more in line with the EU 24 average (Figure 23).

83 Survey on the Access to Finance of Enterprises (SAFE), 2018, https://ec.europa.eu/growth/access-to-finance/data-surveys_en.

84 Bank of Lithuania, 2019, Corporate Survey Overview.

85 Recommendations on the implementation of financial instruments under the Lithuanian Rural Development Programme 2014-2020 (RDP 2014-2020) based on the ex-ante assessment for the use of EAFRD financial instruments, 2014, Final report. Prepared by experts from ESTEP Vilnius and European Social, Legal and Economic Projects for Lithuanian Ministry of Agriculture.

Figure 23: Reasons for loans' rejection in the agri-food sector in 2018



Source: Agri-food survey.

Difficulties in accessing finance relate to the low capacity of firms to co-finance the investments, and the lack of collateral. Banks' tend to ask for a higher share of own financing and collateral when the business risks are considered high. According to the central bank survey of the economy as a whole, poor financial results (35%) and risky overall economic situation (19%) are the most common reasons for rejections of loan applications[86]. These constraints are also very likely to affect the agri-food sector. However, according to surveyed enterprises, credit institutions often do not motivate their application rejections. According to interviewees, food processing companies sell the majority, if not all, of their products to the supermarkets. Supermarkets are large-sized enterprises, and have strong negotiation capacity, whereby the food processors to some extent are price takers, which brings them to low profit margins.

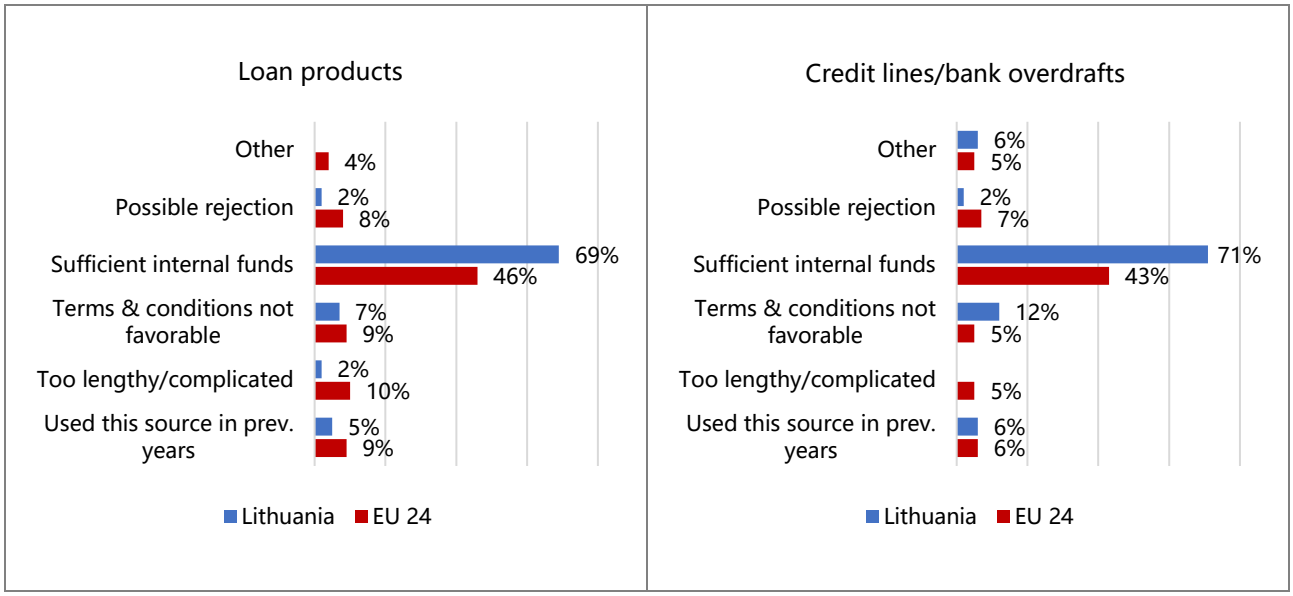
Lack of credit history is an obstacle to obtaining finance for the economy as a whole. As for the firms, not being able to demonstrate a credit history, this represents an important factor in the internal assessment of their financing options: 58% of the respondents' to the survey who had never tried to access financing, deemed it difficult or very difficult to obtain a bank loan. Whereas for firms having experience in obtaining finance, this figure reduces to 34%[87]. This is an indication of the importance banks attach to the availability of credit history. Additionally, it is an indication that these companies are likely to look for other sources of finance or abstain from seeking finance altogether.

Lack of appropriate business plans is another important reason for rejection. The study carried out by the Lithuanian central bank affirms that more than one third of corporate applications for funding are rejected because of the low quality of business plans submitted by companies when applying for funding. This is particularly true for small-sized enterprises and start-ups, whilst big and well-established companies are not facing this problem, as they can rely on professional and experienced financial specialists as staff members[88]. The problem with flawed business plans is partly related to the difficulties described above, related to difficulties of being transparent, and partly to the low level of financial literacy of the managers of the companies operating in the sector, as further discussed below.

High costs associated with loans hold companies back from using external financing. As noted above, 6% of the loan offers made to Lithuanian agri-food companies were turned down by the company due to high costs associated with the loan. This can be compared to 2% for the EU 24. In addition, 7% of interviewees reported unfavourable terms and conditions as one of the reasons for not applying for loan products (Figure **24**). Hence, the costs and conditions associated with the uptake of a loan seems to be a factor holding Lithuanian businesses back from using financial products.

87 Bank of Lithuania, 2019, Corporate Survey Overview.
88 Interviews.

Figure 24: Reasons not applying for loans in the agri-food sector in 2018

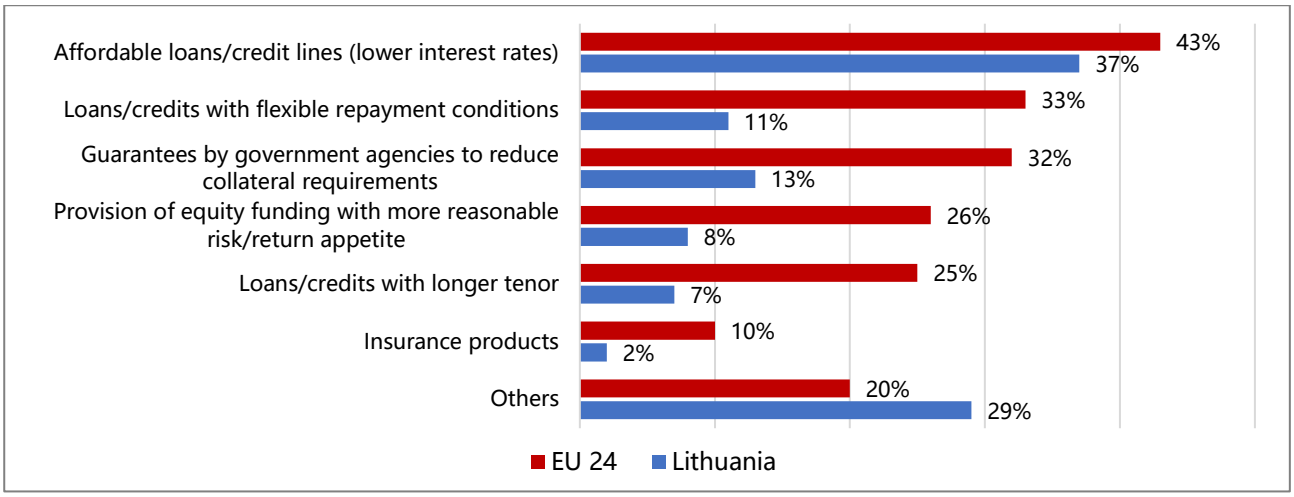


Source: Agri-food survey.

The main reason for not applying for external finance was due to the existence of own resources, as discussed in the section above. However, a small share of the Lithuanian agri-food firms, 2% for both loan products and credit lines, responded that the reason for not applying for a loan was due to the fear of being rejected. In the SAFE survey (covering, however, the whole economy), the shares of respondents who did not apply for bank loans or credit lines in Lithuania because of possible rejection were 8% and 4%, respectively.

More favourable loan conditions would increase firms' interest in applying for external financing. Approximately 37% of Lithuanian enterprises indicated in the Agri-food survey that loans and credit lines with more favourable conditions would make it interesting for them to apply (Figure 25). Approximately 13% of the respondents' indicated the importance of public guarantees, significantly lower than for the EU 24 at 32%. Very similar results can also be noted with regards to credit schemes with longer maturity and repayment flexibility (Figure 25).

Figure 25: Solutions to reduce difficulties in accessing finance, 2018



Source: Agri-food survey.

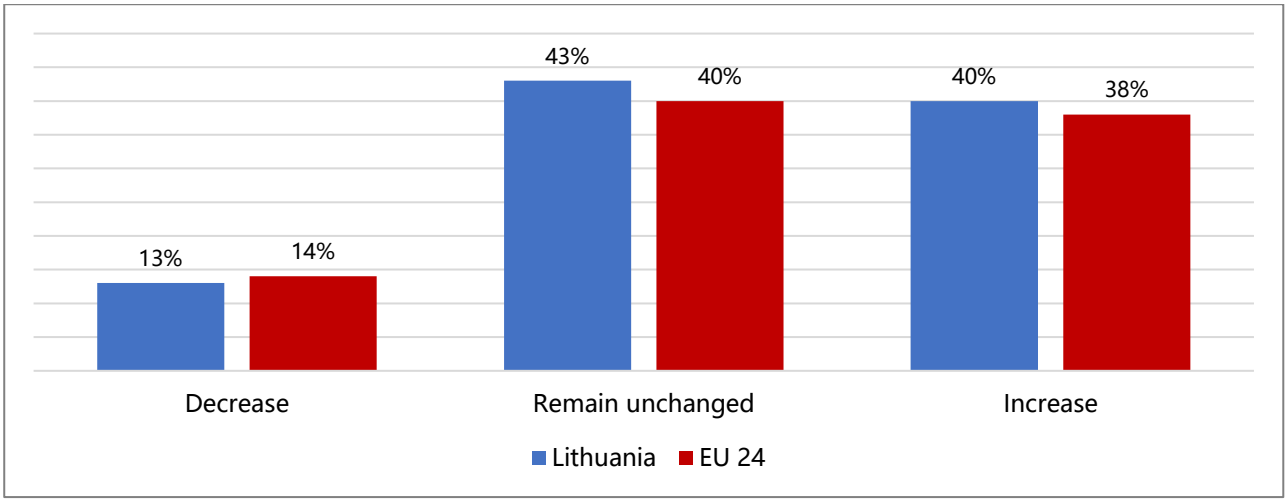
The widespread lack of financial understanding among micro enterprises is an important reason as to why they are not applying for financing. The complexity of the loan application procedure, the difficulties in

drafting business plans that are able to meet banks' requirements, as well as the cost of relying on external consultants lead Lithuanian enterprises to opt for other sources of finance, or to simply abstain from applying for loans altogether.

Firms may also be discouraged from applying for finance due to the lack of credit history of the company, where firms may be aware that this deficiency is a reason that will lead banks to turn their application down, as discussed above. In addition, the relatively high share of refusals, i.e. agri-food firms that turn loan offers down, may to some extent be explained by the unrealistic expectations of the agri-food companies in relation to the credit available to them, and the cost thereof. These unrealistic expectations would be another symptom of the low level of financial literacy of the sector according to interviews.

Financial needs are expected to increase in the coming years. Approximately 43% of Lithuanian enterprises in the Agri-food survey replied that financial needs for the next two-three years will remain unchanged, whilst 40% expect an increase. Only 13% are expecting a decrease. All these expectations are similar to the EU 24 average (Figure 26).

Figure 26: Agri-food companies' expectations on future financing needs, 2018



Source: Agri-food survey.

The need for alternative means of financing (such as venture capital funds, pooled financing, and business angels) is mostly felt by small-sized businesses[89]. Approximately a quarter of companies mentioned this need for alternative sources of finance. 45% of small-sized companies have the greatest need for such sources. At the same time, small-sized businesses would be most inclined to change existing sources of finance (for example, from traditional ones such as bank loans to alternative ones). This is likely due to the banks' stricter approach to credit risk for small-sized businesses. However, 68% of companies stated that they do not plan to change existing traditional sources of finance, mostly own resources, bank loans, leasing.

89 Bank of Lithuania, 2019, Corporate Survey Overview.

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

This section provides an overview of the financial environment in which the agri-food sector in Lithuania 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 Lithuanian agri-food sector

- All banks and credit unions serve the agri-food sector, but the most prominent bank is also Luminor. The high concentration of the supply of finance to the agri-food sector leads banks to be more selective with their clientele.
- Currently, the market offers products for investment loans, leasing for machinery and equipment, and financing of working capital, such as credit line and working capital loans.
- Businesses operating in the agri-food sector whom are not farm managers, can use support from INVEGA, a financial entity incorporated by the State to support businesses, with a similar way of operating to the ACGF.
- INVEGA manages financial instruments financed by the current European Structural and Investment Funds (ESIF) and revolving funds from previous programming periods, allowing small and medium-sized enterprises to start or expand their activities with a soft loan and through access to guarantees. There are no EAFRD financed financial instruments in the current RDP programming period.
- The results of the recent survey conducted by the Bank of Lithuania show that lending conditions of banks and other credit institutions to companies have been tightening recently.
- Interest rates have increased lately in Lithuania, in contrast to the general trend for the EU 28, reflecting the increasing concentration on the banking market.
- Although overall lending to the agri-food sector is likely to have increased over the last few years, a significant constraint of supply of finance to small-sized agri-food firms has been identified.
- The supply constraints identified include: (i) concentration of supply of finance to the sector leads banks to be selective with its clientele, and (ii) low profit margins of the sector means banks request high guarantees, which the companies often cannot provide.

3.3.1. Description of finance environment and funding availability

3.3.1.1. Finance Providers

Banks and credit unions serving the agri-food sector are the same as for the agriculture sector. No specific market shares for the agri-food sector are available, as banks treat the agri-food sector on equal terms to other economic sectors. The three largest banks, as already mentioned, all Scandinavian owned, control over 80% of the finance market in Lithuania. Luminor is understood by stakeholders to have the largest lending to the agri-food sector, and to be the bank with the highest level of expertise of the sector. The sector also counts 64 credit unions[90]. The detailed description of the finance providers is presented in section 2.3.1.1 together with their approximate market share for the whole economy.

90 As of April 1, 2019.

Businesses operating in the agri-food sector, and not directly linked with agriculture by ownership, can use support from INVEGA, which is very similar to the ACGF presented in section 2.3.1.2, but where INVEGA is designed for all sectors of the economy except agriculture. INVEGA is a financial entity incorporated by the State to support businesses in Lithuania. The main objectives are the provision of financial services, and the implementation and administration of financial instruments and other support measures for SMEs.

3.3.1.2. Financial Products

The market currently offers products for investment loans, financing for leasing machinery and equipment, and financing of working capital such as credit line and working capital loans, according to interviews and publicly available information from banks and credit unions. A description of financial products available to the agriculture sector is presented in section 2.3.1.2. The products available to the agri-food sector are very similar, but the loan conditions, particularly the interest rate, is often more advantageous for agri-food companies, particularly for larger enterprises. For the agri-food industry there are products available for medium and long-term investment loans, finance for leasing of machinery and equipment, finance for working capital such as credit line and working capital loans. In 2019, the average interest rate for the industrial sector was approximately 3.1%, and according to bank interviewees, it is the same for the agri-food sector[91].

The main institution providing state supported financial support to the agri-food sector is the ACGF but also INVEGA plays a role. The ACGF is supporting activities, which include and are related to primary agriculture (activities presented under section 2.3.1.2)[92]. Companies working in the agri-food sector, but not linked directly with agricultural production (hence, not farm managers) and not using financial support from the RDP, have the possibility to use support from INVEGA. According to interviews, in theory, agri-food companies could use INVEGA instruments. But, in practice they tend to use support from the ACGF. Agri-food businesses are considered as an extension of the agriculture sector and are therefore foremost supported with instruments developed by the Ministry of Agriculture. Other businesses are under the supervision of the Ministry of Economy and Innovation and supported through their instruments. INVEGA is available to SMEs from the whole economy and supports economic activities which are not primary agriculture activities. All their instruments are developed based on EU regulation 1407/2013 (*de minimis* regulation)[93].

INVEGA manages financial instruments financed by the ESI Funds, with the exception of EAFRD-funded ones, and resources paid back from financial instruments from previous programming periods allowing SMEs to start or expand their activities with a soft loan and guarantees.

- **Loans:** INVEGA targets SMEs, and the agri-food sector consists mainly of SMEs, whereby these would be qualified for applying for INVEGA's instruments. However, few stakeholders seem to be using this option today. INVEGA offers different types of loans provided through financial institutions under different conditions.
    - Soft loans under the instrument called *Entrepreneurship Promotion Fund 2014-2020* offers loans for newly established and young businesses with financing up to EUR 25 000.
    - Soft loans provided under the instrument *Open credit fund 2* are designed for business development (both investment and working capital loans) and offers SMEs financing of up to EUR 600 000.
    - *Risk-shared loans financed by the European Regional Development Fund (ERDF)* offer loans for SMEs of up to EUR 4 million. The instrument is based on the principle of lending with the proportion of 45:55, under which the partnering financial institution selected under the instruments contributes by 55% of its own funds to each loan (including credit line) and the remaining 45% of the risk is shared with INVEGA using the ERDF resources.

91 Bank of Lithuania, 2019.

92 INVEGA and the ACGF distinguish their clients based on NACE codes. Instruments administered by Agricultural Credit Guarantee fund are developed following EC Regulation 702/2014 and 651/2014 and not the de *minimis* regulation.

93 De *minimis* regulation has a threshold of EUR 200 000 for business enterprises and only EUR 20 000 for agriculture. That is why the agriculture sector has a different set-up of support instruments.

- *Start-up loan*. A preferential loan of EUR 25 000 with INVEGA guarantee is offered to small-sized firms and new entrants whose preference is for those with 1-10 employees. The loan is offered during the first year of operation of the business.

- **Credit guarantees.** Businesses applying to banks and other credit institutions for loans to start or grow their business often face the challenge of collateral not being attractive or adequate enough for the bank or the credit institution. INVEGA helps to overcome this challenge by offering individual and portfolio guarantees to financial intermediaries covering up to 80% of the loan.
- **Export credit guarantees** issued by INVEGA are aimed at encouraging the growth of export volumes by helping to expand Lithuanian market shares in countries of non-marketable risk, and by minimising the potential risks stemming from default from a trade partners, by covering up to 90% of losses when a buyer fails to honour a contract or goes bankrupt.

INVEGA offers to the SME clients also different types of grant support:

- With the instrument 'Partial financing of Loan Interest', INVEGA provides businesses compensations of up to 100% of the interest paid.
- Borrowers of soft loans under the financial instrument 'Entrepreneurship Promotion Fund 2014-2020' are eligible for compensation of up to 75% of labour costs for every employee working under an employment contract with the instrument 'Business Start-up Subsidies'.
- Partial financing of staff training under the instrument 'Competence Voucher' offers compensations of up to EUR 4 500 for training over a period of 12 months.
- Businesses can receive compensation of their counselling expenses on export, business start-up and development or more efficient use of resources and conservation of natural resources with the instruments 'Expo Consultant LT', 'Eco Consultant LT' and 'Business Consultant LT'.

In addition, INVEGA aims to grow the Lithuanian venture capital market and broaden the availability of capital for start-ups and growing private companies. Venture capital funds, together with partners-private investors provide investments and financial advice. The Baltic Innovation Fund launched by the European Investment Fund in close cooperation with the Governments of Lithuania, Latvia and Estonia aims to boost equity investments made into SMEs with high growth potential.

Information about the available preferential loans is not well known, and the application procedure is complex. Agri-food stakeholders have not expressed a clear view about the functioning of the INVEGA instruments during the interviews. They confirm that the instruments are to some extent used by the sector and that the agri-food sector is treated as any other business sector when applying. Some academic interviewees have claimed that the uptake of loans facilitated through INVEGA is not optimal due to the limited flexibility of the instrument and the relatively complicated application procedure associated with the access to the preferential loans. Information about the activities supported by INVEGA are not well communicated, whereby often agri-food companies do not know what possibilities of obtaining loans that exist, they may not even know about the existence of the mechanism as such. Hence, there seems to be room for improvement in awareness raising and promotion of the activities supported by INVEGA amongst the agri-food sector actors.

3.3.1.3. Description of financing market

In 2018, banks operating in Lithuania continued its active lending, maintaining good financial health but the increasing concentration of the bank sector is a concern[94]. High concentration in the banking sector poses structural risks as the domestic economy becomes more dependent on the financial health of individual banks. At a real estate conference in Vilnius in November 2019, a member of the Board of the Bank of Lithuania expressed concerns about the increased concentration of banks in the country. An opinion was expressed that the consolidation in the sector have led to significant concentration of banks in the country.

94 Bank of Lithuania, 2019, Financial Stability Review.

One of the main impacts from the increasing concentration of banks in the market is the interest rate dynamics. Increasing interest rates mean consumers do not get the best option. According to the Bank of Lithuania, in 2015, interest rates in Lithuania were amongst the lowest in the Eurozone but the situation changed in 2019 and currently interest rates are above the Eurozone average. In the last four years, the increase of interest rates is the highest in the Euro area and up by 0.8%. According to the Bank of Lithuania, mortgage rates in Lithuania stand at approximately 2.3%, compared with the euro area average of 1.8%. Hence, a few other conditions have changed, but interest rates have increased, this leads to the conclusion that banks are more selective in their clientele and access to finance is becoming harder for many businesses.

Lending conditions have been tightening over recent years. No official statistics and data regarding the financial performance and balance sheet status of businesses operating in the agri-food sector is available. However, according to interviews with bank representatives, financing of the agri-food sector is very similar to that of other sectors in the economy.

At the end of 2017, banks operating in Lithuania slightly tightened their credit standards[95] and terms and conditions[96] for enterprises. According to the Bank Lending Survey (BLS Survey) conducted in Lithuania, credit standards for both small and medium-sized enterprises (SMEs) and larger enterprises tightened similarly. Banks also reported to have increased loan interest margins for enterprises. The main reason for tightening credit standards, as well as lending terms and conditions for enterprises was due to a decline in risk tolerance by financial providers.

This trend is also confirmed by the results from the survey conducted by the Bank of Lithuania in 2019. Almost half of the companies surveyed indicated that lending conditions for businesses are now wholly or partially restricted. This is particularly the case for small and service companies (54% and 51% respectively). Although the share of respondents who had this opinion was similar to the previous year, a stronger increase in the number of rejected applications for new credit or the modification of an existing credit is indicative of a stricter credit assessment[97].

Lithuania attracts substantial foreign investments and in 2018, the share of such inflows in the agri-food sub-sector accounted for 20.8% of total foreign investment in the manufacturing sector[98]. At the end of 2018, the aggregated foreign direct investment in the Lithuanian agri-food sector was EUR 585.6 million. In 2018, the average foreign direct investment per agri-food enterprise was 30% higher compared to that in 2014. This positive trend is explained by the 42.5% increase in the number of enterprises with foreign direct investments during the period under review. Amongst the foreign investors, those from the United Kingdom ranked first, accounting for 23% of the total direct investment in agri-food, followed by Switzerland at 22.4% and France at 11.1%. In addition to benefiting from foreign direct investments, large-sized firms also increasingly obtain finance from capital markets[99].

95 BLS Lithuania, 2018, Credit standards are internal regulations of a bank it follows in granting loans. They define the borrower's criteria acceptable to the bank: income, assets held, age, and employment. Standards are established prior to negotiating borrowing terms and conditions with customers and prior to taking a decision on granting a loan or rejecting the application.

96 BLS Lithuania, 2018, Credit terms and conditions are conditions under which the bank agrees to borrow: the amount of loan and collateral, maturity, margin on the loan, benchmark interest rate index associated with the lending margin, additional charges (conclusion, administration of the contract, etc.).

97 In the small business segment, the percentage of rejected applications increased from 40% to 61%. The total percentage of rejected applications increased from 22 to 27%. According to companies, credit institutions often do not motivate their negative decisions. In other cases, poor financial position (35%) and risky overall economic situation (19%) are the most common reasons for rejection.

98 Lietuvos žemės ir maisto ūkis, 2018. Kolektyvas: R. Melnikienė – vadovė [et. al.]. V, 2019, Lietuvos agrarinės ekonomikos institutas, 216 p.; iliustr., lent., reziumė (angl.) ISSN 2029-4980 (online), ISSN 1822-5101.

99 Interviews.

3.3.2. Analysis of the supply of finance

For the Lithuanian economy as a whole, the demand for business loans grows rapidly. The share of business loans continues to grow steadily. After adjusting for loan repayments, the business loan portfolio grows by approximately 4% every year. With an economy-wide total outstanding loan volume of EUR 13.02 billion in 2019, business financing has been growing by 10% on average since 2015[100]. For the agri-food sector, the increase of 15% of investments undertaken in tangible assets between 2014-2018 (as presented in section Drivers of total demand for finance), is an indicator that demand for, as well as supply of, finance is on a growing trend.

Increased lending has mostly benefitted the large agri-food companies. Several interviewees both from the public administration and the agri-food sector have underlined the difference between large and small-sized companies with regard to access to finance, indicating that the increasing lending to the sector is likely to be mostly provided to the larger companies. According to interviewees, larger companies usually have experienced financing staff and can benefit from the funding offered by banks, whilst small-sized businesses without that experience face challenges in seeking finance. The study of the Central bank of Lithuania study clearly shows the reluctance by many banks to work with smaller enterprises. Representatives of the Lithuanian Small and Medium Business Council says that small-sized businesses in the country have had almost no access to credit from banks for nearly a decade.

The small-sized enterprises, with up to nine employees, according to the same source, are practically not considered by the banking system. The Association of Lithuanian Banks does not deny that the number of rejected applications has increased, but says that it is related to the general need for increased borrowing and lack of understanding of financing terms and conditions from some enterprises. According to a number of interviewees, the fact that banks provide medium-sized companies credit (up to 249 employees), eases credit statistics and hides the real problems faced by the smaller companies.

The increasing concentration of the banking sector leads banks to be more selective in their clientele and allows them to request higher interest rates, as for the agriculture sector. The agri-food sector is generally characterised by low profit margins whereby their repayment capacity is questioned. Although banks' have the resources to provide loans, they are reluctant to lend to the sector due to their high risk perception. In addition, the majority of the sector is made up of SMEs, which in general, have a harder time negotiating the financing conditions and dealing with the administrative part related to taking out a bank loan. Therefore, the supply of finance to the smaller agri-food businesses is likely to be constrained on the Lithuanian market.

100 According to the analysis of the Association of Lithuanian Banks.

3.4. Financing gap in the agri-food sector

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

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

- The financing gap for the agri-food sector is estimated to be EUR 20.2 million.
- Small-sized agri-food firms (less than 50 employees) account for the largest share of the financing gap, meaning their access to finance is the most constrained.
- The gap is the highest for long-term financing.
- The sector's limited profit margins, whereby the repayment capacity is weak, increases the banks' risk perception, leading to higher request for collateral and own funds.
- In addition, the lack of credit history, and lack of knowledge and appropriate business plans are common reasons for banks to reject loan applications.
- Furthermore, the concentration on the banking market means banks are more selective of their clientele which leads them to have limited interest in lending to small-sized firms.
- The ACGF and INVEGA manage financial instruments available on the Lithuanian market to agri-food enterprises, but access to the instruments could be improved, facilitated by improved dissemination activities.

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.

Financing gap = Number of firms X percentage of firms that are both financially viable and have unmet demand X average loan volume

All the calculations are based on the results of the Agri-food survey for Lithuanian firms (see Annex A.6 TG II: Agri-food survey for more information). The methodology used for calculating the gap is the same as the methodology used for the agriculture sector (see Annex A.3 Methodology for financing gap calculation).

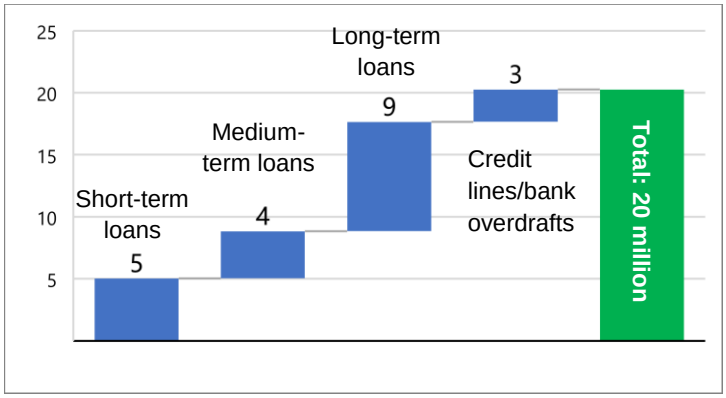
The financing gap arises from unmet financing demand from economically viable firms[101]. The unmet demand for finance includes

(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 report, '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.

101 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 27: Financing gap by product in the agri-food sector, 2018, EUR million



Source: Agri-food survey.

The financing gap for the Lithuanian agri-food sector is estimated to be EUR 20.2 million (Table 13). According to this estimation, the unmet financing need concerns mainly the small-sized firms. This result is confirmed through interviews with stakeholders, having pointed out the particular difficulties for small-sized firms in accessing finance. The type of products for which the gap is the largest are long-term loans (Figure **27**).

Table 13: Financing gap by agri-food firm size and product, 2018, EUR million

	Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Small-sized firms	**11.9**	2.7	2.3	5.3	1.6
Medium-sized firms	**5.9**	1.8	1.0	2.4	0.7
Large-sized firms	**2.4**	0.5	0.5	1.1	0.4
Total	**20.2**	**5.0**	**3.8**	**8.8**	**2.7**

Source: Agri-food survey.

The financing gap in the agri-food sector is driven by a combination of factors affecting the demand and supply.

- Low profit margins experienced by the sector generate repayment difficulties and leads banks to be reluctant to lend to the sector as a whole.
- This affects particularly small-sized enterprises who have difficulties with providing own resources or collateral, in order to be able to take up a loan.
- In addition, the lack of credit history of many companies imposes a further complication in obtaining bank loans.
- Lack of knowledge and/or understanding of financial products amongst small-sized agri-food companies, resulting in poor business plans, and unrealistic expectations of the conditions that can be offered to them.
- The financing conditions provided by credit institutions to companies are strict and complicated. These conditions are significantly tightening especially for small-sized companies.

Almost 60% of the overall gap may be attributed to small-sized firms, and start-ups experience particular difficulties. The financing gap for small-sized firms is calculated to be EUR 12.1 million. The fact that small-sized firms represent a large part of the gap can be explained by the high entry barriers for small-sized new firms and new entrants, as described in previous sections. In addition, the lack of an appropriate business plan is a large contributing factor, together with the banks general unwillingness to work with small-sized firms, imposing worse loan conditions on the smaller loans.

Start-ups are expected to face particular difficulties related to access to finance. Small-sized firms, particularly those that are new entrants and have no banking history and who lack sufficient collateral, have difficulties in obtaining any kind of loan. According to interviews, the start-up loan offered by INVEGA has somewhat eased the situation for start-ups during their first year of activities. However, this product is only offered during the company's first year, whereby the continued activities may encounter problems.

Efforts are made to close the financing gap, and ease access to finance for the agri-food sector, but additional efforts could be undertaken. Support provided from the RDP for the processing and marketing of agri-food products is an important factor in accessing finance, as banks assess loan applications accompanied by a grant in a more favourable light. However, the amounts are limited and competition for projects amongst companies is tight. In addition, the preferential loans provided by INVEGA and the ACGF help easing the situation for SMEs in the agri-food sector. Even so, additional effort could be made in order to increase the access to finance by small agri-food enterprises, for example by scaling up the current size of the instruments, simplifying the administrative procedures, improve awareness raising and information on the available financial products, and offering technical assistance to the enterprises.

3.5. Conclusions

Investments in tangible assets undertaken by the agri-food firms are on a positive trend, and so is the lending to the sector. Demand for finance is driven by investments in capacity expansion, in order to increase economies of scale and investments, in order to reduce costs and improve productivity, in particularly labour productivity, are often also linked to expansion of production. In addition, the need for modernising and improving production standards in response to changing consumer demand is an important dynamic, which is driving agri-food enterprises investments in Lithuania, underpinned by the quest for competitiveness within the EU market. At the end of 2018, the aggregated foreign direct investment in the Lithuanian agri-food sector was EUR 585.6 million. In 2018, the average foreign direct investment per agri-food enterprise was 30% higher compared to that in 2014. This positive trend is explained by the 42.5% increase in the number of enterprises with foreign direct investments during the period under review.

The financing gap of the sector is estimated to be EUR 20.2 million. The small-sized firms and start-ups are the ones most suffering from access to finance, and in particular, the supply of long-term loans seems to be under stimulated. The unmet demand for finance identified is due both to relatively high rejection levels and an important share of firms being discouraged from applying for finance due to fear of being rejected. Agri-food firms are rejected on their loan applications primarily due to:

- Poor financial results;
- Risky economic situation (both factors leading banks to ask for higher collateral);
- Lack of credit history; and
- Lack of an appropriate business plan.

In addition, the lack of sufficient financial literacy to successfully fulfil loan applications' procedures also discourage enterprises from applying for finance.

Constraints on the supply side have also been identified, with banks showing a limited interest in lending to small-sized firms. Tight terms and conditions for loans, partly due to the increased concentration of the banking sector, and partly related to the limited economic profits of the agri-food sector, means financing is difficult to obtain for small-sized agri-food enterprises.

In particular, the following recommendations to improve the current offer of financial instruments could be considered:

- The portfolios of the ACGF and INVEGA could be scaled up to ensure support to more actors active in both the agriculture and agri-food sectors.
- To improve access to finance among small agri-food enterprises, the existing financial instruments, administered through ACGF and INVEGA could be reviewed and simplified. The application and administration procedures could be digitalised, for example. To save time and reduce costs for potential users and administrative staff, data requests could be linked with already functioning official registers and databases.
- Dissemination of information on the different preferential loan products available through INVEGA for enterprises from the agri-food could be enhanced.
- To ease access to the credit market, technical support to improve firms' financial literacy could be provided, with a focus on small and new enterprises. This could be achieved by enhancing the financial support provided by ACGF or INVEGA through advisory services.

ANNEX

A.1. References

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A.2. Stakeholders interviewed

Type of Organisation	Name of Institution	Address and Website
Government	Ministry of Agriculture	Gedimino Ave.19, LT-01103 Vilnius, Lithuania www.zum.lt
Government	Ministry of Agriculture	Gedimino Ave.19, LT-01103 Vilnius, Lithuania www.zum.lt
Government	Ministry of Agriculture	Gedimino Ave.19, LT-01103 Vilnius, Lithuania www.zum.lt
Government	Ministry of Agriculture	Gedimino Ave.19, LT-01103 Vilnius, Lithuania www.zum.lt
Professional Organisation	Lithuanian Chamber of Agriculture	K.Donelaičio g.2, 44213 Kaunas, Lithuania www.zur.lt
Professional Organisation	Lithuanian Chamber of Agriculture	K.Donelaičio g.2, 44213 Kaunas, Lithuania www.zur.lt
Professional Organisation	Union of Family Farms	K.Donelaičio g.2-222, Kaunas 44213 Kaunas, Lithuania www.seimosukiai.lt
Professional Organisation	Association of Agricultural Companies	Tilto g. 35-6, 01101 Vilnius www.lzuba.lt
Professional Organisation	Lithuanian Young Farmers Union	K. Donelaičio g. 2 Kaunas LT – 44213, Lithuania www.jujs.lt
Professional Organisation	Lithuanian Association of Cereal Growers	K. Donelaičio g. 1 Kaunas LT – 44213, Lithuania www.lgaa.lt
Professional Organisation	Lithuanian Milk Producer Organisation	K.Donelaičio g.2, LT-44213 Kaunas, Lithuania www.pienogamintojai.lt
Professional Organisation	Association of Lithuanian Meat Processors	K.Donelaičio g.2-116, LT-44213 Kaunas, Lithuania www.lmpa.lt
Professional Organisation	Association of Lithuanian Dairies	Perkūnkiemio g. 3, LT-12127 Vilnius, Lithuania, www.pieno-centras.lt
Professional Organisation	Lithuanian Farmers Union	K. Donelaičio g.2, LT- 44213 Kaunas, Lithuania www.lus.lt
NGO	PienasLT Agricultural Cooperative, food processing	Kokybės g. 1, Biruliškių kaimas, Kauno r., LT-54469, Lithuania www.pienaslt.eu
NGO	'Lietuviško ūkio kokybė' Agricultural Cooperative	K. Donelaičio g. 2, Kaunas, Lithuania http://beta.mobilusturgelis.lt

Type of Organisation	Name of Institution	Address and Website
NGO	'Joniškio aruodas' Agricultural Cooperative	Sandelių g. 5, Joniškis, LT- 84165, Lithuania www.joniskioaruodas.lt
Financial institution	Limited stock company 'Paskolų garantijų fondas' (Agricultural Credit Guarantee Fund)	Blindziu str. 17, LT-08111 Vilnius, Lithuania www.garfondas.lt
Bank	Luminor	Konstitucijos pr. 21A, 03601 Vilnius, Lithuania, www.luminor.lt
Bank	Šiaulių bankas	Šeimyniškių g. 1A LT-09312 Vilnius, Lithuania www.sb.lt
Bank	Swedbank	Konstitucijos pr. 20A Vilnius, LT- 03502, Lithuania www.swedbank.lt
Bank	Medicinos bankas	Paměnkalnio g. 40, LT-01114 Vilnius, Lithuania, www.medbank.lt
Professional organisation	Association of Lithuanian Banks	Konstitucijos pr. 7, LT-09308 Vilnius, Lithuania www.lba.lt
Credit Union	The Lithuanian Central Credit Union (LCCU)	Savanorių pr. 363-211, Kaunas LT-51480, Lithuania www.lku.lt
Research	Lithuanian Institute of Agrarian Economics	V. Kudirkos g. 18–2,LT- 03105 Vilnius, Lithuania www.laei.lt
Research	Vytautas Magnus University Agriculture Academy	Universiteto St.10, room 323, LT- 53361 Akademija Kaunas district, Lithuania https://zua.vdu.lt/
Research	Vytautas Magnus University Agriculture Academy	Universiteto St.10- 404, LT-53361, LT-53361 Akademija Kaunas district, Lithuania https://zua.vdu.lt/
Research/ Consultancy	'Europos socialiniai, teisiniai ir ekonominiai projektai' ESTEP	Olimpiečių g. 1A-26, LT-09235 Vilnius, Lithuania www.estep.lt
Government	Permanent Representation of Lithuania to the EU	Belliard Street 41/43, 1040 Brussel, Belgium

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**:

1. $\boldsymbol{Rejected}$ **credit applications** include applications that are rejected by banks (or other credit organisations) and offered from banks but turned down by the farmers/firms.
2. **The share of $\boldsymbol{Viable}$ firms is measured by** the share of total firms that have a non-negative turnover growth[102] 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).
3. **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

$\boldsymbol{Rejection\ Rate^{Viable}}$ **:** 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.

$$Rejection\ Rate_j^{Viable} = \frac{Number\ of\ Rejected\ Viable\ Firms}{Total\ survey\ population_j}$$

with and $j = Short - term\ , Medium - term, Long - term\ Loans, Credit\ lines.$

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

$$Discouraged\ Rate_j^{Viable} = \frac{Number\ of Discouraged\ Viable\ Firms}{Total\ survey\ population_j}$$

with and $j = Short - term\ , Medium - term, Long - term\ Loans, Credit\ lines.$

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

$$Unmet\ demand\ Rate_j^{Viable} = Rejection\ Rate_j + Discouraged\ Rate_j$$

Step 2: Number of farms rejected or discouraged

$\boldsymbol{N.of\ Farms\ in\ unmet\ demand_{ij}^{Viable}}$: 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 TG I, 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

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

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.

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

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

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

for $i = Small, Medium, Large$
and $j = Short - term\ , Medium - term, Long - term\ Loans, Credit\ lines.$

Step 3: Standard Loan Application Size

$\boldsymbol{Application\ Size_{ij}}$: 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.

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

for $i = Small, Medium, Large$
and $j = Short - term\ , Medium - term, Long - term\ Loans, Credit\ lines.$

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

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

The methodology for the gap calculation for TG II is the same as for TG I, but no lower limit on the size of enterprises is applied in step 2 (all enterprises in the population are included in the calculation). For Target Group II, we obtain each component of the financing gap formula from the following questions in the Agri-food survey of Target Group II carried out in mid-2019:

- ***Lending/funding applied to***: For what kind of finance did you apply in 2018 and with what amount?
- ***Lending not applied to***: For what reasons did you not apply for some kind of finance?
- ***Rejected*** **:** What was the result of your application?
- **Viability**: Has the following company indicator changed in the last year: Turnover ?

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

For Lithuania, Table 14 and Table 15 report the elements used in the calculation of the financing gap for the agricultural and agri-food sector, respectively.

Table 14: Elements for the calculation of the financing gap in the agriculture sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Lower bound: farms with a non-negative turnover growth and no cost increase	*Share of respondents rejected by creditor or farmer*	2.95%	2.95%	3.36%	0.98%
	Share of respondents that have not applied because of possible rejection	3.94%	3.94%	4.92%	3.94%
	Total (sum of rejected and discouraged)	**6.89%**	**6.89%**	**8.28%**	**4.92%**
Upper bound: farms with a non-negative turnover growth	*Share of respondents rejected by creditor or farmer*	7.14%	6.00%	4.60%	1.01%
	Share of respondents that have not applied because of possible rejection	10.12%	10.14%	13.95%	12.16%
	Total (sum of rejected and discouraged)	**17.26%**	**16.14%**	**18.54%**	**13.17%**
Total unmet demand: all farms	*Share of respondents rejected by creditor or farmer*	11.33%	9.20%	7.75%	1.01%
	Share of respondents that have not applied because of possible rejection	12.32%	13.57%	17.45%	14.83%
	Total (sum of rejected and discouraged)	**23.65%**	**22.78%**	**25.20%**	**15.84%**
Farms with constrained access to finance, **lower bound**	*Small-sized farms*	4 880	4 880	5 865	3 486
	Medium-sized farms	1 194	1 194	1 435	853
	Large-sized farms	364	364	437	260
Farms with constrained access to finance, **upper bound**	*Small-sized farms*	12 221	11 429	13 128	9 321
	Medium-sized farms	2 990	2 796	3 212	2 280
	Large-sized farms	911	852	979	695
Standard loan application size	*Small-sized farms*	EUR 10 974	EUR 26 621	EUR 73 418	EUR 9 908
	Medium-sized farms	EUR 13 904	EUR 25 302	EUR 79 719	EUR 10,990
	Large-sized farms	EUR 41 009	EUR 64 389	EUR 143 543	EUR 58 531

Source: fi-compass survey.

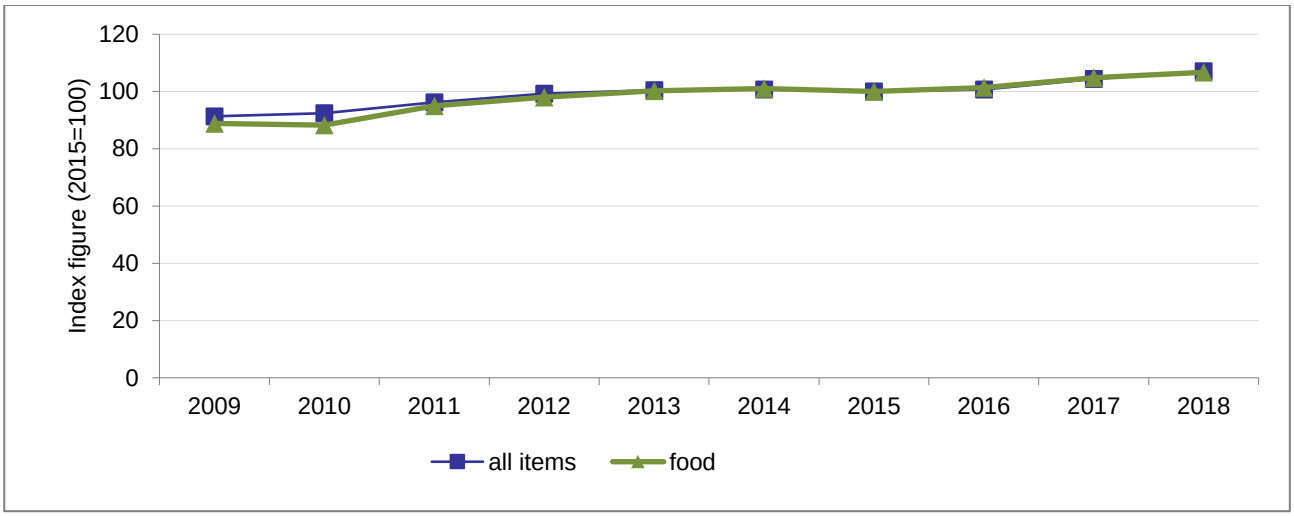
Table 15: Elements used for the calculation of the financing gap in the agri-food sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Firms with a non-negative turnover growth	*Share of respondents rejected by creditor or firms*	1.69%	0.38%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	1.69%	1.69%	1.69%	1.69%
	Total (sum of rejected and discouraged)	**3.38%**	**2.07%**	**1.69%**	**1.69%**
Total unmet demand: all firms	*Share of respondents rejected by creditor or firms*	1.69%	0.38%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	1.69%	1.69%	1.69%	1.69%
	Total (sum of rejected and discouraged)	**3.38%**	**2.07%**	**1.69%**	**1.69%**
Firms with constrained access to finance	*Small-sized firms*	53	33	27	27
	Medium-sized firms	4	3	2	2
	Large-sized firms	1	1	1	1
Standard loan application size	*Small-sized firms*	EUR 85 601	EUR 108 073	EUR 315 389	EUR 115 869
	Medium-sized firms	EUR 1 065 982	EUR 557 057	EUR 1 350 202	EUR 473 260
	Large-sized firms	EUR 4 518 303	EUR 2 545 393	EUR 16 962 320	EUR 11 414 929

Source: Agri-food survey.

A.4 Data from the agriculture statistical factsheets

Figure 28: Evolution of harmonised indexes of consumer prices, 2009-2018



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

A.5 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 16) reports the number of respondents by Member State.

Table 16: *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.6 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 17 reports the sample size per country.

Table 17: Agri-food survey sample size per Member State

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

Source: Agri-food survey.

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

A.7 Information on specific financial instruments

The Loan Portfolio Guarantee. Currently, the ACGF administers a Loan Portfolio Guarantee, which is financed by repayment of funds and interest accrued from the financial instrument of the Lithuanian RDP 2007-2013[103]. It is provided in the form of *de minimis* aid[104] and several commercial banks and credit unions have signed an agreement with the ACGF in order to be able to offer the loan.

The portfolio guarantee support farmers and agricultural cooperatives in obtaining loans for replenishment of working capital and/or the acquisition of assets in case of insufficient collateral. The guarantee provided allows riskier operators to obtain funding and facilitate their expansion or modernisation. The AGCF provides:

(i) guarantees of 80% to the credit institution[105];

(ii) repayment of the outstanding portion of the loan to the credit institution in case the borrower fails in repayment; and

(iii) partial interest compensation (the loans are provided with lower interest margin than market-based loans, and the interest rate may not exceed 5%).

In addition, the loans guaranteed by the Loan Portfolio Guarantee Facility have lower administration fee (may not exceed 0.5% of the loan amount). The borrower must invest at least 10% of his own funds in the investment project for which the credit is granted.

103 During the RDP programming period 2007-2013, the ACGF administered a Loan Fund, funded through the RDP. EUR 39 million was used for this measure. As a result of the implementation of this financial instrument, the repayment to the RDP over the past years has been EUR 6.3 million, allowing for the implementation of new financial instruments.

104 Under European Commission Regulations (EU) No 204/2010. 1408/2013 and Nr. 1407/2013.

105 In addition, the guarantee fee is paid not by the borrower but by the credit institution providing the loan portfolio guarantee.

Table 18: Type of loans guaranteed by the Agricultural Credit Guarantee Fund

Type of loan	Investment loans	Working capital for short-term and biological assets, and services
Maximum size	EUR 1.16 million	EUR 1.16 million
Purpose	Purchase, construction and reconstruction of industrial real estate. Acquisition of agricultural, forestry and other machinery, equipment, technological lines, special vehicles, land, computer hardware-software, and other long-term assets.	Purchase of fertilisers, seeds, plant protection products, fuel and other commodities related to farm activities, and purchase of agricultural products. Purchase of biological assets (perennials, livestock and other animals) and services, including leasing (services listed in the Annex to the Fund's Guarantee Provisions).[106]
	Portfolio guarantees target group	
Portfolio guarantees are granted to credit institutions for lending to:	• Agricultural entities; • Processing companies of agricultural products; • Fisheries operators; • Rural communities and local action groups implementing investment projects funded by EU support funds; and, • Research and study institutions with experimental, demonstrative, educational or testing farms and implementing investment projects funded by EU support funds.	

Source: Agricultural Credit Guarantee Fund, 2019

A new loan instrument, facilitating access to preferential loans for agricultural machinery and equipment, is been in place since October 2019. In October 2019, the ACGF started the implementation of a new financial instrument 'Provision of agricultural machinery and equipment loans'. The facility is expected to provide nearly EUR 2.7 million in soft loans by the end of 2020. Also, this instrument is financed by the repayment of funds and interest accrued from the financial instrument of the Lithuanian RDP 2007-2013. EUR 2 million has been allocated to the instrument by the Ministry of Agriculture. Several credit unions[107] have signed agreements with the Fund in order to provide the preferential loans, and they will provide the remaining EUR 700 000.

The aim is to facilitate the access to loans for the purpose of buying agricultural machinery and equipment by agricultural entities engaged in the primary production of agricultural products. According to representatives of the ACGF, the previous soft loan instrument (working capital loans for machinery) has been very effective, so now the Fund can offer loans for both new and used agricultural machinery and equipment once the previously borrowed funds have been returned. The loans will be granted on more favourable terms than market conditions.

The credit unions will provide these loans for a maximum period of six years, the maximum amount of loans for agricultural machinery and equipment is EUR 70 000, which will be provided in accordance with the internal credit union procedures. Agricultural entities will be able to obtain loans on more favourable terms, in line with the terms offered for the Loan Portfolio Guarantee Facility. The total annual interest rate for loans under this measure may not exceed 5%, and the loan administration fee may not exceed 0.5% of the loan amount. Borrowers with guaranteed loans may be reimbursed up to 80% of the interest paid to credit unions for the first

106 The Company guarantees to credit institutions (leasing companies) up to 60% of the unrecovered part of the leasing price payment for assets purchased by the economic entities: new (unused) production equipment; new (unused) agricultural machinery other than parts for assembly; new (unused) agricultural and forestry machinery. From 1 November 2019, leasing guarantees are also provided for second-hand machinery. Leasing and guarantee terms are unlimited.

107 Raseiniai Credit Union, Ignalina Credit Union, Biržai Credit Union, Zanavykų bankas Bankel Credit Union and Kupiškėnų Taupa Credit Union.

three years, as well as 80% of the guarantee premium. Credit unions that provide loans will also have access to a guarantee on the loans provided, granted by the ACGF.

The new instrument has the same administrative rules as the instrument already in place, and no particular measures are put in place in order to give preferential access to small and/or young farmers.

Table 19: Uptake of guarantees, 2017-2019

Period	Number of beneficiaries	Amount, EUR million
2017	164	16.6
2018	223	21.6
2019	190	20.9

Source: Agricultural Credit Guarantee Fund, 2019.

Table 20: Uptake of guarantee fee compensation, 2017-2019

Period	Number of beneficiaries	Amount, EUR
2017	58	174 000
2018	77	290 000
2019	73*	300 000*

**Provisional data*
Source: Agricultural Credit Guarantee Fund, 2019.

Table 21: Uptake of interest compensation, 2017-2019

Period	Number of beneficiaries	Amount, EUR
2017	213	158 000
2018	252	376 000
2019	341*	630 000*

**Provisional data*
Source: Agricultural Credit Guarantee Fund, 2019.

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European Commission

European Investment Bank The EU bank