fi compass EAFRD

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

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European Commission

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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
CAP	Common Agricultural Policy
EAFRD	European Agricultural Fund for Rural Development
EBITDA	Earnings before interest, tax, depreciation and amortisation
EC	European Commission
EIB	European Investment Bank
EIF	European Investment Fund
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
EUR	Euro
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
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
ha	Hectare
RDP	Rural Development Programme

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

SME	Small and medium-sized enterprise[2]
SO	Standard Output
SZRB	Slovak Guarantee and Development Bank
UAA	Utilised Agricultural Area

2 Small and medium-sized enterprises (SMEs) are defined in the EU recommendation 2003/361.
The main factors determining whether an enterprise is an SME are: staff headcount and either turnover or balance sheet total. An enterprise is considered as micro, if it has less than 10 employees, as small-sized, if it has less than 50 employees, and as medium-sized, if it has less than 250 employees. https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

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EXECUTIVE SUMMARY

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

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

Financing gap for the agriculture sector in Slovakia

Investment in the Slovak agriculture sector has been declining in recent years, although it accounts for a high share of the overall Gross Value Added in the country, compared to the EU 28 average. At the same time, and especially since joining the EU in 2004, there has been a significant increase in the outstanding loan volume to the sector. Among the investments carried out by Slovak farmers, **three main drivers stand out**:

(i) The **expansion in the size of enterprises**. The average size of a Slovak farm is over 80 ha, which makes it five times larger than the EU 28 average. Increasing the economies of scale, while concentrating on labour extensive commodities, such as cereals and oilseeds, seem to be the objective. Structural duality continues to exist, with 80% of all farms categorised as small-sized family farms, which manage less than 20 ha on average.

(ii) The **modernisation of agricultural enterprises**. As in many other countries, farmers in Slovakia suffer from the weak position they occupy in the value chain. They face difficulties related to both the cost of inputs and the selling prices of their products. To overcome these barriers, Slovak farmers invest in the competitiveness of their enterprises and in solutions to better position themselves in the value chain.

(iii) **Improving production standards**. This driver comes in response to the growing consumer expectations and the desire to enable local businesses to better compete in the local, EU and global markets.

Loans are a major source of external financing in Slovak agriculture and their increased uptake has been supported by the inflows and actions resulting from the Common Agricultural Policy. The demand for grants under the EAFRD investment measures for on-farm modernisation is twice as high as the available budget. Young farmers are also searching for higher volumes of support. In addition, direct payment beneficiaries are seen by the banks as being low risk clients and direct payments are often accepted as a collateral for an equal share of liquidity. Small-sized farms face challenges accessing finance and remain the weakest part of the Slovak agriculture sector.

Farmers mainly apply for medium and short-term loans and mainly borrow for working capital needs. The main purpose of loans is to invest in machinery, buildings and equipment. While EU accession, in 2004, has accelerated the uptake in loans for investments in agriculture, since 2015, however, low interest rates have become the main driver of the demand for finance.

Financing supply, for its part, is provided by a group of six financial intermediaries with a long history and sufficient specialisation in the sector. They are also able to cover the Slovak rural area. Land market imperfections negatively affect the credit market. High fragmentation of land ownership hinders the use of land as a collateral. This is because many farms only own a portion of the parcels they cultivate and banks do not accept such partial ownership of land as collateral, due to the regulation of the National Bank of Slovakia. In many cases, buildings also cannot be used as collateral due to unclear property rights. Further, low land prices mean land is an insufficient source of loan collateral, even if the size of the land owned by the farm is large.

The report shows that there is a financing gap estimated to be between EUR 140 million and EUR 316 million. Around 60% of the gap value relates to small-sized farms (below 20 ha), while around 35% relates to young farmers. In terms of financial products, 60% of the financing gap relates to long-term investment loans. This market gap is comprised of separate components:

- Loan application rejections appear to be mostly related to a lack of assets that could be used as collateral. In this regard, it is also worth noting that, according to *fi-compass* survey data, requests for collateral or guarantees in Slovakia are more frequent compared to the EU 24 average. They also represent, on average, a higher percentage of the loan value amounts. Other important reasons for rejections include a poor, or lack of, credit history.
- The second component of the gap relates to the estimated value of loan applications that are not submitted by **farmers, who have a project which might be considered viable, due to discouragement from a possible rejection**. This financing gap component relates mainly to medium and long-term loans and can be tied to the farmer's lack of knowledge and familiarity with the banking system. This is especially the case for small-sized farms and young farmers who are just entering the market. Hence, farmers can miss potentially cost-effective investment opportunities.

Slovak farmers can rely on a well-developed and functional financial market, but banks are unwilling to work with small-sized farms and the bank products on offer are not adapted to the agriculture sector. In addition, the analysis highlighted that loan conditions are considered to be unfavourable in many cases. The state-owned Slovak Guarantee and Development Bank provides loans with subsidised interest rates. In addition, and in cooperation with two commercial banks, it offers guarantees to address collateral issues on the side of farmers. However, the uptake of the instrument by the sector is low.

RECOMMENDATIONS

Based on the EAFRD-EFSI feasibility study and the financial situation of the country, the managing authority is currently evaluating the possibility of setting up a pilot financial instrument under the EAFRD. This would contribute to easing the access to credit of Slovak farmers. However, the continuity of any potential financial instrument should also be insured for the 2021-2027 programming period, since it is unlikely that the instrument will be able to bring the market to full functionality by the end of the current programming period.

- An EAFRD guarantee fund may complement the support provided by the Slovak Guarantee and Development Bank and improve the access to finance for farmers (particularly young farmers) who lack sufficient assets. The financial instrument to be set-up should minimise the administrative costs for final beneficiaries.
- One of the constraints faced by small-sized farms is linked to the high interest rates applied by banks, due to the high risk perception of the sector and the lower profitability of small loans. For this reason, an EAFRD risk-sharing loan instrument might also be considered, as it would combine the provision of risk coverage with a reduction in the financing cost.
- The financial instruments should aim to increase the provision of long-term loans, which according to the analysis are less accessible, in particular for small-sized farms. To address this problem, a risk-sharing loan restructuring instrument might be more effective, since it would make part of the long-term financial provision needed to finance the enterprises available to banks.
- For both types of instruments, the opportunities offered by the new legal framework, such as the easier combination of financial instruments and grant support, or the possibility for young farmers to finance the purchase of land, might offer interesting opportunities to increase the effectiveness of the instrument for small-sized farms and new entrants.
- The combination of a financial instrument with technical support may also be beneficial, as this would increase the financial know-how of the sector, including in the preparation of business plans. This is of particular relevance to young farmers.

Financing gap for the agri-food sector in Slovakia

After a period of stagnation, the level of investments in the Slovak agri-food sector has been increasing since 2016. In 2018, total investment was 21% higher than in 2013.

There are four main drivers of investments in the agri-food sector:

(i) **The expansion of the agri-food production** to meet the overall growth objective of the agri-food sector. Agri-food firms are seeking to modernise and expand their production, and this requires long-term financing.

(ii) **Product differentiation and the production of specialised innovative food products** to satisfy consumer trends requires increased investment, including into packaging.

(iii) **Managing the shortage of skilled labour in the market** demands higher investments in labour saving technology, such as process automation.

(iv) **Investing in modernised production technologies** to improve competitiveness in the EU single market and to respond to new regulatory requirements, including environmental and food safety regulations.

Investments in the Slovak agri-food sector are mainly financed by enterprise's own resources. Bank loans finance less than a quarter (24%) of investments in the agri-food sector. Both the EAFRD and the Slovak Rural Development Programme finance investments by agri-food companies. The fact that the demand for public support is much higher than the available resources indicates the positive development of the sector and the high unmet demand for finance. Additional investment support is provided by the Ministry of the Economy in the form of research and innovation subsidies.

A broad spectrum of banks serve the agri-food sector. However, these show a lack of specialised knowledge of food processing and**,** as a result, only offer generic financial products. There are no specific schemes financing the Slovak agri-food sector. Currently, banks have sufficient liquidity and their interest rates are at historically low levels. Leasing is the second most used form of financing by agri-food companies, even though it has a minor role in Slovakia compared to banks.

The financing gap for the Slovak agri-food sector is estimated at EUR 37 million. The financing gap mainly concerns small-sized enterprises. The type of loans for which the gap is the largest are short and long-term loans. The gap is driven by the large share of agri-food enterprises that are discouraged from submitting a loan application due to the unfavourable loan conditions offered by banks, as well as the lengthy and complicated procedures of the loan application process. The lack of sufficient collateral and the absence of targeted, adapted financial products are additional factors that drive the financing gap.

The financing gap can be expected to increase in the future. This is due to increased environmental concerns and changing consumer preferences, as well as growing international competition. Like for the agriculture sector, the Slovak Guarantee and Development Bank also provides loans with subsidised interest rates and offers guarantees to the agri-food sector. However, the up-take of the instrument by the agri-food sector is even lower than for the agriculture sector.

RECOMMENDATIONS

- An EAFRD guarantee fund may complement the support provided by the Slovak Guarantee and Development Bank, increasing access to finance for small-sized enterprises that lack sufficient assets. This would also mean that banks would no longer have to rely on personal guarantees from the owners of agri-food enterprises.
- One of the constraints faced by small-sized enterprises is linked to the unfavourable lending conditions in terms of cost and maximum loan maturity. For this reason, an EAFRD risk-sharing loan instrument might also be considered, as it would combine the provision of risk coverage with a reduction of the financing cost and a long-term financial provision that would allow banks to offer longer maturities to their clients.
- Stakeholders have indicated that additional resources for financial instruments could close the financing gap and solve the problems of the current RDP grant schemes.

- For both types of instruments, the easier combination of financial instruments and grant support offered by the new legal framework might be considered to better address the needs of small-sized enterprises.
- The combination of a financial instrument with technical support may also be beneficial, as this would increase the financial know-how of the sector, including in the preparation of business plans.
- Technical support and awareness raising might also be considered for small-sized enterprises to address their lack of knowledge on the available funding opportunities.

1. INTRODUCTION

Objective

This report 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 Slovakia. 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 could serve as a basis to better understand the potential need for continuing currently operating financial instruments, or for the creation of new or additional ones, supported by the European Agricultural Fund for Rural Development (EAFRD).

Approach

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

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

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

(i) lending applied for (by the viable enterprises), but not obtained, as well as

(ii) lending not applied for (by the viable enterprises) due to expected (by the same enterprises) rejection of the application (by a financial institution).

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

The financing gaps for the two sectors are calculated with data from the above surveys and applied statistics from Eurostat. The financial gaps are independent from each other. The report also outlines the drivers of the unmet demand for finance as identified from desk research and interviews with key stakeholders from the agriculture and agri-food sectors in the respective country, representatives from the government, financial institutions, in two focus groups, one for each sector. Information on the supply side of finance were 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 of which focuses on a sector of interest – Part I covering the financing for the agriculture sector and Part II the one for the agri-food sectors. 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 Slovak agriculture sector
• Agriculture plays an important role in Slovakia, given its contribution to the economy (3.6% of Gross Value Added in 2018) and the rural nature of the country. • The average farm size in Slovakia is 80.7 ha (as of 2016), which is almost five times larger than the EU 28 average[3]. • While Slovakia has low added value per ha of agriculture land, the value added per agriculture working unit (AWU) matched EU average in 2018. • While the production of labour-intensive commodities, such as vegetables and livestock, decreased in 2018, the area used for labour-extensive commodities, such as cereals and oilseeds, grew. • 25.4% of the Slovak agricultural output derives from cereals, followed by 15.2% industrial crops (oil seeds, sugar beet), 12.7% dairy, 6.7% pig production and 6.0% cattle production.[4] • Agricultural output, in current prices, has been stagnating since 2011. • Nearly 19% of Slovak farmers are young farmers (under 40 years old), which is higher than the EU 28 average (11%)[5]. • Farmers only own 10% of the land they cultivate, with the rest being leased.

Agriculture plays an important role in Slovakia, considering the size of the rural population (37.4%) and its contribution to the economy (3.6% of Gross Value Added (GVA)).[6] Agricultural land accounts for 46% of the land in Slovakia and almost two-thirds of it is arable. Despite considerable potential, average yields in Slovak agriculture are modest, which points to a much less than optimal use of production factors. The productivity gap has to be seen in the light of the dual farm structure and fragmented land ownership. Slovakia has one of the most pronounced structural divisions amongst all EU 28 member states. In 2018, while 80% of the 25 660 farms were categorised as small-sized family farms, managing less than 20 ha on average, the 2 400 large-sized farms (9% of farm population), which manage more than 100 ha per farm, cultivated 90% of the Slovak agriculture land and produced 95% of the agriculture output.

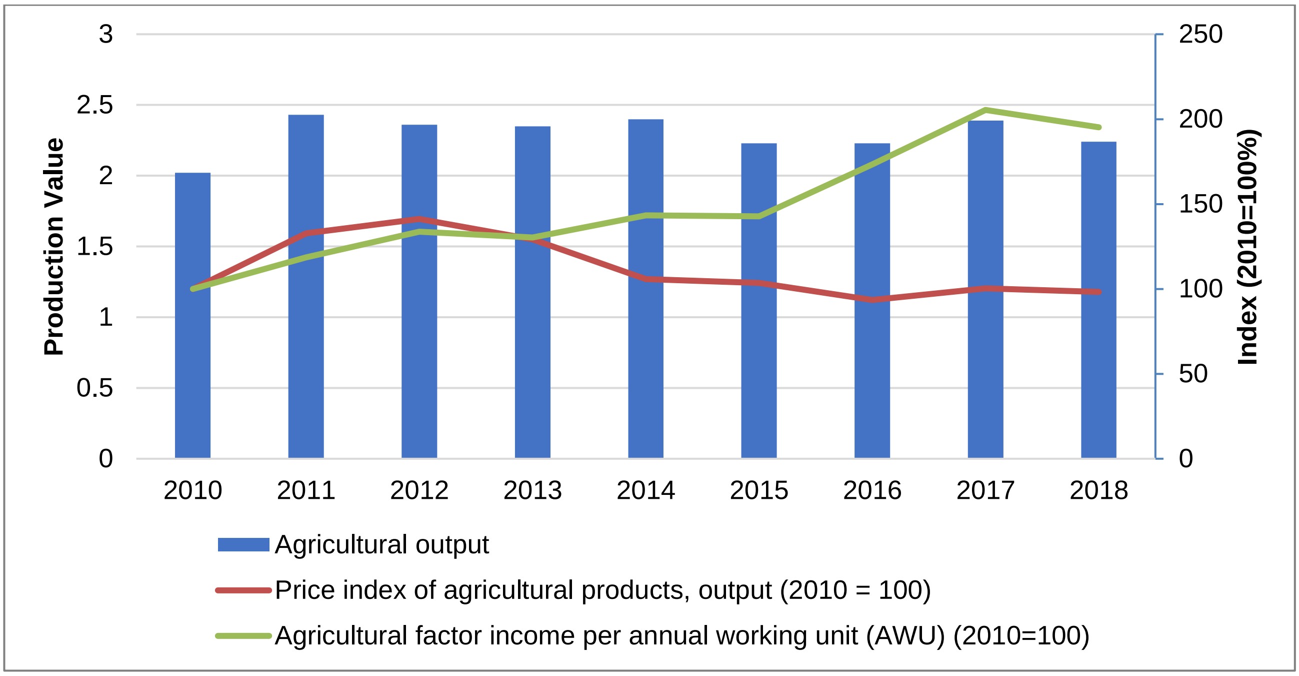
Agricultural output, measured in current prices, has been stagnating since 2011 (Figure 1). The value of agriculture production was still hovering around EUR 2.2 billion in 2018. The stagnation can be best explained by the following key indicators:

- The growth in farm sizes has led to a specialisation in labour-extensive crops. For example, cereals and oilseeds account for 38% and 13.7%, respectively, of agricultural land use.

3 Eurostat: Farm Structure Survey 2016, https://ec.europa.eu/eurostat/documents/2995521/9028470/5-28062018-AP-EN.pdf/8d97f49b-81c0-4f87-bdde-03fe8c3b8ec2.
4 European Commission, June 2019, Statistical Factsheet Slovakia, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agri-statistical-factsheet-sk_en.pdf.
5 Eurostat: Farm Structure Survey 2016, https://ec.europa.eu/eurostat/documents/2995521/9028470/5-28062018-AP-EN.pdf/8d97f49b-81c0-4f87-bdde-03fe8c3b8ec2.
6 European Commission, June 2019, Statistical Factsheet Slovakia, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agri-statistical-factsheet-sk_en.pdf.

- Today, lower value arable crops account for 56.1% of agricultural output, while higher value livestock account for only 37.9%. Further, the share of higher value output has been declining since a change in the political system in 1989.
- The agriculture price index has remained the same since 2010.
- While the factor income in agriculture has increased by 205% since 2010, the share of support under the Common Agricultural Policy (CAP) makes up 87% of this, which is the highest share within the EU 28.[7] Slovakia also takes the top spot with regards to the share of direct payments of factor income in agriculture (53%).

Figure 1: Development of the agricultural output, producer prices and agricultural factor income in 2010-2018, EUR billion



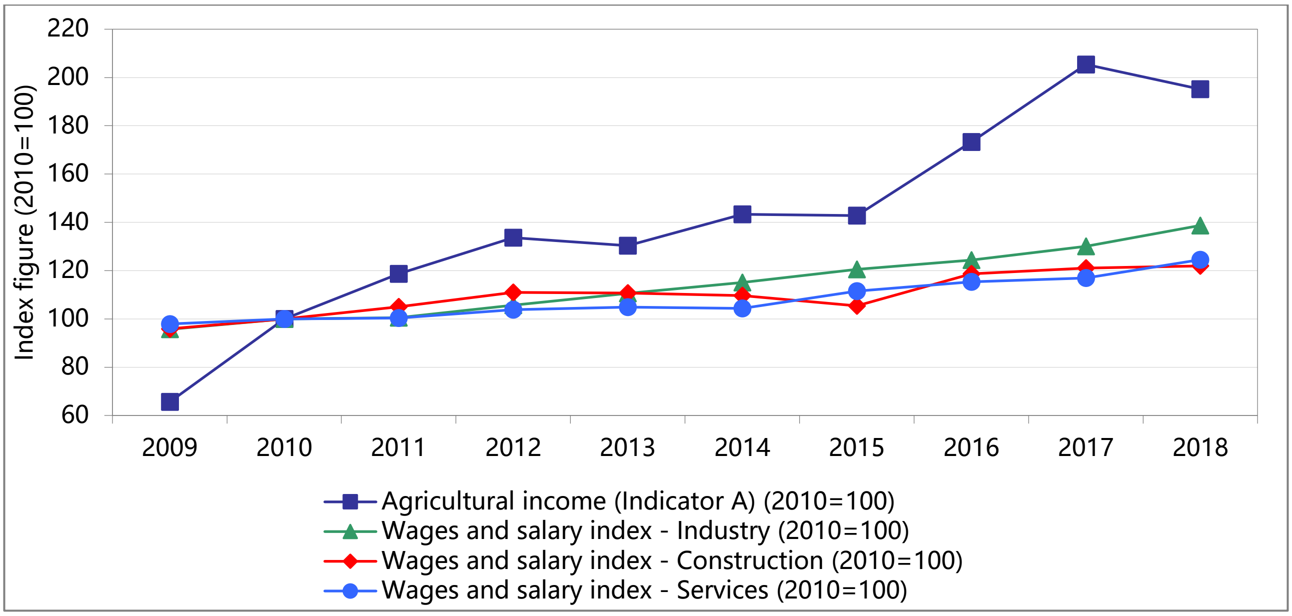
Source: Ministry for Agriculture and Rural Development, Green report 2018, Eurostat 2018.

The high fragmentation of land ownership hinders the use of land as collateral. In 2017, while 4.4 million people in Slovakia owned agricultural land, they owned an average of only 0.9 ha, with the average size of an agriculture parcel being only 0.5 ha. The extreme land fragmentation causes significant transaction costs in the Slovak land market and, hence, 90% of land is rented. Farms own only 10% of the land they cultivate.

Agricultural income has been above average over the last eight years, compared to other sectors of the economy. In 2016 and 2017, agricultural income was significantly higher than that for the rest of the economy (Figure 2). In 2017 it reached a peak, before decreasing slightly in 2018.

7 European Commission, July 2019, Common Agricultural Policy Key Graphs & Figures. https://ec.europa.eu/agriculture/sites/agriculture/files/cap-post-2013/graphs/graph5_en.pdf.

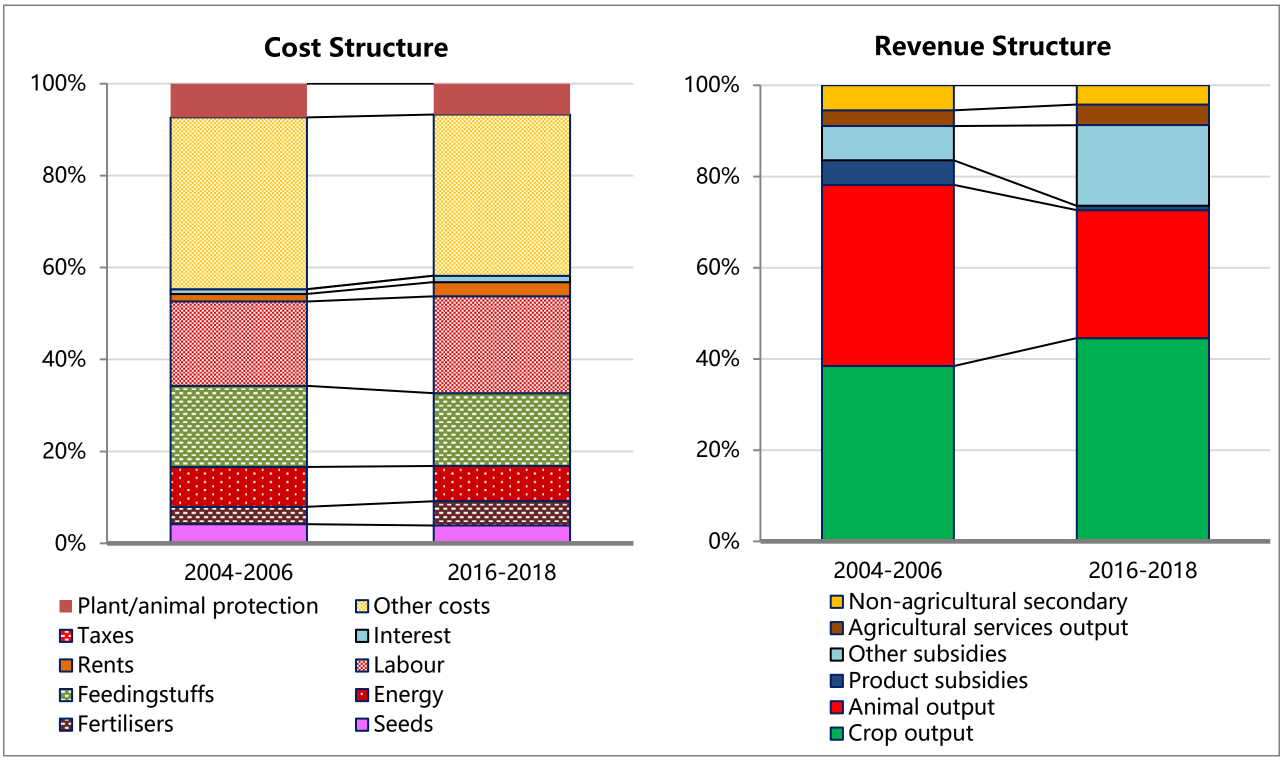
Figure 2: Evolution of agricultural income compared to wages and salaries in other sectors of the economy



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

Over the last 15 years, the cost structure in the Slovak agriculture sector has largely remained the same. When comparing the cost and revenue structures in the agriculture sector from 2004-2006 and from 2016-2018 (Figure 3), the costs for fertilisers, labour, interest and rent have increased slightly, while the costs for feeding stuffs have decreased slightly. The remaining cost components have remained fairly similar. On the revenue side, the share of revenues from crop output and public support have increased slightly, while revenues from animal output decreased significantly.

Figure 3: Agricultural income – cost and revenue structure in Slovakia (2004-2018)



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

Statistical factsheet Slovakia, 2019
More data on agriculture indicators from Slovakia can be found in the **Statistical factsheet for Slovakia 2019** of the Directorate-General for Agriculture and Rural Development, Farm Economics Unit and in the Annex A.6.

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

This section describes the drivers of demand for finance in the agriculture sector, analyses the met and unmet demand. It elaborates the main reasons for farm enterprises to request financing and identifies the agriculture sub-sectors with 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 312 Slovak 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 Slovak agriculture sector

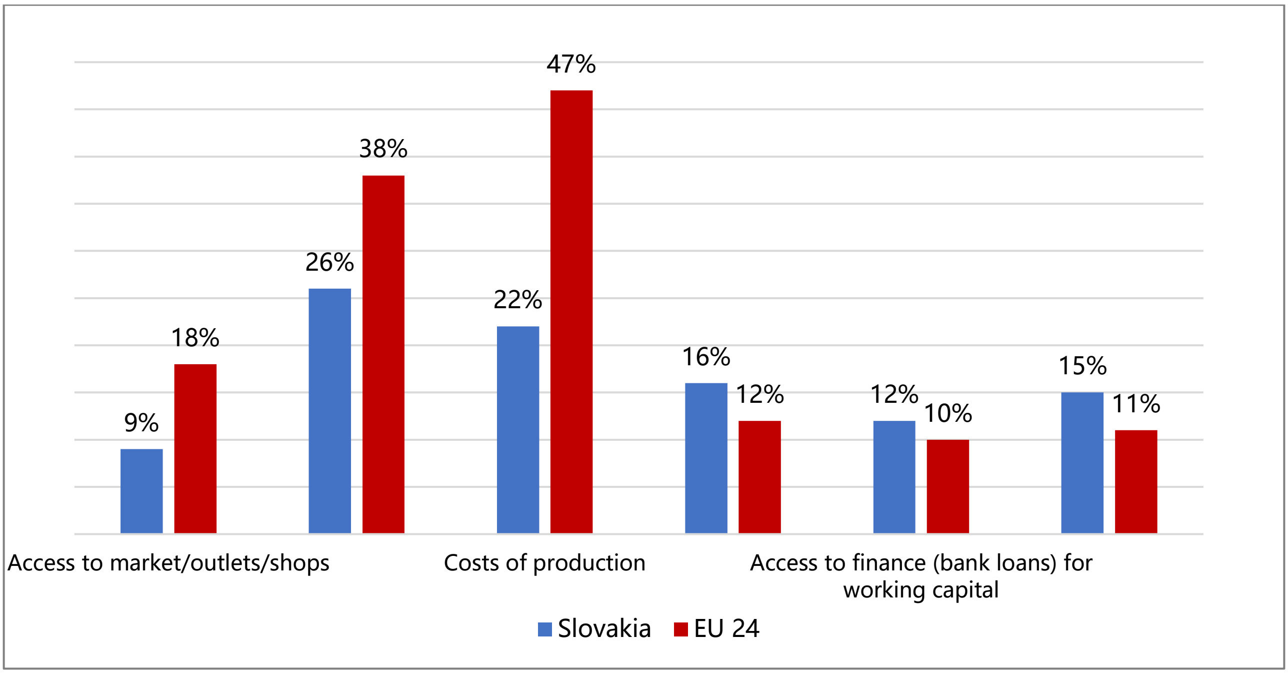
- Access to finance is a significant concern to Slovak farmers.
- In 2018, investments in Slovak agriculture (measured by Gross Fixed Capital Formation as a share of Gross Value Added) had decreased by 15.2% compared to 2010.
- Slovak farmers are less worried about rising production costs and declining output prices, compared to the EU 24.
- Farmers mostly apply for short and medium-term loans.
- Loans are used for working capital needs and investments in machinery, buildings and land.
- Loans are a major source of external financing and the uptake of loans has been increasing since EU accession in 2004.
- As much as 75% of agriculture loans are directly linked to CAP support measures, according to banks interviewed. This is because RDP support catalyses investment loans and CAP direct payments are used as guarantees.
- In 2017, the total estimated unmet credit demand in the Slovak agriculture sector was EUR 353.1 million.
- Slovak farmer's loan applications are rejected more often than the EU 24 average. Banks reject loans applications due to (i) an economically unviable project or a unviable farm, (ii) a lack of sufficient collateral, (iii) a lack of credit history and (iv) the high investment risk of new entrants.
- Small-sized farms and young farmers have particularly low access to loans due to poor credit history, a lack of collateral and because they are often considered economically unviable.

2.2.1 Drivers of total demand for finance

Slovak farmers are more challenged in accessing finance compared to EU 24 average. In the *fi-compass* survey, 16% of Slovak farmers responded that access to finance for investments was a problem (Figure 4), which was a higher share than for the EU 24 (12%). A similar situation was observed with regards to access to finance for working capital, where 12% of the Slovak respondents considered it as an issue. However, interviews revealed that access to finance depends on farm size, with small-sized farms experiencing more difficulties compared to large-sized commercial farms.[8] According to the *fi-compass* survey, Slovak farmers were less concerned with output prices and costs of production compared to the EU 24 average. Access to land, be it for purchase or for rent, was also a bigger problem in Slovakia (15% of respondents) compared to the EU 24 average (11%).

8 Interviews with ASYF (Association of Young Farmers in Slovakia) and UniCredit Bank, May 2019.

Figure 4: Difficulties experienced by farmers in 2017



Source: fi-compass survey.

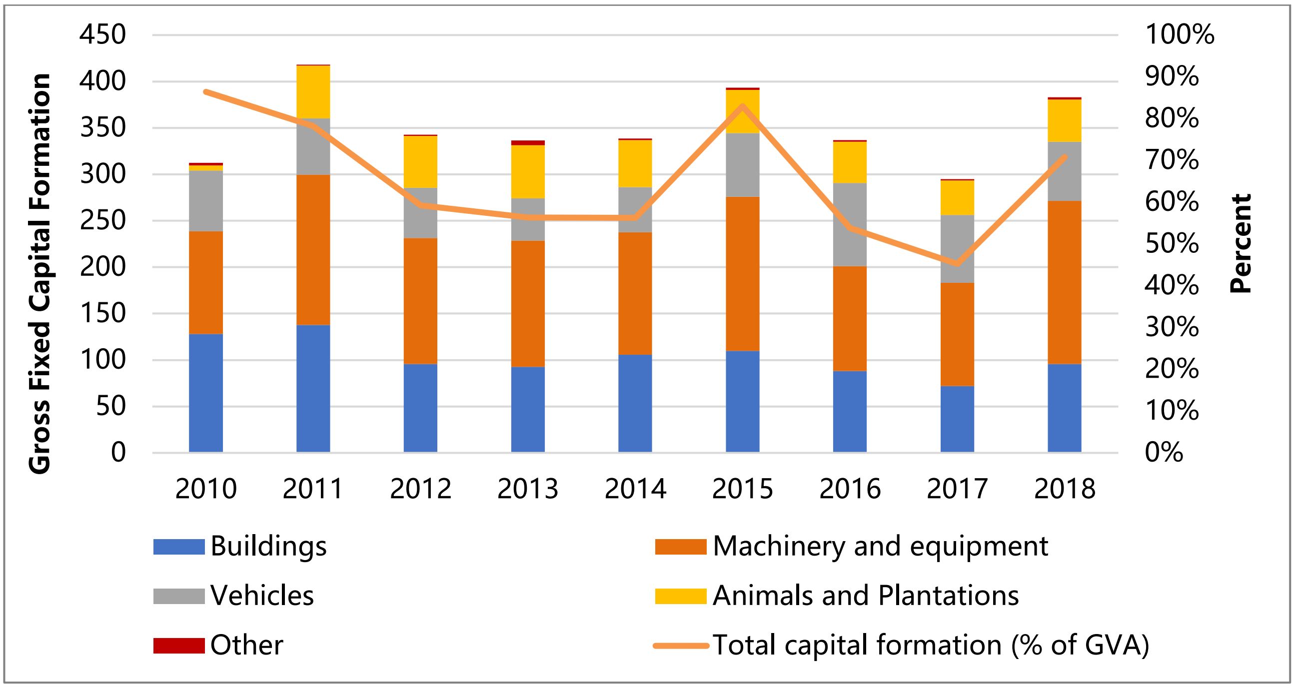
The Gross Fixed Capital Formation (GFCF[9]) in recent years has been volatile. When comparing the share of GFCF on the GVA in 2010 with the share in 2018, a decrease of 15.2% was noticed. However, GFCF in 2018 reached EUR 383 million (Figure 5), which implies that 71% of the GVA of EUR 541.1 million is invested in the Slovak agriculture sector. This is a higher share compared to the EU 28 average, which is 33.6% of total agriculture GVA.[10] The peaks in investment in 2011, 2015 and 2018 are most likely linked to calls for applications for investment support under the Rural Development Programme (RDP).

Of the GFCF, the bulk of investments were made in non-agriculture assets, such as machinery and buildings, rather than agriculture assets, such as livestock and plantations. In 2018, farmers invested mainly in machinery and technical equipment (46%), buildings (25%) and vehicles (17%). Investments in plantations and livestock play a lesser role.

9 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.

10 European Commission: Gross Fixed Capital Formation in Agriculture, updated 2017.

Figure 5: Development of Gross Fixed Capital Formation in the Slovak agriculture sector, 2010-2018, EUR million



Source: MARD SR, Green Report, 2019, Eurostat – Economic Accounts for Agriculture, 2019.

The share of loans in overall liabilities is growing. In general, the share of debt of Slovak farms is higher than owner's equity (Table 1). While the share of liabilities (46.8% in 2017) has been declining slightly since 2015, the share of public support has been growing. Borrowed capital from financial institutions is less important for Slovak farmers, as they form just 23.7% of the total liabilities with the rest being mainly supplier credit.

Table 1: Structure of funds to finance Slovak farm assets in 2015-2017, in %

	2015	2016	2017
Owner`s equity	44.8%	44.4%	44.8%
Liabilities	47.2%	47.3%	46.8%
out of which Bank loans	10.7%	11.2%	11.1%
Subsidies	8.0%	8.4%	8.4%

Source: Green report, Ministry of Agriculture and Rural Development of Slovak Republic, 2018.

Overall, the drivers of demand for finance from Slovak farmers are as follows:

(i) expansion of their agriculture activity (including the purchase of land);

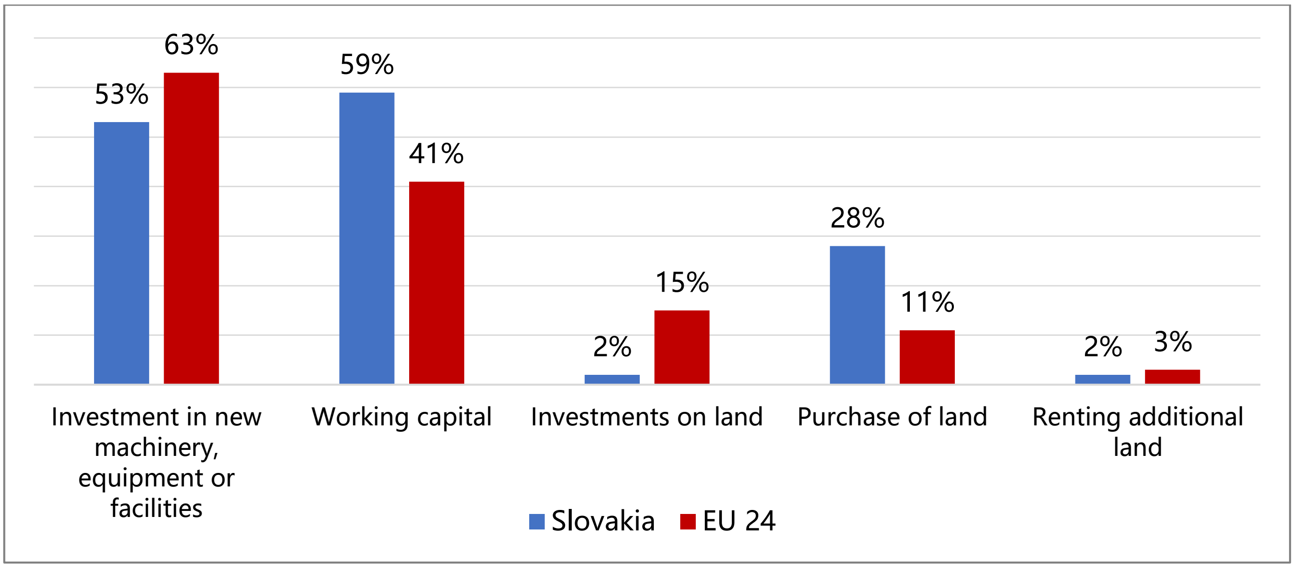
(ii) investing in modernised production technologies; and

(iii) improving production standards in response to consumer demands and to be able to compete in the EU and global markets.[11]

11 Interviews with Slovak Agriculture and Food Chamber (SPPK), May 2019, and Ministry of Agriculture and Rural Development of the Slovak Republic, July 2019.

These drivers of demand for finance are also reflected in the purpose of the loans. Slovak farmers responded in the *fi-compass* survey that the main purposes of loans were for working capital (59% of respondents), followed by investments in new machinery, equipment or facilities (53%), and the purchase or renting of additional land (28%) (Figure 6). The demand for both short-term financing in the form of working capital, as well as medium and long-term financing for investments in the modernisation of the farm, via the purchase of machinery, equipment or facilities, are equally important in the Slovak agriculture sector. As the significant fragmentation of land ownership is a specific problem of Slovakia,[12] farmers demand financing to purchase or rent additional land. Some farmers borrowed funds to expand their farm, while others purchased land they were previously renting.

Figure 6: Purpose of bank loans in the agriculture sector, 2017



Source: fi-compass survey.

Variations in demand for finance exist between sub-sectors. The majority of large-sized farms in Slovakia are mixed farms. Specialisation is limited to small and medium-sized arable crop farms and, partially, to intensive livestock farms. The following variations in the demand for finance exist:

- The **cereal and oilseed sub-sector**, which accounts for 36.4% of agricultural output, shows growing investments into innovative technologies, such as precision farming.
- The **fruits and vegetables sub-sector**, which accounts for just 10.7% of agricultural output, shows a high demand for finance. This is driven by the need to carry out investments in irrigation, storage facilities and technical equipment. Producer organisations foresee growth in this sub-sector and expect a growing demand for investments in the on-farm processing and packaging of fruits and vegetables, in order to shorten the supply chain, eliminate intermediaries, and increase incomes by keeping more of the value-added from the processing of the primary products.
- Investments in the **dairy and cattle sub-sector**, which accounts for 19% of agricultural output, are driven by: (i) increased on-farm processing for higher value-addition, (ii) modernisation, in order to comply with stringent environmental standards, and (iii) automation technologies, in order to reduce labour costs.
- The **poultry and egg sub-sector**, which accounts for 9.8% of agricultural output, requires additional investments to expand their production, driven by the increasing consumption of chicken meat in Slovakia, and to meet changing requirements in animal welfare practices.

12 IPP, 2019, Revision of expenditure on agriculture and rural development, https://www.mpsr.sk/index.php?navID=1&navID2=1&sID=184&id=14541

Slovakia receives EUR 4.6 billion in CAP support over the 2014-2020 programming period. As a result of the CAP reform, the envelope of Slovakia for direct payments in financial years 2014-2020 was initially EUR 2 700 million. Slovakia decided to apply flexibility between Pillars and thus shifted funds from rural development to direct payments (EUR 345 million) for the financial years 2015-2020. Moreover, the estimated reduction of direct payments for financial years 2016 to 2020, as notified by Slovakia, was transferred from direct payments to its rural development allocation (EUR 14 million). As a result of these transfers, the direct payments' envelope is EUR 3 031 million and the rural development's envelope for 2014-2020 is EUR 1 560 million. In addition to the EU-funded CAP-measures, the RDP benefited from national co-financing with a contribution of EUR 540 million. Thus, the total funds available during the 2014-2020 programming period, in both pillars of the CAP, amount to EUR 5 131 million.

While investment support in physical assets has a high priority in the Slovak RDP, many applications were left unsatisfied, pointing to a high unmet demand for finance. A quarter of the RDP budget is allocated to investments in farms, agri-food processing and agriculture infrastructure in Slovakia. At the end of 2019**,** there have been four calls for sub-measure 4.1 and EUR 182 million already committed. The supported investments mostly target farm modernisation, irrigation, machinery, renewable energy and storage capacity/post-harvest treatment (Table 2). The amount requested from all 2 014 applications under all of these calls reached EUR 430 million, and although no distinction between eligible and non-eligible applications is being made, about EUR 248 million were not satisfied (under 1 137 applications). The latter can be seen as a proxy for development and demand for supporting the growth in the sector. The real figure for the total budget under all projects is about twice as high as the one under the calls, as any project also bares a private co-financing part of about 50%.

Table 2: Slovakia: 2014-2020 RDP implementation of sub-measures 4.1 and 6.1, by the end of 2019

Sub-measures	Amount requested from all applications (EUR million)	Amount committed (EUR million)	Amount not satisfied (EUR million)	Number of received applications	Number of non-supported applications	Number of approved applications
4.1 Support for investments in agricultural holdings	430	182	248	2 014	1 137	877
6.1 Business start-up aid for young farmers	101	24	77	2 029	1 543	486

Source: Ministry of Agriculture, 2019. Preliminary data on total public financing (EAFRD + national co-financing), including projects from the 2007-2013 transitional period. Private co-financing is not included.

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. They could also be withdrawn by the beneficiary at a later stage (following the submission) or under ongoing evaluation by the Paying Agency.

Start-up aid for young farmers is also a priority under the RDP in Slovakia, with the demand by the end of 2019 exceeding initial expectations (Table 4). During the 2014-2019 period, there was only one call for sub-measure 6.1, with a total requested volume of EUR 101 million. The committed budget under the measure was EUR 24.3 million and it supported 486 young farmers. The total demand by all 2 029 applications from young farmers was EUR 77 million higher than the budget under the call, but due to various reasons, including withdrawn or non-eligible applications, a significant share of the 1 543 applications could not go through or reach the stage of commitment.

Table 3: Share of RDP investment support (sub-measure 4.1) by type of investments, 2014-2018

Supported area	Share in %
Special crop production	9%
Livestock investments	13%
Reducing environmental burdens	1%
Storage capacity and post-harvest treatment and sales area	4%
Innovative technologies with flexible application of fertilizers	2%
Biomass	5%
Large investment projects over EUR 1.2 million	45%
Irrigation	21%

Source: Agricultural paying agency in Slovakia 2014-2018.

The analysis of the use of bank loans in Slovakia reveals that farmer's demand for finance often complements investment grants from the RDP or are linked to CAP. Around one quarter of all agriculture loans are used for the pre-financing or co-financing of RDP projects.[13] CAP direct payments also contribute to farmer's access to loans, as direct payments are used as collateral in up to 50% of the agriculture loans taken out.

Main findings of the Feasibility study in support of the implementation of financial instruments combining EAFRD and EFSI within the framework of the Rural Development Programme of Slovakia for the 2014-2020 programming period[14]

- Drivers of demand for finance for agriculture include: improvement of production capacities and diversification of the business (to a lesser extent) as well as the acquisition of new companies or the restructuring of existing debts.
- Drivers of demand for finance for agri-food enterprises include: renewal and development of the production capacities, business diversification, acquisitions, development and innovations.
- Several difficulties in accessing finance for the agriculture and agri-food sector were identified:
  - ability to generate sufficient cash to meet the repayment terms;
  - absence of sufficient levels of collateral;
  - high interest rates, although to a lesser extent; and
  - young farmers being constrained in accessing finance because they often do not have sufficient collateral levels or access to information on financing opportunities.
- Farmers are interested in specific advisory services, including advisory related to the financial products and export development advisory, support in preparation of business plans and support in improving marketing know-how.
- The gap between supply and demand in the agriculture sector is estimated to be between EUR 59.2 million and 224.1 million per year, while the gap for food processing companies is estimated to be between EUR 67.7 million and 174.6 million per year.

  Recommendation: Set up a portfolio guarantee instrument. One of the two types of portfolio guarantee instruments can be considered – capped guarantees and uncapped guarantees. A contribution of

13 Interview with VUB bank, May 2019 and Green report, Ministry of Agriculture and Rural Development of Slovak Republic, 2018.

14 *fi-compass*, 2019, Feasibility study in support of the implementation of Financial Instruments combining EAFRD and EFSI within the framework of the Rural Development Programme of Slovakia for the 2014-2020 programming period, Final report.

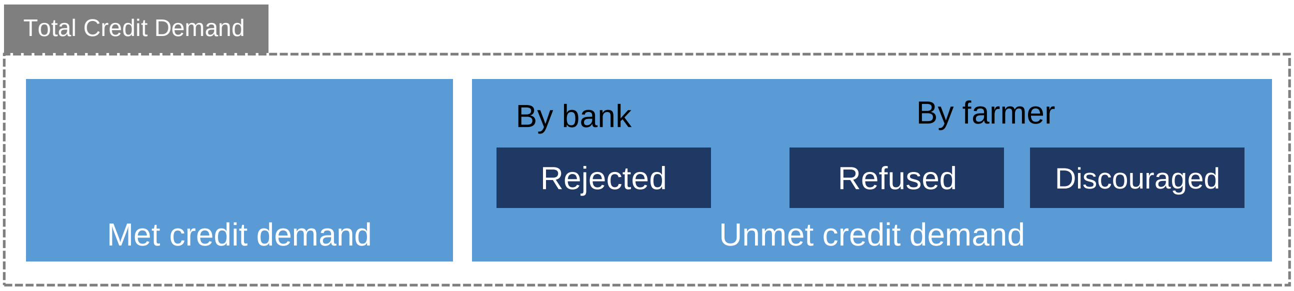
EUR 10 million and EUR 20 million of RDP resources will result in between EUR 50 million and EUR 100 million of new loans with improved conditions for final recipients. It is estimated that this will improve the access to finance for at least 500 final recipients.

Source: fi-compass, Feasibility study in support of the implementation of financial instruments combining EAFRD and EFSI within the framework of the Rural Development Programme of Slovakia for the 2014-2020 programming period, Final report, 2019.

2.2.2 Analysis of the demand for finance

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

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

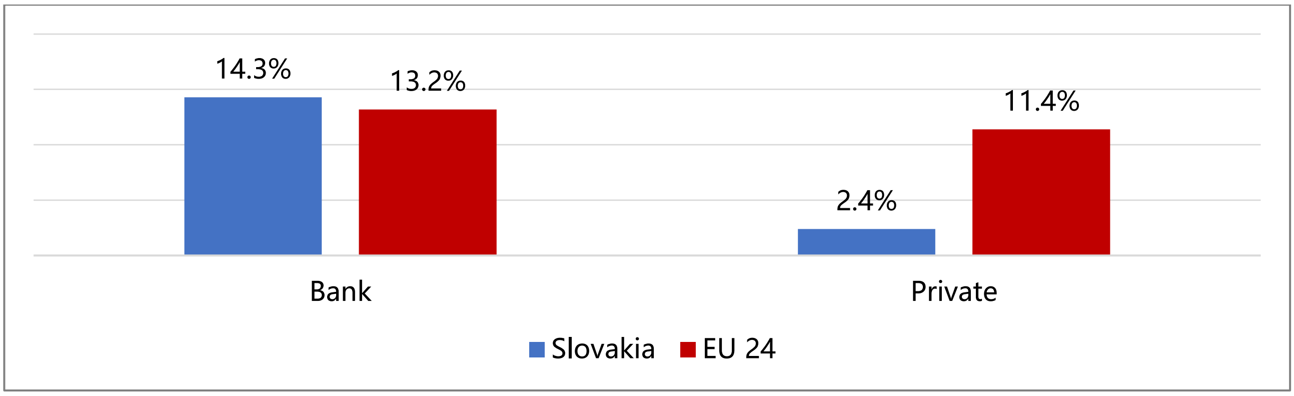


Source: Ecorys, 2019.

Based on the results of the *fi-compass* survey, the unmet demand for the agriculture sector in Slovakia is estimated at EUR 353.1 million.

Farmers in Slovakia use mainly bank loans to finance both working capital and investments. In 2017, 14.3% of farms in Slovakia applied for a bank loan while only 2.4% used private resources provided by family members or friends (Figure 8). Seeking financing from private individuals might be explained by the lack of financial products available to small-sized and young farmers by commercial banks and the preferences of farmers not to have bank loans. Furthermore, the limited understanding of the financial market may lead to some farmers preferring to ask family members or friends for a loan rather than going straight to the bank.

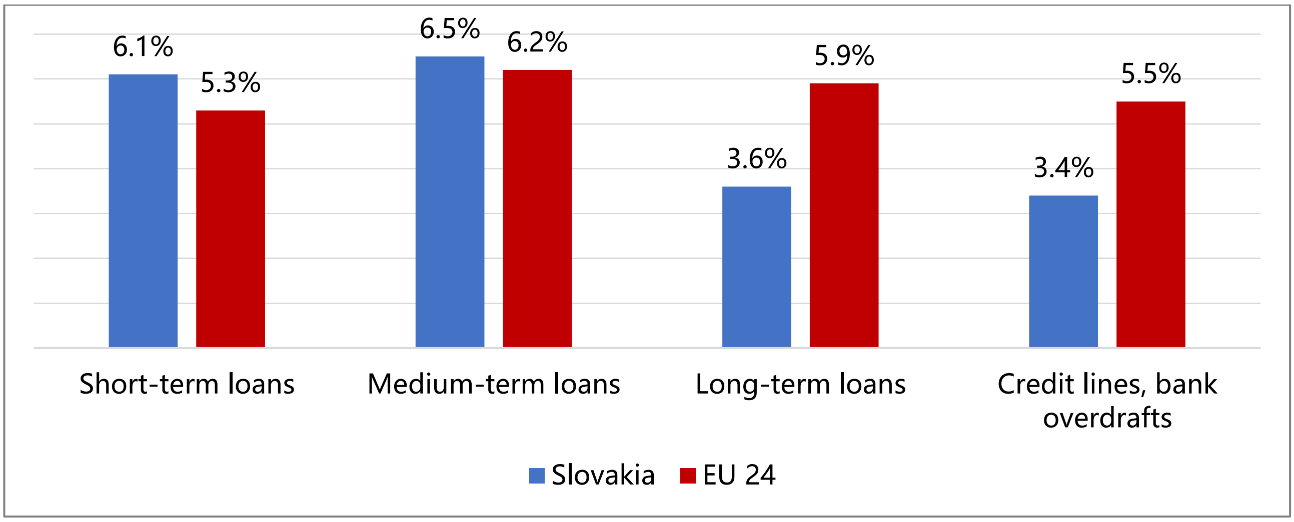
Figure 8: Slovak farms applying for finance in 2017



Source: fi-compass survey.

Farmers mainly applied for short-term (6.1%) and medium-term loans (6.5%). The demand for credit lines (3.4%) and long-term loans (3.6%) was lower and below the EU 24 average (Figure 9).

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



Source: fi-compass survey.

According to the Slovak Ministry of Agriculture, Slovak farmers mainly acquire new fixed assets (e.g. land) using owner's equity (66%). This is followed by bank loans (26%), with the rest covered by subsidies and other funds (Table 4).

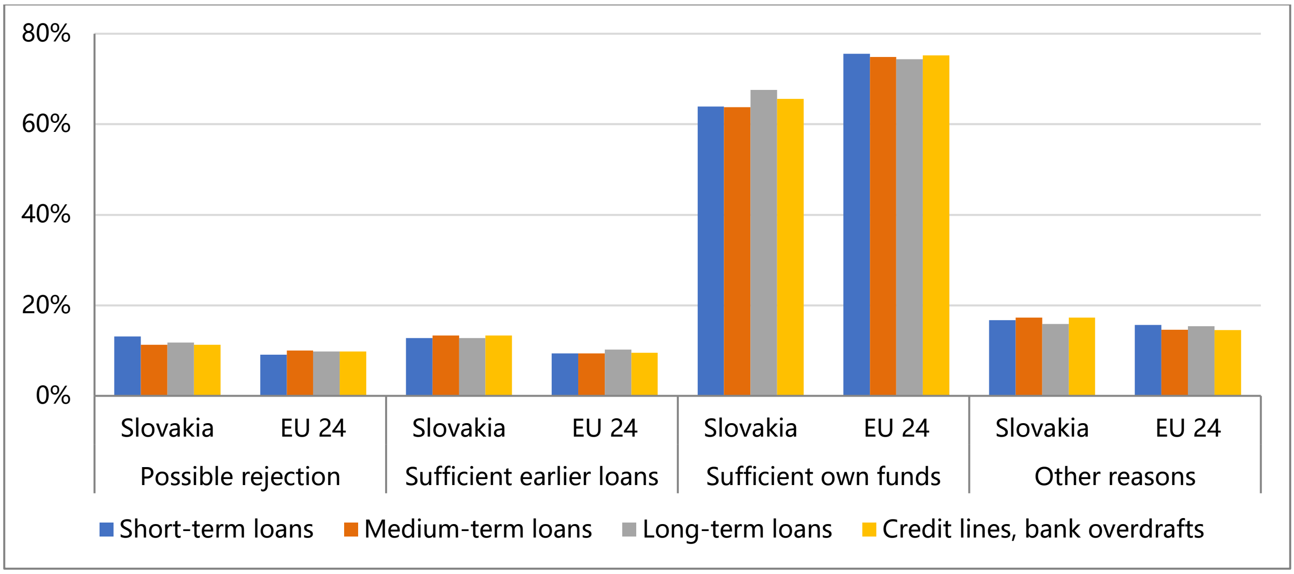
Table 4: Share of funds in financing new fixed assets in Slovak agriculture, 2015-2017

	2015	2016	2017
Owner`s equity	64.7%	66.5%	65.7%
Bank loans	24.6%	25.5%	25.6%
Subsidies	14.7%	5.0%	2.8%
Other funds	10.8%	7.9%	8.7%

Source: Green report, Ministry of Agriculture and Rural Development of Slovak Republic, 2018.

A significant share of Slovak farmers are discouraged from applying for bank loans due to a fear of being rejected. About 12% of farmers were discouraged from applying because they thought they would be rejected. The share attributable to this reason is higher in Slovakia than for the EU 24 average, which is in line with the information collected during interviews with stakeholders.[15] Both banks and farmers confirmed that many farmers learn about the difficulties they are likely to face in obtaining a loan early in the process, and therefore they do not formally apply. More than 60% of Slovak farmers declared in the *fi-compass* survey that the main reason for not applying for a loan in 2017 was due to the availability of sufficient own resources (Figure 10). Other farmers did not apply because they obtained sufficient loans in previous years.

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

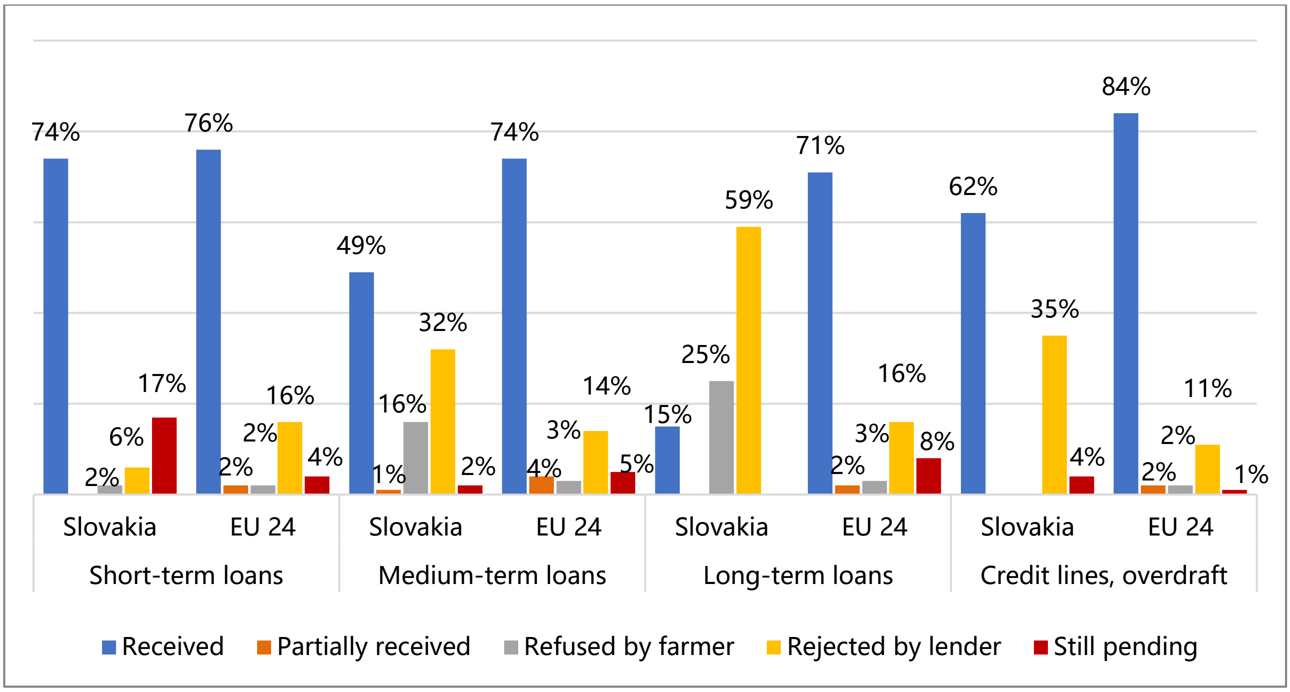


Source: fi-compass survey.

A significant share of unmet demand for finance in Slovak agriculture is based on rejections and refusals within all loan categories. In Slovakia, 59% of long-term loan applications, 35% of credit lines and 32% of the medium-term loan applications are rejected by banks (Figure 11). Consequently, the largest share of unmet demand for finance is based on product categories with medium and long-term maturities. Interviews confirmed that banks mainly offer short-term loans, which are repaid from direct payments[16] and are therefore of low risk.[17] There is also a high share of offers that are refused by farmers. The results show that 25% of long-term and 16% of medium-term loans are refused by farmers due to shorter maturities than requested or unfavourable collateral conditions.[18]

15 Interviews with ASYF (Association of Young Farmers in Slovakia), and Agrarian Chamber of Slovakia, May 2019.
16 Ministry of Agriculture and Rural Development, 2019, Green Report.
17 Interview with VUB Bank and UniCredit Bank, May 2019.
18 Interview with VUB Bank and UniCredit Bank, May 2019.

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



Source: fi-compass survey.

Based on the *fi-compass* survey, the **main reasons why banks refuse loan applications in Slovakia** include (Figure 12):

(i) **Economically unviable project or an unviable farm**: Banks evaluate loan applications based on the economic viability of the farm, using EBITDA,[19] which determines loan repayment ability.[20] In Slovakia, the volume of short-term loans is also determined by direct payments, which banks use instead of EBITDA. Farms with low EBITDA and low or no direct payments are often rejected by banks.

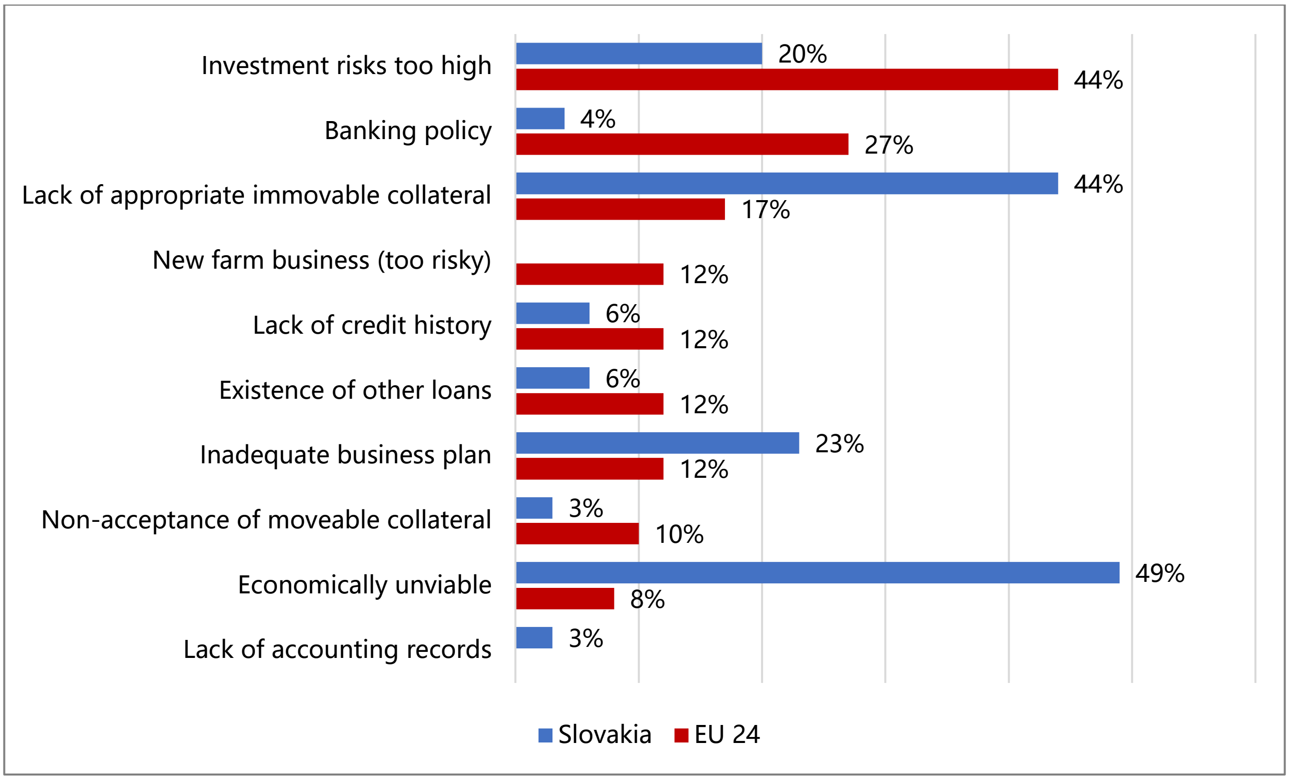
(ii) **Lack of sufficient collateral**: Lack of collateral in Slovakia is a bigger problem than in other EU countries. This is because land ownership is highly fragmented and because banks do not accept land as collateral.[21] Many farmers only own a portion of the parcels they cultivate, and banks do not accept such partial ownership of land as collateral, due to the regulation of the National Bank of Slovakia which stipulates that banks shall only accept marketable collateral with predictable value. Additionally, the land under buildings has often no clear and transparent ownership, which makes the use of buildings as collateral problematic.

(iii) **Lack of credit history**: This constraint affects new entrants and recently created small-sized family farms, which are often excluded from the credit market.

(iv) **High investment risk of new entrants**: Banks confirmed that young farmers, especially those that are new entrants, often have an insufficient level of education or managerial skills and they are considered as a riskier client category.[22]

19 Earnings before interest, tax, depreciation and amortisation.
20 Interview with banks (CSOB, VUB bank, TATRA bank and UniCredit Bank), September 2019.
21 Interview with banks (CSOB, VUB bank, TATRA bank and UniCredit Bank), September 2019.
22 Interview with banks (CSOB, VUB bank, TATRA bank and UniCredit Bank), September 2019.

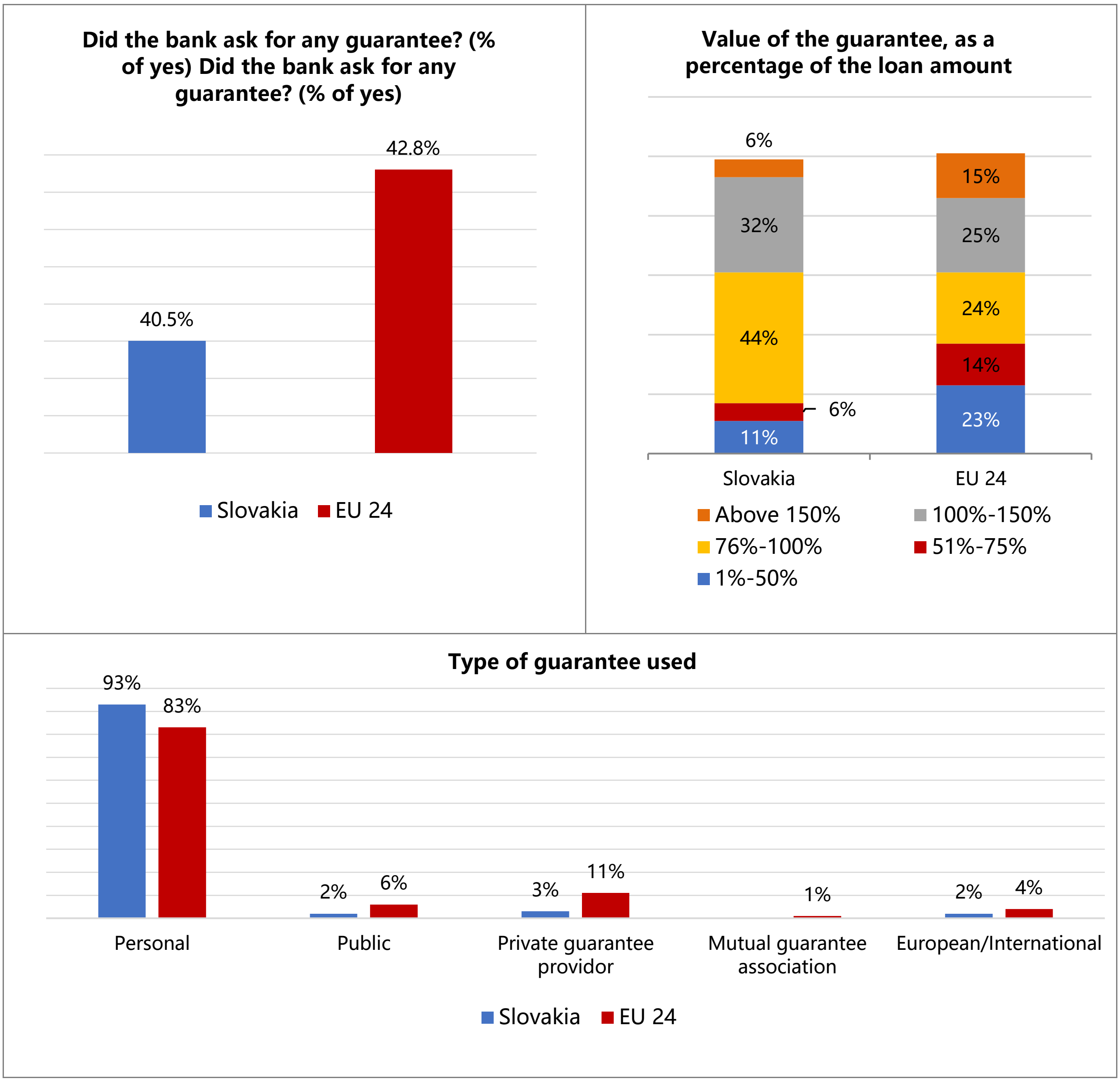
Figure 12: Reasons for applications' rejection in the agriculture sector in 2017



Source: fi-compass survey.

The request for guarantees from the banks has significant impact on Slovak farmers. The *fi-compass* survey shows that 40.5% of Slovak farmers replied that the banks requested collateral (Figure 13). The value of the guarantee, as a percentage of the loan, was higher than 75% for 82% of the respondents in Slovakia. At the same time, guarantees above 100% of the loan amount were requested in 38% of the cases. In addition, **93% of Slovak farmers responded that their own personal assets (land, buildings) were used as collateral**. Even though Slovak Guarantee and Development Bank (SZRB) provides national financed guarantees to commercial banks for their lending to Small and Medium-sized Enterprises (SMEs) (including farmers), the *fi-compass* survey confirms that the absence of collateral is the second most important reason for the rejection of a loan application. More information on SZRB and its products is provided in sections 2.3.1.1 and 2.3.1.2.

Figure 13: Information related to guarantees requested by Slovak agriculture producers, 2017



Source: fi-compass survey.

Small-sized farms have a higher unmet demand. Small-sized farms are discouraged from applying for loans, or have their applications rejected from the bank, more frequently than for other farms, especially large-sized ones. This may be related to a mix between them being outside the scope of CAP support (very small holdings are excluded from support), or simply obtaining smaller amounts of CAP support (whereby the possibility of using the support for repayments is negligible), and the lack of knowledge and familiarity with the banking system.[23] They also do lack sufficient collateral. In addition, most small-sized farms are so-called first-generation farms. This is because family farms did not exist in Slovakia prior to 1989. The infrastructure in Slovakia, including the structure of suppliers of inputs, purchasers of outputs, banks, and providers of services, mainly serve large-sized farms. This means that there is a culture around working with large-sized farms among the financial institutions.

Banks have no specific financial products for small-sized farms. Some banks do not deal with farms with agricultural areas lower than 20 ha (and even 100 ha) due to high transaction costs. The majority (84%) of

23 Interviews with Agrarian Chamber of Slovakia, and VUB bank, May 2019.

small-sized farms (20 400) in Slovakia are non-business individuals. This group of small-sized farms is considered as part of the regular household category and banks therefore generally refuse to offer them agriculture loans.

Nearly one third of the loan application rejections were of young farmers in Slovakia. The results from the *fi-compass* survey estimated the unmet demand for finance of young Slovak farmers to be at EUR 111 million. Interviews confirmed that young farmers face serious difficulties when trying to access bank loans.[24] They are rejected due to insufficient collateral and low returns. Young farmers with CAP support manage only 22 840 ha of land in Slovakia, and run small, first-generation family farms. The average size of a young farmer's farm is 38 ha, which is significantly below the average of 80.7 ha. Up to one third of young farmers manage less than 20 ha, while about half manage less than 40 ha. Young farmers have a higher demand for investment, face higher costs from starting their business, so they have lower returns from their farming activities. This reduces their profitability and their access to credit. The situation is worsened by the fact that banks are risk averse and require a business history to verify credibility. In this regard, young and small-sized farms would benefit from a dedicated bank product.

Despite efforts to strengthen capacity and advise Slovak farmers, a part of the agriculture sector, particularly small-sized farms, is still lacking knowledge about agriculture finance. Additional technical support could be considered in order to support the training of farmers on financial literacy. A particular focus on strengthening farmer's capabilities around the preparation of business plans would be beneficial, in order to improve farmers' access to financing.

24 Interviews with ASYF (Association of Young Farmers in Slovakia), May 2019.

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 Slovakia 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 and the FADN database.

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 Slovak agriculture sector

- Six banks cover 100% of the supply of Slovak agriculture loans.
- Slovak farmers are financed by bank loans (with EUR 746 million of outstanding loans in 2018) and leasing (EUR 149 million).
- Some farmers received guarantees from a scheme offered by the Slovak Guarantee and Development Bank (SZRB) in Slovakia, but the instrument shows a low uptake.
- Outstanding loans have been increasing steadily since EU accession in 2004, with a further rise following the 10 years transitional period of phasing-in CAP direct payments.
- Farmers can access either general loans or special agriculture loans. This is particularly the case for large-sized farms.
- Banks do not provide appropriate financial products for small farms and for young farmers.
- Special financial products for land acquisition exist in Slovakia.
- The key constraint in access to finance on the supply side of the market is the fact that banks are reluctant to finance small-sized farms, which are considered riskier and less profitable clients.

2.3.1 Description of finance environment and funding availability

2.3.1.1 Finance providers

Slovak agriculture is fully financed by commercial banks. In 2018, there were 27 banks registered in Slovakia. Of them, six currently provide credit to farmers (Table 5).[25] UniCredit Bank, with a market share of 30% in the segment of agriculture loans, is traditionally the largest bank for farmers in Slovakia because it is the country's successor to Polnobanka, which was set up as a specialised financial institution for the farming sector. The next largest bank is Vseobecna uverova banka, with a market share of 25%, followed by Tatra Banka, with a market share of 20%, Slovenska sporitelna (10%), Slovenska zarucna a rozvojova banka (10%) and CSOB (5%).

25 Focus group meeting, 2019.

Table 5: Main banks providing loans to the agriculture sector in Slovakia

Banks	Market Share
UniCredit Bank Czech Republic and Slovakia, a.s.	30%
Všeobecná úverová banka, a.s.	25%
Tatra banka, a.s.	20%
Slovenská záručná a rozvojová banka, a. s.	10%
Slovenská sporiteľňa, a.s.	10%
Československá obchodná banka, a.s.	5%

Source: National bank of Slovakia, 2019.

Support for Slovak agriculture is also provided by the Slovak Guarantee and Development Bank (SZRB). It is a state-owned bank and its sole shareholder is the Ministry of Finance of the Slovak Republic. SZRB uses its own funds and long-term external debt to finance loans and guarantees for small and medium-sized enterprises (including agriculture and agri-food sectors). Loans are offered directly by SZRB without any other intermediary.

2.3.1.2 Financial products

The Slovak financial intermediaries provide the agriculture sector with loans, leasing services and bank guarantees. Agricultural producers can obtain loans with general business conditions, or loans that are specific to the agriculture sector. General loans are used by all types of clients, including farmers, while specific agriculture loans are created for the use of farmers only. To access consumer loans, farmers can approach all 27 commercial banks registered in Slovakia. As outlined in section 2.3.1.1, specific agriculture business loans are provided by six banks (Table 5). The characteristics of the specific loan products are presented below:

- **Short-term loans**, used to finance farm's operations, such as the purchase of seeds, fertilisers, chemicals, fuels, or to fill the time gap between the application for direct payments actual payment. Specific loan products include:
  - **'Operational Financing'** starting from EUR 70 000 and also provided in the form of a bank overdraft, available from Tatra bank;
  - **'Operational Financing'** for direct payments (DP) up to 100% of DP, available from UniCredit Bank;
  - **'Overdraft' loan** up to 100% of DP, available from Slovenska Sporitelna; and
  - **'Bridge loan for farmers'**, available from ČSOB Bank, SZRB and VUB Bank.

Farmers use mainly DP as collateral in the case of short-term loans and the maturity is up to 12 months.

- **Medium-term loans**, used to pre-finance the value of production deposited in a warehouse. Examples of loans include:
  - **'Loan for warehouse receipts and commodity receipts'** for up to 100% of the value of contract, available from UniCredit Bank and VUB Bank. Farmers use the warehouse receipt as collateral. Some of the receipts may also be short-term.
- **Long-term loan**, for which there are three main types: (i) investment loans, (ii) loans for the purchase of land, and (iii) loans linked to EU funded projects. Investment loans are used to meet farmer's investment needs. Examples are:
  - **'Investment financing for machinery, technology and farm modernisation'**, available from OTP Bank and VUB Bank;
  - **Loans for the purchase of land** are offered by all banks operating in agriculture;
  - **Loans linked to EU funded projects** cover the farmers co-financing needs of projects related to measures of the RDP. An example of loans are the 'financing of EU funded projects', available from by UniCredit Bank, VUB Bank and OTP Bank.

Banks offer loans to farmers in Slovakia with flexible interest rates. Interest rates increase with the maturity of loans. On average, short-term loans are offered with an interest rate of EURIBOR + 2%, medium-term loans with a rate of EURIBOR + 2.5%, and long-term loans with a rate of EURIBOR + 3%. Loans to purchase land are characterised by having the highest interest rates.[26]

The value of the agriculture leasing market is EUR 149 million.[27] Farmers use leasing to finance trucks, combine harvesters, tractors, and other types of machinery. As the machinery serves as collateral, leasing companies can offer services to farmers with higher risk.

SZRB offers various types of products. It also provides loans for the purchase of agriculture land and offers guarantees. SZRB's general eligibility criteria and financing conditions include:

- Support for the development of small and medium-sized enterprises and financing of the investment and operational needs of recipients of EU funds;
- Maximum loan maturity is 15 years with a minimum loan volume of EUR 3 000;
- Accepted collateral includes bank deposits and moveable and immovable property.

The loans are offered with interest rates calculated based on EURIBOR and the addition of a risk premium. Interest rates offered by SZRB are lower compared to loans offered by commercial banks. There are no interest rate subsidies in Slovakia.

The outstanding loans of SZRB to the agriculture sector amount to EUR 29 million, which is less than 3% of the total outstanding loans and leasing to the sector.

SZRB also provides guarantees for loans to small and medium-sized enterprises which lack adequate collateral or are considered too risky by commercial banks. The basic principle for providing guarantees for loans is the distribution of the risk between the SZRB, the client, and a partner bank (SZRB cooperates with Tatra banka, a.s. and Slovenská sporiteľňa, a.s).[28] SZRB provides guarantees for loans of commercial banks up to 55% of the loan principal. The minimum guarantee amount is EUR 16 600 and the maximum is EUR 340 000. The maximum maturity is seven years.

Guarantees to the agriculture sector provided by SZRB were EUR 0.4 million in 2018.[29] This is an increase compared to 2016 for which new guarantees to agriculture stood at EUR 0.16 million (or 0.049% of the total guarantees provided).[30] Guarantees are only offered for clients that:

- pass the financial analysis, in line with the internal regulations of the bank, with positive result;
- do not have a negative record in the bank loans and guarantees registry; and
- sign a personal liability statement.

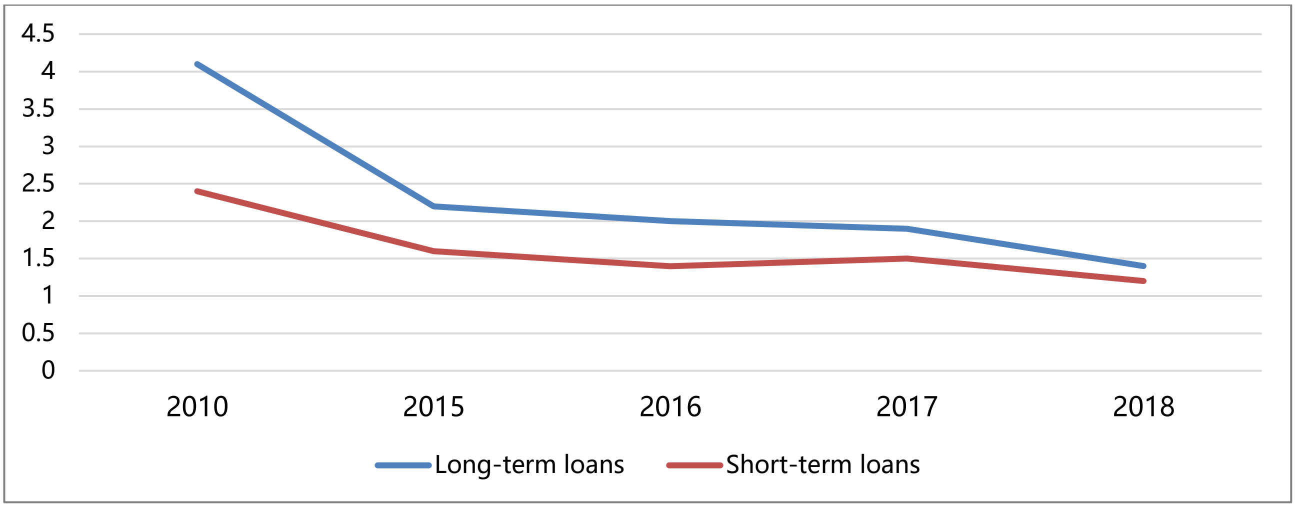
The main benefits to agriculture and agri-food sectors from products offered are the low interest rate on loans and the more favourable conditions, compared to commercial banks loans, in terms of maturity and collateral requirements. On the downside, the SZRB has very limited human resources and their products suffer from high administrative costs. The uptake of loans and guarantees by the agriculture and agri-food sector is considered low.[31] The up-take of guarantees is especially low as, according to interviews with farmers' representatives, SZRB has a focus on providing loans rather than guarantees. The reasons mentioned include SZRB's profit orientation and the perception that the provision of loans is more profitable than the provision of guarantees. Also, loans are easier to manage for SZRB than are guarantees.

26 Central Bank of the Slovak Republic, 2019, Annual Report 2018, https://www.nbs.sk/_img/Documents/_Publikacie/AnnualReport/ARNBS18.pdf.
27 Ibid.
28 Central Bank of the Slovak Republic, 2019, Annual Report 2018, https://www.nbs.sk/_img/Documents/_Publikacie/AnnualReport/ARNBS18.pdf.
29 The total guarantee volume in 2018 was EUR 29 million in total, SZRB Annual Report 2018, https://www.szrb.sk/files/files/SZRB%20VS%202018%20-%20digital%20-%20web.pdf.
30 SZRB Annual Report 2016, https://www.szrb.sk/files/files/SZRB_VS_2016_digital_final%20(2).pdf.
31 Focus group meeting, 2019.

2.3.1.3 Description of the financing market

The continued decrease in the interest rate, especially since 2015, has supported the uptake of loans. Interest rates on short-term loans decreased from 2.4% in 2010 to 1.2% in 2018 (Figure 14). For long-term loans, the decrease in interest rates was even higher, dropping from 4.1% in 2010 to 1.4% in 2018. Interest rates on short-term loans in Slovakia are below the EU average (4.76%). Farmers confirmed floating interest rates, based on 3M EURIBOR.

Figure 14: Development of interest rate on new loans in Slovakia, 2010-2018, %



Source: National Bank of Slovakia, 2019.

Favourable business conditions after accession to the EU and rising CAP support have also played an important role in stimulating the financing of the agriculture sector in Slovakia. The introduction of the CAP led to a decrease in the risk of farming in Slovakia due to enhanced stability of farm incomes and markets. The 10 years transitional period, with incremental growth of direct payments, has increased this development. This contributed to an increase in the volumes of agriculture loans. Due to the economic and financial crisis, agriculture loans were stagnating during the period between 2009 and 2013. After 2014, banks eased credit lending standards, which supported increased lending. In 2017, banks reported annual increase of agriculture loans by 9.6%.[32] However, the share of agriculture loans on total loans in the economy remains small (1.38%) and the share has increased annually only by 0.08%.

Non-performing loan levels for agriculture are comparatively low. Based on the interviews with banks, their levels of non-performing loans range between 3% and 5%, which is comparable to other sectors. Hence, banks overall can adequately evaluate the potential risks of farm clients.

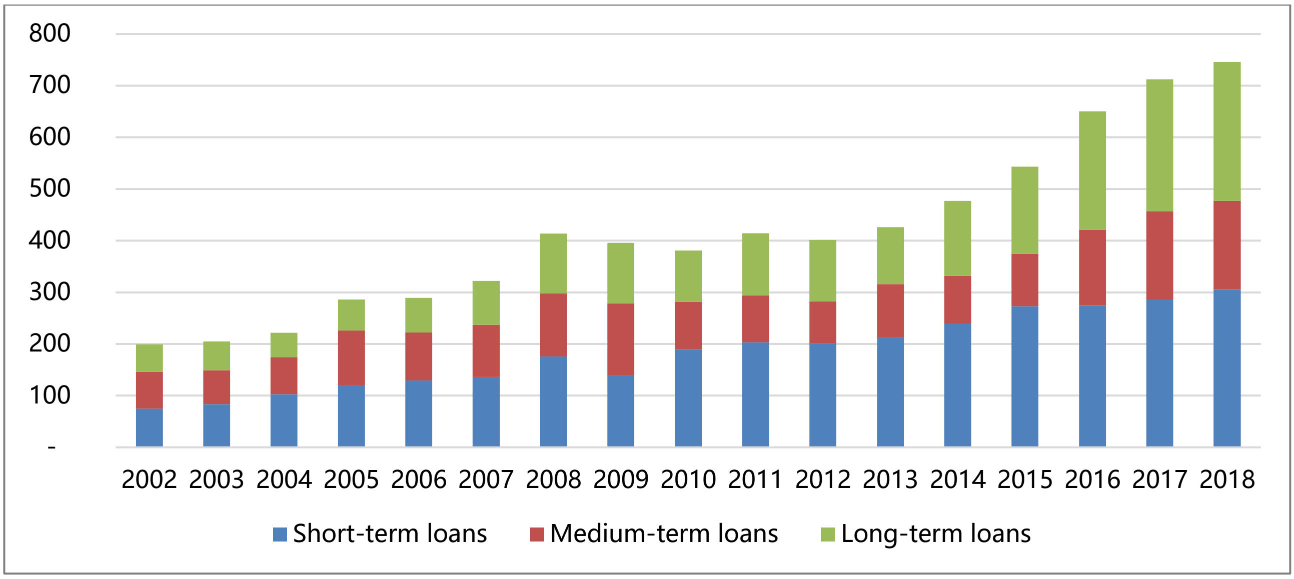
Small farmers might be disadvantaged due to the banks' marketing strategy. Banks use their exclusive agents to deal with clients and these agents only offer the products of one bank. They provide all necessary information on the respective products to clients and are being remunerated based on the number of loans sold. However, due to the lower average loan amount requested, the remuneration of loans applied for by small-sized farms is lower than for large-sized farms. While bank agents visit farmers in person regularly, they do not provide any technical support, such as business plan preparation. This is the case for all farm sizes.

32 Central Bank of the Slovak Republic, 2019, Lending Statistics, https://www.nbs.sk/en/statistics/financial-institutions/banks/statistical-data-of-monetary-financial-institutions/loans.

2.3.2 Analysis of the supply of finance

The total outstanding loan volume in 2018 was EUR 746 million. Agriculture loans have been increasing since Slovakia's accession into the EU in 2004. Furthermore, specific peaks in outstanding loan volumes are connected to calls for applications for EAFRD investment support under the RDP and the beginning of the new programming periods (Figure 15), a trend also confirmed by the banks interviewed. Since 2013, there has been a 76% increase in loan volume to the Slovak agriculture sector. As reported above, the growth of loans has been mainly supported by increasing direct payments[33] and decreasing interest rates over the last eight years. Throughout each year the outstanding loan volume varies. It peaks in November each year,[34] as farmers commonly repay their loans after receipt of direct payments in December.[35]

Figure 15: Outstanding loan volume in Slovak agriculture sector, 2002-2018, EUR million



Source: National Bank of Slovakia, 2019.

The growth-rate of bank loans varies depending on maturity (Table 6). Medium (18 months to 5 years) and long-term loans (more than 5 years) grew faster than short-term loans (less than 18 months) since 2015. According to the Slovak Agriculture and Food Chamber, the volume of the short-term loans is linked to the amount of the expected direct payments by farmers, which serve as collateral. Medium and long-term investment loans commonly serve to pre-finance or co-finance projects from the RDP.

Short-term loans made up 41% of total agriculture loans in 2018. The share of medium-term loans in total agriculture loans reached 22.9% in 2018. Their maturity varies between 1 and 5 years. Long-term loans make up 36.4% of total agriculture loans. About half of the medium and long-term loans are used to pre-finance and co-finance RDP 2014- 2020 investment projects.[36]

Long-term loans are also used by farmers in Slovakia to purchase land. Land purchases serve to expand the farm or to buy the land that was rented. For the purchase of land, some commercial banks provide long-term investment loans of up to 15 years. The loan amount ranges from EUR 3 000 to EUR 330 000 and farms have

33 Direct payments have been increased over a 10-year transitional period following EU accession.
34 National Bank of Slovakia, loan statistics: https://www.nbs.sk/en/statistics/financial-institutions/banks/statistical-data-of-monetary-financial-institutions/loans.
35 Ministry for Agriculture and Rural Development, Green report 2018.
36 Interviews with Banks, May 2019.

to contribute with 10-20% of their own resources. The demand for loans to purchase land is driven by higher direct payments, and the expectation that land prices will increase in the future. The price of land was kept low due to the significant fragmentation of land ownership and the high transaction costs to purchase or rent land. An approved government strategy, aiming at consolidating land ownership in the future, is currently being planned. This would be a state programme financed by RDP funds and/or national funds and is expected to lead to lower transaction costs on the land market and higher land prices.[37]

Table 6: Development and structure of outstanding loans in agriculture 2015-2018, EUR million

Year	Total loans	Short-term loans	Medium-term loans	Long-term loans
2015	**543.2**	272.9	102.0	168.3
2016	**650.3**	274.9	146.2	229.2
2017	**712.4**	286.4	170.8	255.3
2018	**746.1**	306.1	170.6	269.4

Source: National Bank of Slovakia, 2019.

The majority of loans are obtained by large-sized farms, as banks view these farms as being less risky than small-sized farms.[38] Generally, large-sized farms face little difficulty obtaining loans,[39] unless their project is too risky.

37 Slov-lex, 2019, https://www.slov-lex.sk/legislativne-procesy?p_p_id=processDetail_WAR_portletsel&p_p_lifecycle=2&p_p_state=normal&p_p_mode=view&p_p_cacheability=cacheLevelPage&p_p_col_id=column-2&p_p_col_count=1&_processDetail_WAR_portletsel_fileCooaddr=COO.2145.1000.3.3366829&_processDetail_WAR_portletsel_file=vlastny_material.pdf&_processDetail_WAR_portletsel_action=getFile.
38 Interviews with VUB bank and UniCredit Bank, May 2019.
39 Interviews with Slovak Agriculture and Food Chamber (SPPK), and VUB bank, May 2019.

2.4 Financing gap in the agriculture sector

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

Key elements of the financing gap in the Slovak agriculture sector

- The financing gap was estimated to be between EUR 140 million and EUR 316 million.
- Small-sized farms have the largest unmet demand.
- The largest part of the gap relates to long-term financing.
- 35% of the financing gap affects young farmers, which have significantly higher financial needs than other farmers.
- Also large-sized farms face challenges in terms of access to finance – even though few large-sized farms are affected. Still, the gap for this segment might have a significant impact on the overall sector performance due to the important role of large-sized farms.
- The ability of small-sized farms to access loans in Slovakia is low, due to their limited availability of assets to be used as collateral, low economic returns, and the lack of know-how in relation to the preparation of business plans.
- New entrants face financing difficulties, due to the lack of history of family farming in Slovakia, lack of collateral, lack of credit history, and higher risk.
- The amount of CAP support directly affects access to finance, as the amount of aid a farm receives determines the amount they can borrow, mostly short-term.

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 Slovak farms and statistics from Eurostat (see Annex A.4 for more information). The methodology used for calculating the gap is described in Annex A.3.

The financing gap arises from unmet financing demand from economically viable farms[40]. As explained in section 2.2.2, the unmet demand for finance includes:

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

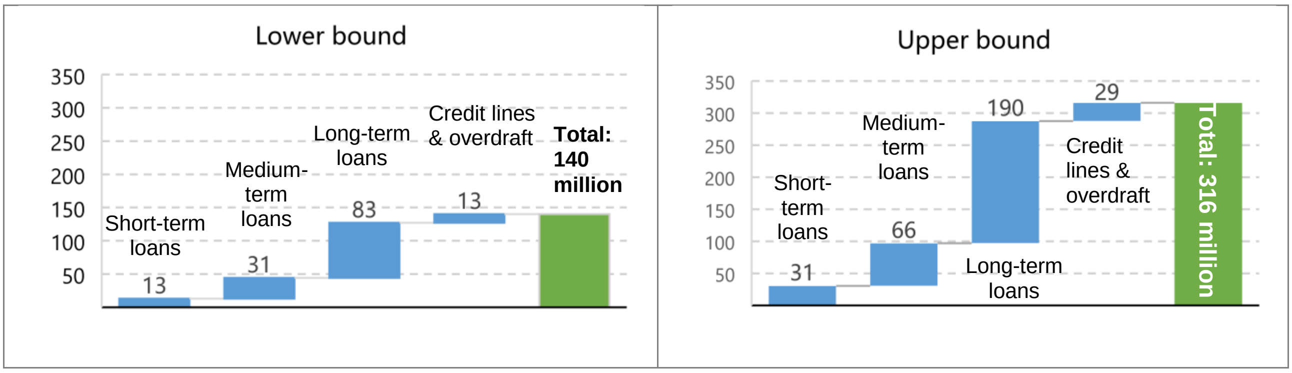
For the purpose of this report, ‘turnover growth’ is used as a proxy of farm viability. In particular, two different criteria for viability are used, which lead to the calculation of a range for the financing gap between an upper and a lower bound:

- 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.

40 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.

- 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.

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



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

The financing gap for Slovak agriculture sector is calculated to be between EUR 139.8 million and EUR 315.9 million. The financing gap mainly concerns small-sized farms and young farmers. The most difficulties concern long-term loans (Figure 16). At present, the share of long-term loans accounts for only 36% of total outstanding loans, which is a relatively low share compared to other countries (section 2.3.1.3).

Table 7: Financing gap by farm size in in the agriculture sector in 2017, EUR million

		Total	Short-term Loan	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Upper bound	Small-sized farms	**190.7**	16.0	40.8	121.3	12.6
	Medium-sized farms	**42.2**	4.2	8.0	27.2	2.9
	Large-sized farms	**82.9**	10.5	17.4	41.8	13.1
	Total	**315.9**	**30.7**	**66.3**	**190.4**	**28.6**
Lower bound	Small-sized farms	**84.4**	6.5	19.4	52.7	5.7
	Medium-sized farms	**18.7**	1.7	3.8	11.8	1.3
	Large-sized farms	**36.7**	4.3	8.3	18.2	6.0
	Total	**139.8**	**12.6**	**31.5**	**82.8**	**13.0**

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

As discussed in section 2.2.2, a *fi-compass* feasibility study, was recently carried out. This study concludes that the financing gap for the agriculture sector in Slovakia ranges between EUR 59.2 million to EUR 224.1 million.[41] This estimate only takes into account long-term loans. The results can be considered in

41 *fi-compass*, 2019, Feasibility study in support of the implementation of Financial Instruments combining EAFRD and EFSI within the framework of the Rural Development Programme of Slovakia for the 2014-2020 programming period, Final report, page 113.

line with our results, which instead covers all loan maturities. The feasibility study further underlines that small-sized farms have the most difficulty accessing finance. It proposes adequate products for small-sized farms to be developed, as a lack of collateral is their major issue.[42]

Table 8: Financing gap of young farmers in 2017, EUR million

	Lower Bound			Upper Bound		
	Small-sized	**Medium-sized**	**Large-sized**	**Small-sized**	**Medium-sized**	**Large-sized**
Financing Gap	84.4	18.7	36.8	190.7	42.3	82.9
Young farmers gap	16.0	3.5	5.8	67.1	14.8	28.5
Share of total gap	18.1%			34.9%		

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

Because smallholders are considered to be too risky by the banking sector, 60% of the financing gap is attributed to small-sized farms (Table 7). The financing gap for small-sized farms mainly exists for long-term loans (63%), which is also driven by need to invest in land, machinery and buildings.

Small-sized farms are often rejected by banks as they lack sufficient collateral and receive lower levels of CAP support (above all, direct payments) that is otherwise commonly used as collateral, mainly for short-term and medium-term lending. Currently there is no cap on the amount of direct payments to individual beneficiaries in Slovakia. A lack of credit history or being economically unviable is also often a reason why banks reject applications. Discouragement from applying might also be due to farmer's lack of financial knowledge and/or lack of familiarity with the banking system. In addition, small-sized farmers get discouraged because of the unfavourable loan conditions offered by banks.

While only 26% of the financing gap is linked to large-sized farms, the gap for this segment might have a significant impact on the overall sector performance due to the important role of large-sized farms. They contribute to 95% of the agricultural output and cover 90% of the agricultural land.[43] Moreover, the interviews conducted revealed that, in general, long-term loans are viewed as riskier by financial institutions as compared to other products, regardless of the size of the farm. The financing gap is also higher for very specialised farms due to both price risks and an inefficient insurance market. This is especially the case for animal production, which is generally less competitive in Slovakia, with production on the decline.

Up to 35% of the financing gap might be attributed to young farmers. Between 62% and 66% of rejected and viable loan applications came from Slovak farmers below the age of 40 years. Similarly, 28% of the discouraged applications came from young farmers. Using the rate of farmers constrained in their access to finance, **the financing gap for young farmers is between EUR 25.3 million and EUR 110.4 million** (Table 8). Young farmers represent a large part of the gap as they experience high entry barriers, have limited amount of land at their disposal, lack credit history and have insufficient assets for collateral.

42 Ibid.
43 Interview with Slovak Agriculture and Food Chamber (SPPK), and VUB bank, May 2019.

Interviews with stakeholders[44] confirm that additional resources (including from the CAP/EAFRD) for financial guarantee instruments would be beneficial, in order to increase access to long-term loans, particularly for small-sized farms and young farmers. This would expand the absorption of loans by solving the challenges pertaining to collateral.[45] The current preferential loans and public guarantees have very limited uptake among the agriculture sector. Shortcomings include the high administrative costs, bureaucracy and the understanding that loans are more profitable than guarantees. The benefits of new instruments may include lower interest rates being charged to farmers, and, depending on the product design and its management, strong leverage could be achieved.

44 Interview with banks (CSOB, VUB bank and UniCredit Bank), May 2019.
45 Focus group meeting, 2019.

2.5 Conclusions

The agriculture sector in Slovakia shows a declining trend in investments. The share of the GFCF on the GVA has been decreasing in recent years, although it remains higher than the EU average. At the same time, the demand for loans has accelerated since joining the EU in 2004. The vehicle for the increased loan uptake is the financial inflow from the CAP. Results from the analysis indicate that direct payments are very often used as a form of collateral for short-term loans. At the same time, about half of the medium and long-term loans are used for the pre-financing or co-financing of RDP projects.

The analysis shows that there is a financing gap estimated between EUR 140 million and 316 million. Around 60% of the value of the gap relates to small-sized farms (below 20 ha) and around 35% to young farmers. In terms of financial products, 60% of the financing gap relates to long-term investment loans. While there are several reasons for the gap, the lack of collateral is the main identified constraint and is a particular issue for small-sized farms and young farmers. In addition, a lack of credit history and a lack of knowledge constitute additional significant constraints. From the supply side, banks seem to be reluctant to work with small-sized farms and young farmers. Some financial instruments are already available to facilitate access to credit for the sector, but, according to the results of this analysis, their current uptake is very low. To address the financing gap, additional public support for guarantees in the agriculture sector should be considered.

There are multiple development pathways to alleviate the unmet demand for finance. Even though Slovak farmers can rely on an already well-developed and functional financial market, a targeted use of financial instruments in the next CAP programming period may help to facilitate access to finance for new enterprises currently excluded, or in some cases self-excluded, from the market.

- An EAFRD guarantee fund may complement the support provided by the Slovak Guarantee and Development Bank, supporting access to finance for the farmers (young farmers in particular) who lack sufficient assets. The financial instrument to be set-up shall minimise the administrative costs for final beneficiaries.
- One of the constraints faced by small-sized farms is linked to the high interest rates applied by banks, due to the high risk perception of the sector and the lower profitability of small loans. For this reason, an EAFRD risk-sharing loan instrument might also be considered, as it would combine the provision of risk coverage with a reduction in the financing cost.
- The financial instruments should aim to increase the provision of long-term loans, which according to the analysis are less accessible, in particular for small-sized farms. To address this problem, a risk-sharing loan restructuring instrument might be more effective, since it would make part of the long-term financial provision needed to finance the enterprises available to banks.
- For both types of instruments, the opportunities offered by the new legal framework, such as the easier combination of financial instruments and grant support, or the possibility for young farmers to finance the purchase of land, might offer interesting opportunities to increase the effectiveness of the instrument for small-sized farms and new entrants.
- The combination of a financial instrument with technical support may also be beneficial, as this would increase the financial know-how of the sector, including in the preparation of business plans. This is of particular relevance to young farmers.

3. PART II: AGRI-FOOD SECTOR

3.1 Market analysis

Key elements on the agri-food sector in Slovakia

- Out of 3 907 agri-food enterprises, 96% (3 748) were categorised as small-sized enterprises (under 50 employees) in 2017. [46]
- Of the 46 440 employees within the agri-food sector, 21% were employed in the bakery and milling sub-sector, 16% in the meat processing sub-sector, and 15% in the dairy sub-sector in 2017.
- The agri-food sector generated a turnover of EUR 4.6 billion in 2018, of which meat processing contributed 19%, followed by dairy production with 18%, the beverage sector with 17%, and bakery and milling with 10%.
- Production, revenues and value added are increasing while productivity is lagging behind.
- Since 2015, the number of start-ups increased by 36%, with micro and small-sized enterprises making up the majority share.
- Slovakia is a net importer of most agri-food products, particularly meat products, non-alcoholic beverages, and dairy products.

While the Slovak agri-food sector has been on the rise in recent years, its share in the overall economy is decreasing. The agri-food sectors' contribution to the Slovak economy is marginal, accounting for 1.4% of the GVA and 1.9% of employment in 2018. Still, the total revenues of the sector amounted to EUR 4.6 billion in 2018. Value-added reached about EUR 0.9 billion in 2017, which was an increase of 12% since 2015 (Table 9). However, with other industries in the Slovak economy growing faster, such as the automotive and electronics industry, the share of the agri-food sector to the national economy has been decreasing in recent years.

Table 9: Value added and turnover of the Slovak food and beverage manufacturing sectors, 2013-2018, EUR million[47]

	2013	2014	2015	2016	2017	2018
Value added manufacture of food and beverage	710.5	747.7	755.7	760.6	849.9	
Turnover manufacture of food and beverage	4 461.6	4 344.0	4 227.0	4 225.7	4 488.2	4 583.6

Source: Eurostat – Structural Business Statistics, 2019.

The growth of the agri-food sector is reflected by the increasing number of start-ups. Since 2015, there has been a particularly rapid rise of micro (1-9 employees) and small-sized enterprises (less than 50 employees), which together account for 96% of all start-ups in the sector (1 025 start-ups over the 2015-2017 period). The number of medium-sized (between 50 and 249 employees) and large-sized enterprises (over 250 employees), on the other hand, is increasing very slowly. In 2017 alone, there were 445 start-ups, which represents an increase of 12% since 2016.

However, productivity of the agri-food sector is lagging behind. The agri-food sector has below average productivity compared to the national economy of Slovakia. The overall productivity of the national economy

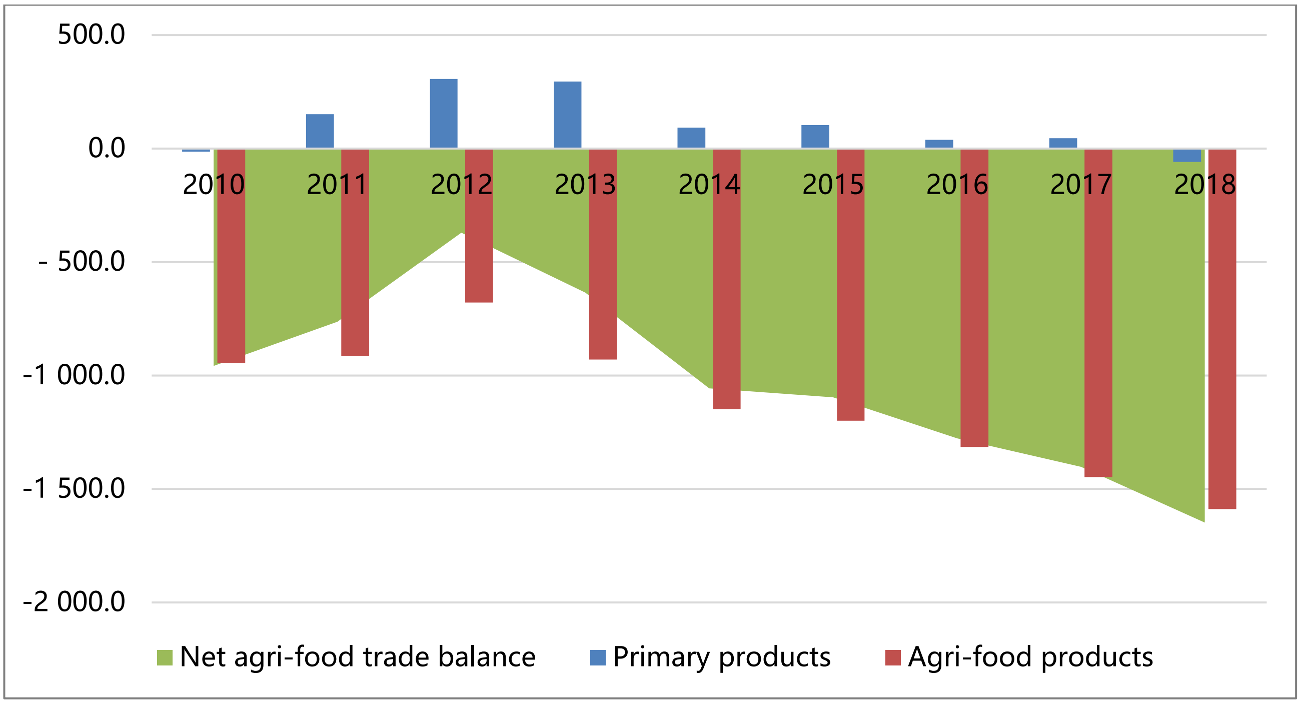
46 Eurostat, 2019, Structural Business Statistics, https://ec.europa.eu/eurostat/web/structural-business-statistics/data/database.
47 No available figures on the value added for 2018.

reached EUR 32 000 of GVA per employee in 2016. In contrast, the productivity of the agri-food sector lagged behind, reaching only EUR 24 000 of GVA per worker. Compared to the EU 28 average, Slovakia has one of the lowest agri-food GVA per working unit. The starch, beer and malt, and sugar sub-sectors have the highest productivity of labour within the food processing industry. The lower productivity in food processing is reflected in lower wages for the sector, which are about 90% of the national average wage. Both in the national economy and in the food processing industry, labour productivity has been growing recently.

The level of concentration in the food processing industry varies by sub-sectors. Poultry, beer, and sugar are highly concentrated, while meat processing, dairy production, bakery and confectionery are significantly less concentrated. In the overall agri-food sector, the largest three enterprises account for 13% of total revenues, while the largest 10 enterprises make up 32% of total revenues.

Slovakia's agri-food trade deficits are growing, driven by imports of high-value processed goods (Figure 17). Slovakia is a net exporter of malt, starch products and sugar. While Slovakia has a small trade surplus with regards to primary agriculture commodities, it increasingly imports high valued agri-food products. The agri-food trade deficit of almost EUR 1.8 billion in 2018 is mainly driven by accelerating imports from other EU member states.[48] The largest dependency is on meat products, followed by non-alcoholic beverages and dairy products. The weak trade performance underlines the need to strengthen the competitive position of Slovakia's agri-food value chains, with a view of growing their domestic and international market shares.

Figure 17: Development of the agri-food trade 2000-2018, EUR million



Source: Ministry of Agriculture and Rural Development, Green report, 2019.

48 European Commission, June 2019, Statistical Factsheet for Slovakia.

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

This section describes the drivers of the 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 analysis of the demand for agri-food finance is based on the findings from the Agri-food survey results of 50 Slovak firms, as well as interviews with key stakeholders in the agri-food sector, combined with national statistics.

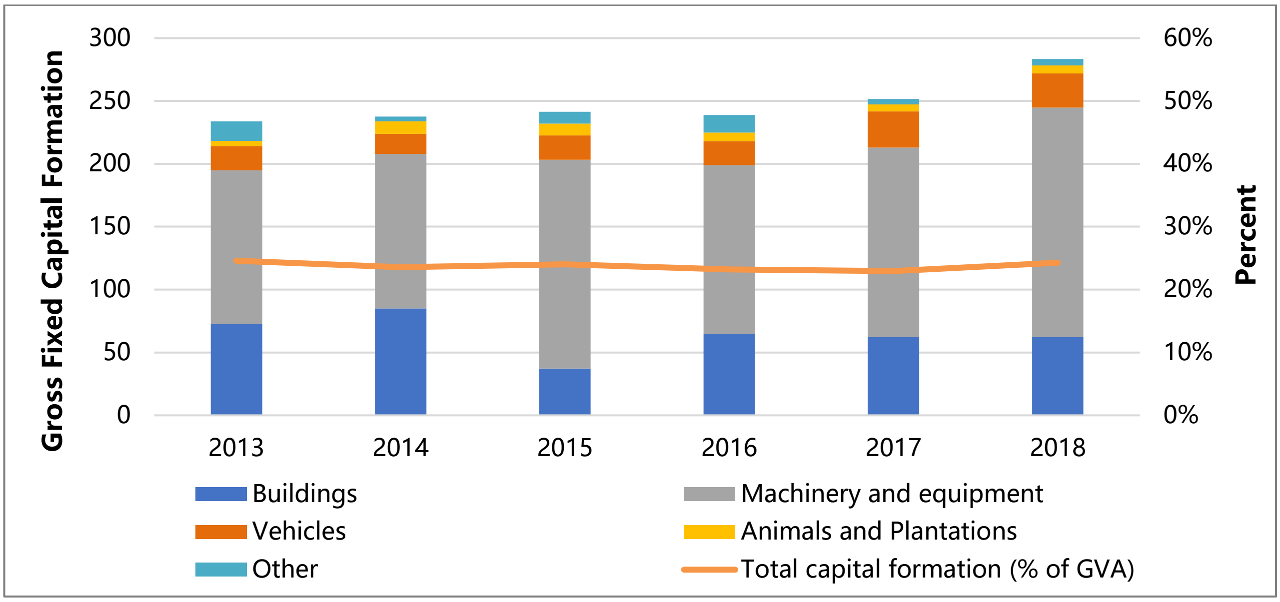
Key elements on finance demand from the Slovak agri-food sector

- The demand for finance reflects the sector's efforts to (i) modernise enterprises, (ii) remain competitive at both the domestic and EU market level, (iii) adjust production in accordance with consumer preferences, (iv) manage stricter standards, and (v) deal with a shortage of skilled labour.
- The total unmet demand for finance in 2018 was estimated to be EUR 36.8 million.
- The highest share of investment is in machinery and equipment, buildings and vehicles.
- 9% of Slovak agri-food firms experienced problems with access to finance.
- 14% of firms did not apply for loans in Slovakia due to non-favourable conditions, while 13% did not apply due to lengthy and complicated procedures.
- Agri-food enterprises are constrained by (i) their lack of collateral, (ii) a lack of knowledge on the available financial products, and (iii) unfavourable terms and conditions. In addition, they suffer from a weak position in the supply chain and from low margins.

3.2.1 Drivers of total demand for finance

Since 2016, the level of investments in the Slovak agri-food sector has been increasing. This follows a relatively stable period between 2013 and 2016, due to stagnating prices. In 2018, the GFCF in absolute value reached EUR 283.5 million, which was 21% higher than in 2013 (EUR 233.8 million). The highest share of investment is in machinery and equipment, followed by buildings and vehicles (Figure 18).

Figure 18: Development of Gross Fixed Capital Formation in the Slovak agri-food sector, 2013-2018, EUR million

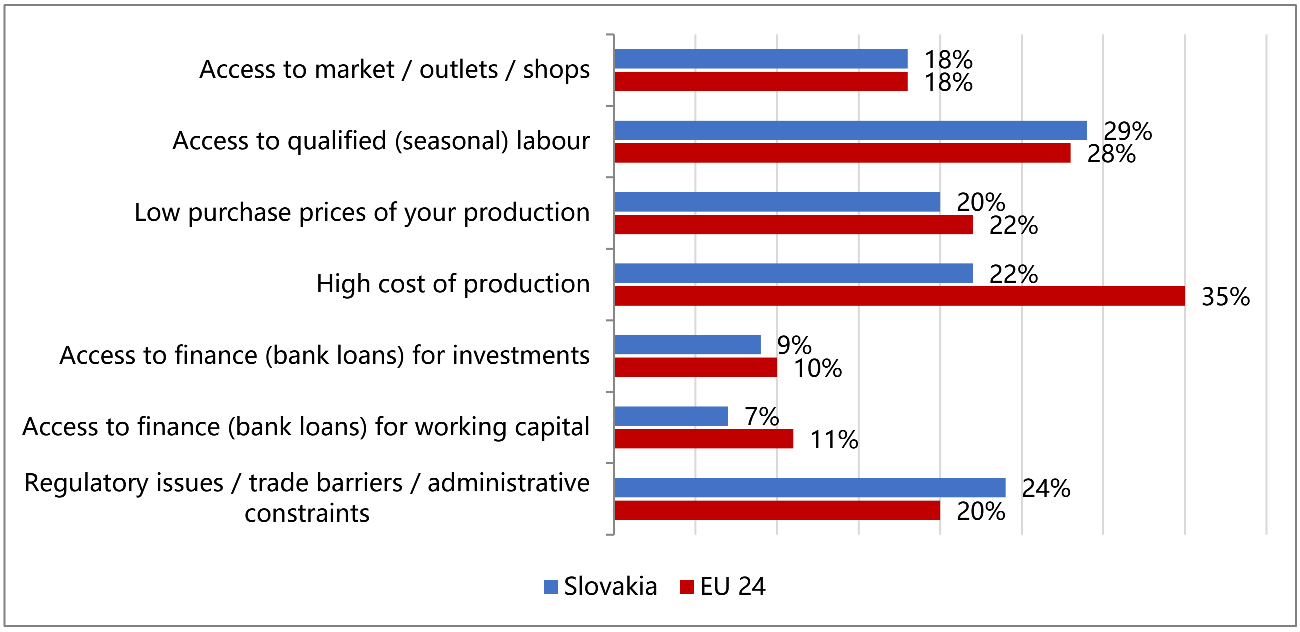


Source: MARD SR, Green Report, 2013-2019.

The Slovak agri-food sector is challenged by strong competition from the EU 28, which is reflected in the growing agri-food trade deficit. The sector looks back to missed opportunities following the years of transformation in the 1990s[49] when the privatisation process was not successful. Following EU accession, the economic weight of the Slovak agri-food sector was even further reduced, due to the high costs of adjustment to the standards of the single market. The Slovak agri-food sector also suffers from stagnating domestic agriculture production and a significant decline of animal and fruit and vegetable production.[50]

Agri-food enterprises in Slovakia have difficulties finding qualified labour. According to the Agri-food survey, 29% of Slovak agri-food enterprises face this challenge (Figure 19). These difficulties are driven by the emigration of skilled workers out of the country and by low unemployment rates in the overall economy. With regards to the labour market, the agri-food sector competes for qualified workers with growing industries, such as the automotive and electronics industries. Developments in the labour market also impact production costs. This is a concern given that 22% of Slovak agri-food firms consider high production costs to be an issue and that 62% of Slovak agri-food enterprises stated that production costs in 2018 increased compared to the previous year. Furthermore, 24% of agri-food enterprises also suffer from regulatory and administrative constraints, which lead to further increases in production costs. These constraints, in many instances, require investment into new technology to cope with the enhanced regulatory requirements.[51] Another concern of Slovak agri-food enterprises is access to market, with 18% of firms facing problems. This is caused by a highly concentrated retail sector, with about 85% of all food in Slovakia purchased in supermarket chains.[52]

Figure 19: Difficulties experienced by agri-food enterprises in 2018



Source: Agri-food survey.

Overall, the drivers of demand for finance from Slovak agri-food enterprises are as follows:

(i) **Expansion of agri-food production,** which relates to the overall growth objective of the agri-food sector. Agri-food firms seek to modernise and expand and this requires long-term financing.[53]

49 Chrastinova et al., 2018.
50 IPP, 2019.
51 Interview with Agri-food associations, September 2019.
52 VUEPP, 2019, SWOT Analysis for Strategic Plan for Common Agricultural Policy 2021–2027 in Slovakia.
53 Interview with Slovak Agriculture and Food Chamber (SPPK) and Agri-food associations, July 2019.

(ii) **Product differentiation and producing specialised innovative food products**, to satisfy consumption trends,[54] require increased investment into packaging.

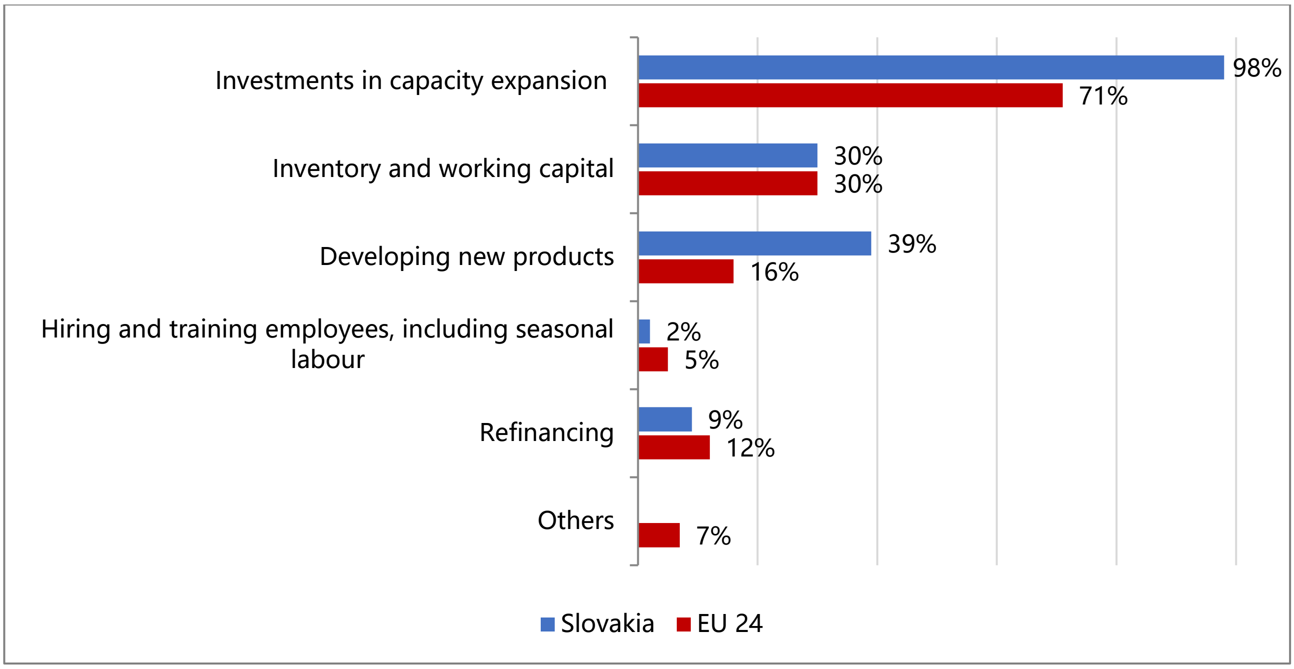
(iii) **The management of a shortage of skilled labour** demands higher investment in labour saving technology, such as process automation.

(iv) **Investing in modernised production technologies** to improve the competitiveness on the EU single market.[55]

(v) **Responding to new regulatory requirements**, as well as environmental and food safety regulations.[56]

These drivers of demand for finance are also reflected in the purpose of loans. In the Agri-food survey, 98% of Slovak agri-food enterprises responded that the main purpose of their loans was to invest in capacity expansion (Figure 20). This requires investments in processing equipment, machinery, buildings and logistical vehicles, among others. 39% of respondents stated that their financial needs are based on developing new products, which is more than twice the rate recorded for the EU 24 average (16%). 30% of the Slovak agri-food enterprises responded that working capital is also needed to maintain their operations.

Figure 20: Purpose of bank loans in the agri-food sector in 2018



Source: Agri-food survey.

Variations in investment intensity exist between sub-sectors.[57] The four branches of meat manufacturing, dairy manufacturing, bakery and milling manufacturing, and fruit and vegetables are further analysed below, due to their significance to the agri-food sector:

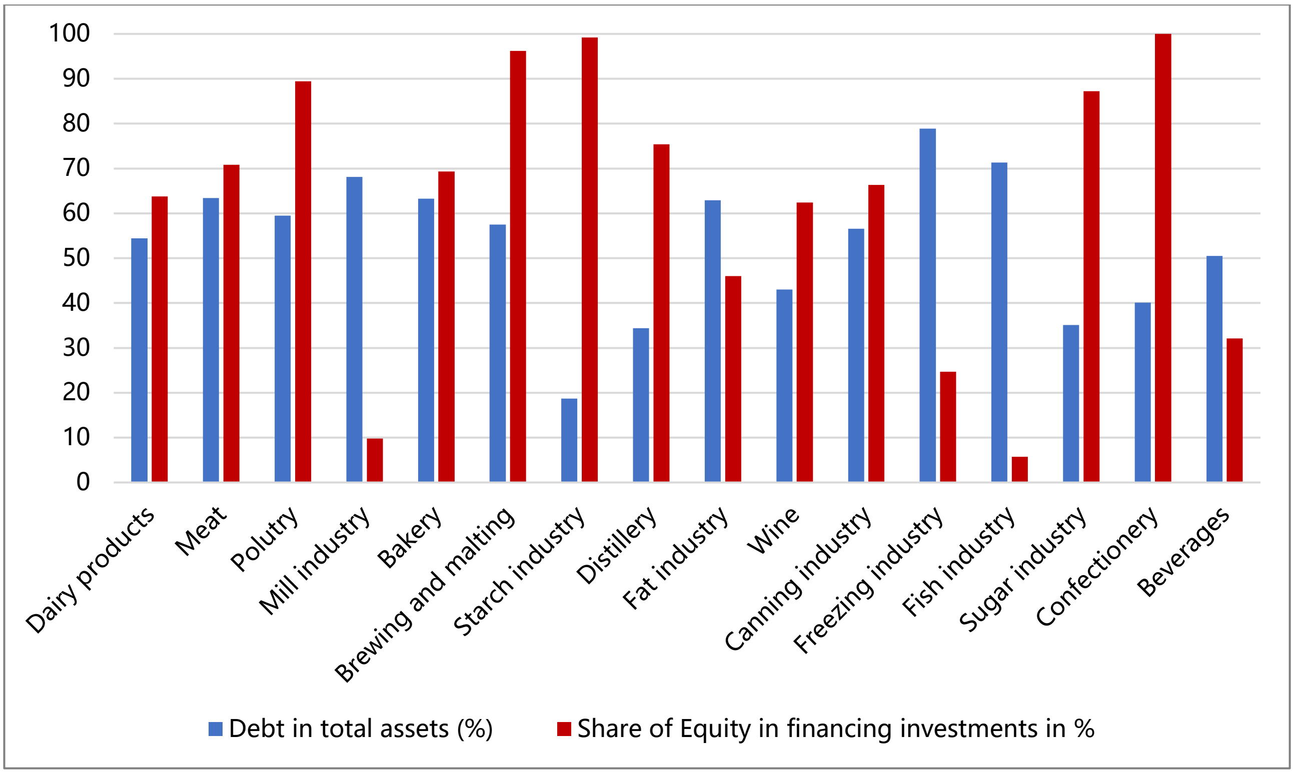
- Investment in the **dairy sub-sector** has been declining since 2009. As of 2016, the dairy sub-sector invested only two thirds of its investment value compared to 2009. In total, 64% of investments come from

54 VUEPP, 2019, SWOT Analysis for Strategic Plan for Common Agricultural Policy 2021-2027 in Slovakia.
55 Interview with Slovak Agriculture and Food Chamber (SPPK) and Agri-food associations, July 2019.
56 Interview with Slovak Agriculture and Food Chamber (SPPK) and Agri-food associations, July 2019.
57 Chrastinova et al., 2018.

own resources (Figure 21). Nearly two thirds of the investments were made into new technologies, mainly financed by companies' own resources.

- The **meat processing sub-sector** is showing slight growth in investments, with the investment value growing by 3.5% since 2009. About 56% of these investments went into new technologies. Similar to dairy, investments in the meat processing sub-sectors are based on a higher share of own equity (71%).
- Investments in the **milling sub-sector** depend on borrowed capital in 68% of the cases. Investments were mainly directed into purchase of new technologies (76%). However, since 2009, investments have been declined by 26.3%. Investments in the bakery sub-sector depend equally on own resources (69%) and borrowed capital (63%).
- Investments in the **fruit and vegetable processing sub-sector** have increased since 2009 by 85%, and most investments went into new technology.

Figure 21: Share of equity versus borrowed capital on investments, by sub-sector (%)



Source: Chrastinová (2017), own processing.[58]

The development of the agri-food sector is attracting new entrants. Start-ups are mainly micro (below 10 employees) and small-sized enterprises. Based on national statistics (POTRAV database), since 2009, there was a growth of numbers of mainly micro and small-sized enterprises in agri-food. These categories of enterprises play an important role in bakeries, wine, beer (micro-breweries), meat processing and milk processing. Overall, the number of micro-enterprises has been growing over the 2015-2017 period, while the number of enterprises in the other size classes has remained rather stable (Table 10).

58 Chrastinová, Zuzana et al. 2018, http://www.vuepp.sk/dokumenty/publikacie_studie/ekonomicke_aspekty_polnohospodarstva_2018.pdf.

Table 10: Development of agri-food enterprises in Slovakia by size, 2015-2017[59]

Firm-size Category	2015	2016	2017
Micro enterprise (<10 employees)	2 311	2 915	333 5
Small-sized enterprises (10-49 employees)	425	402	413
Medium-sized enterprises (50-249 employees)	112	113	122
Large-sized enterprises (>250 employees)	26	23	27
TOTAL	2 874	3 453	3 897

Source: Eurostat **–** *Structural Business Statistics, 2019.*

While the EAFRD/RDP supports agri-food enterprises in carrying out investments, a large share of companies could not obtain access to public funding due to a lack of budget, which signals a potentially large unmet demand from a sector that is developing positively. During the 2015-2019 period, EUR 203 million was committed under the EAFRD measure for support of investments in processing, marketing and development of agriculture produce (Table 11). In total, 432 businesses were supported, with the meat processing sub-sector and the milling and bakery sub-sectors being some of the most demanding (Table 12). The maximum grant volume is EUR 2 million per beneficiary and EUR 10 million in the case of joint projects.[60] However, 404 applications were not approved for support, including those withdrawn and ineligible, accounting for EUR 183 million of unsatisfied demand, which is almost as high as the public support provided.

Table 11: Slovakia: 2014-2020 RDP implementation of sub-measures 4.2, by the end of 2019

Sub-measures	Amount requested from all applications (EUR million)	Amount committed (EUR million)	Amount not satisfied (EUR million)	Number of received applications	Number of non-supported applications	Number of approved applications
4.2 Support for investment in processing, marketing and development of agricultural products	386	203	183	836	404	432

Source: Ministry of Agriculture, 2019. Preliminary data on total public financing (EAFRD + national co-financing), including projects from the 2007-2013 transitional period. Private co-financing is not included.

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. They could also be withdrawn by the beneficiary at a later stage (following the submission) or under ongoing evaluation by the Paying Agency.

59 2018 data were not available.
60 Joint projects are projects gathering 3 or 4 processors that jointly implement a project.

Table 12: Share of investment support by agri-food sub-sector (M4.2) in 2014-2018

Supported area	Share
Meat processing	25%
Dairy	11%
Mill, bakery, pastry and confectionery sub-sector	24%
Canning industry a freezing industry	6%
Sugar industry, fat industry, including oilseed processing	12%
Brewing and malting, distillery, wine industry and beverages	13%
Production of feedstuff and other	9%

Source: Agricultural paying agency in Slovakia 2014-2018.

There is additional investment support from the Ministry of Economy for the agri-food sector. Over the 2008-2017 period, this total support amounted to EUR 11.3 million. The support is focused on export promotion, innovations, and SME business start-ups.

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 enterprises 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 Slovakia is estimated at EUR 36.8 million.

Investments in the Slovak agri-food sector are mainly financed by enterprise's own resources (57% in 2018), as shown in Table 13. Bank loans make up nearly a quarter (24%) of investment financing in the agri-food sector. The share of foreign direct investments (FDI) remained stable from 2016-2018 at just 1% of the investment volume. While about 63% of owners' equity belongs to foreign capital, the involvement of foreign capital in the agri-food sector has declined after some international companies left Slovakia. Lower investment led to a decline of assets and to higher rates of depreciation of assets.[61]

Table 13: Funds to finance fixed assets in Slovak agri-food sector, 2016-2018, EUR million

	2016	2017	2018
Owner`s equity	61%	58%	57%
Bank loans	**20%**	**25%**	**24%**
Subsidies	5%	6%	7%
Other funds	13%	10%	11%
Foreign investments	1%	1%	1%

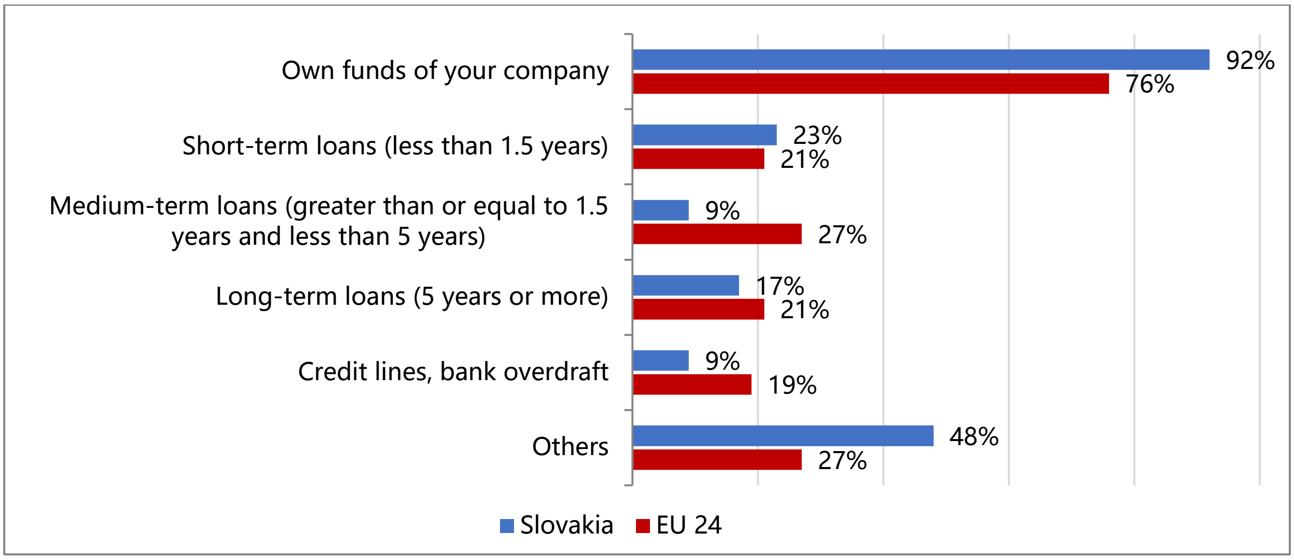
Source: Report POTRAV 2018.

For 92% of the Slovak agri-food enterprises, their own resources are the major source of finance (Figure 22 and Table 13). Own funding has a higher significance for Slovak agri-food enterprises compared to the average for the EU 24 (76%). Short-term loans are the second most important source of finance (23% of

61 Interview with Slovak Agriculture and Food Chamber (SPPK) and Agri-food associations, July 2019, Ministry of Agriculture and Rural Development, 2019, Green report.

respondents). Other sources of finance, as mentioned by 48% of respondents, include supplier finance or loans from headquarters in case of multinational enterprises.

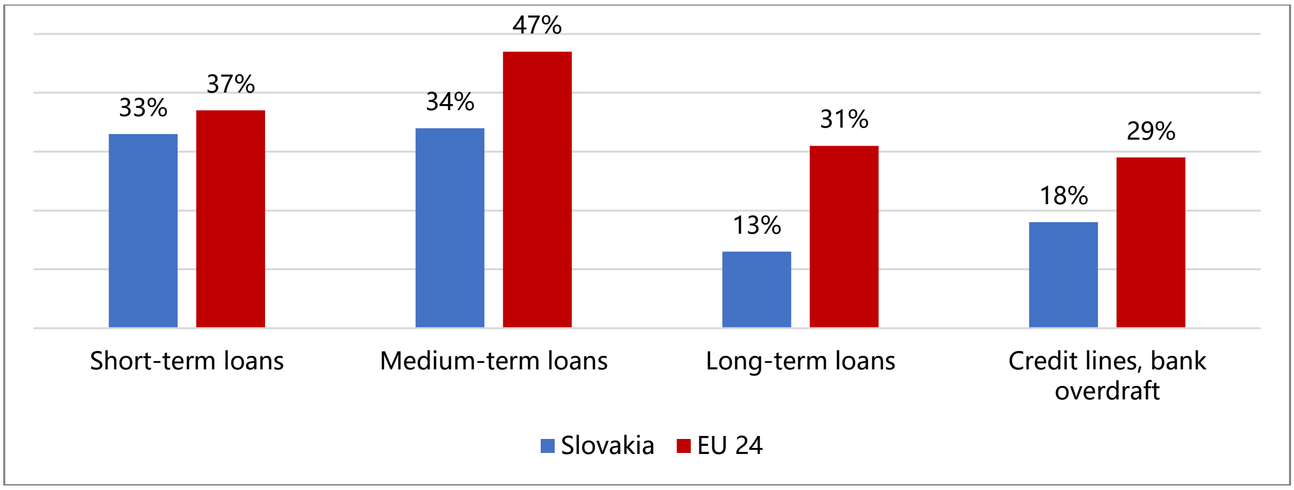
Figure 22: Most important financing instruments to agri-food enterprises



Source: Agri-food survey.

While agri-food enterprises have sizeable equity ratios, the demand for finance is lower than in the EU 24. Only 21% of Slovak agri-food enterprises applied for finance from financial institutions in 2018, which is significantly lower than for EU 24, which had a figure of 46%. Slovak enterprises mainly seek loans with short and medium-term maturity (33 and 34% respectively), while long-term loans (13%) are frequently used for capacity expansion and developing new products (Figure 23).

Figure 23: Agri-food enterprises applying for finance in 2018, by financing product

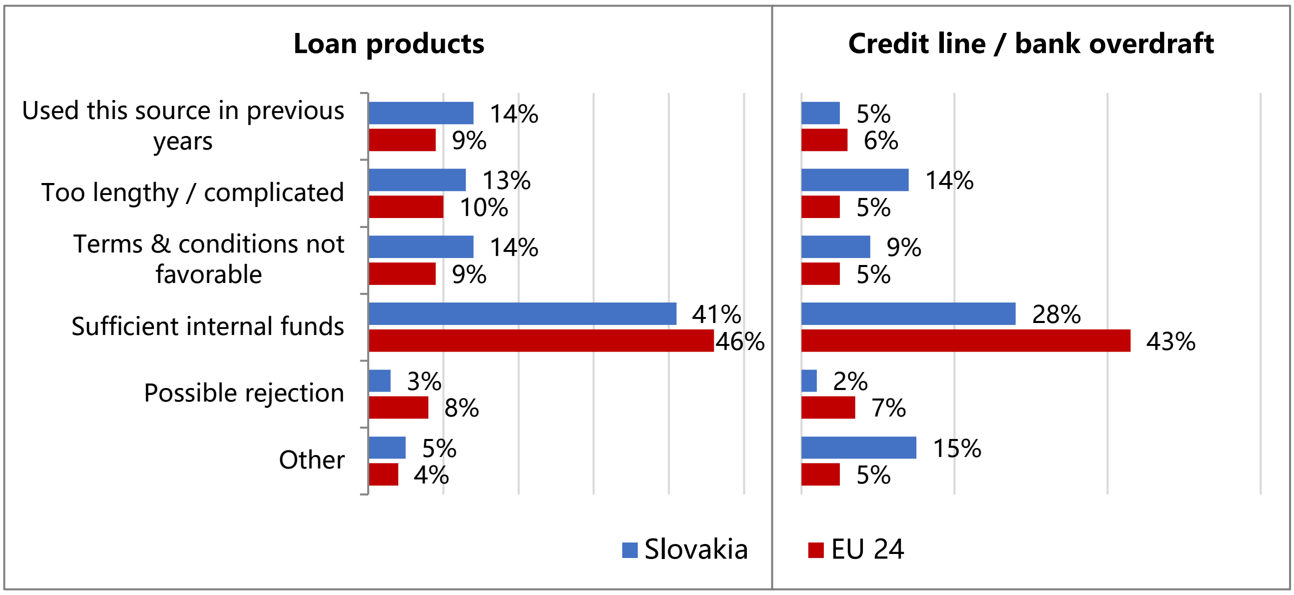


Source: Agri-food survey.

The key reason enterprises do not apply for financing is due to the unfavourable terms and conditions offered to them by banks. While Slovak agri-food enterprises confirmed that they largely rely on own resources, one of the main reasons for which they did not apply for finance is based on the maturities and conditions of the loan being unfavourable (Figure 24). Enterprise's also considered the loan application process to be too lengthy and complicated (between 13 and 14% depending on the product). Only between 2 and 3% of the Slovak agri-food enterprises fear having their application rejected.

The EAFRD-EFSI feasibility study[62] conducted in Slovakia identified the same reasons for not applying. This study confirmed that the survey respondents who did not apply for external financing mentioned the lengthy and difficult process to receive financing (22%), lack of attractive financing offers (16%) and sufficient own financing resources (11%) as the key reasons for not applying.

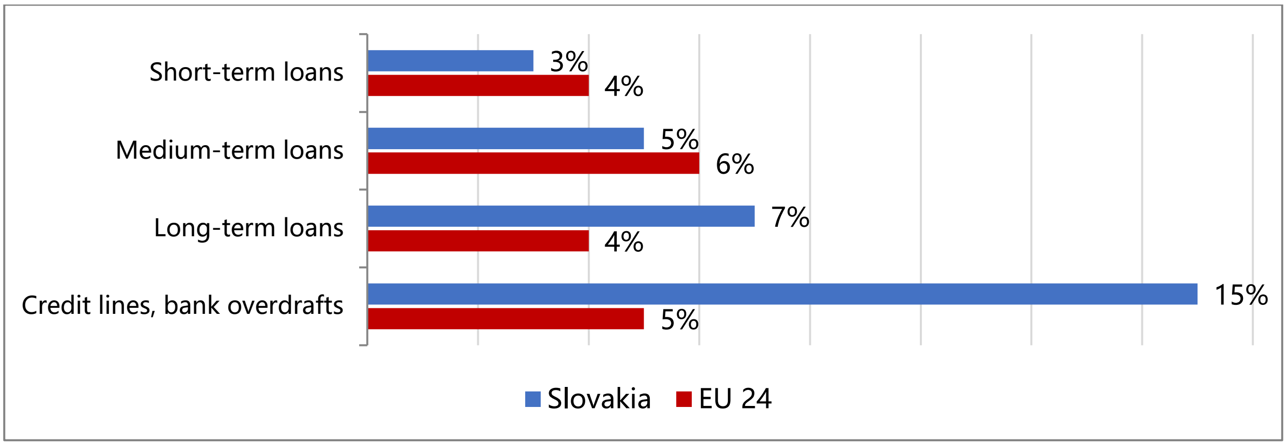
Figure 24: Reasons for not applying for loans in the agri-food sector in 2018



Source: *Agri-food survey*.

Slovak agri-food enterprises lack knowledge of their financing options. 15% of the Slovak enterprises responded that the main reason for not applying for credit lines and bank overdraft is based on their limited knowledge of their opportunities. This is three times higher than the share of the EU 24 average. Between 3 and 7% reported limited knowledge for the other financial products (Figure 25). This point towards the need for targeted information campaigns to reduce the demand for finance.

Figure 25: Share of respondents who see lack of knowledge on their financing options



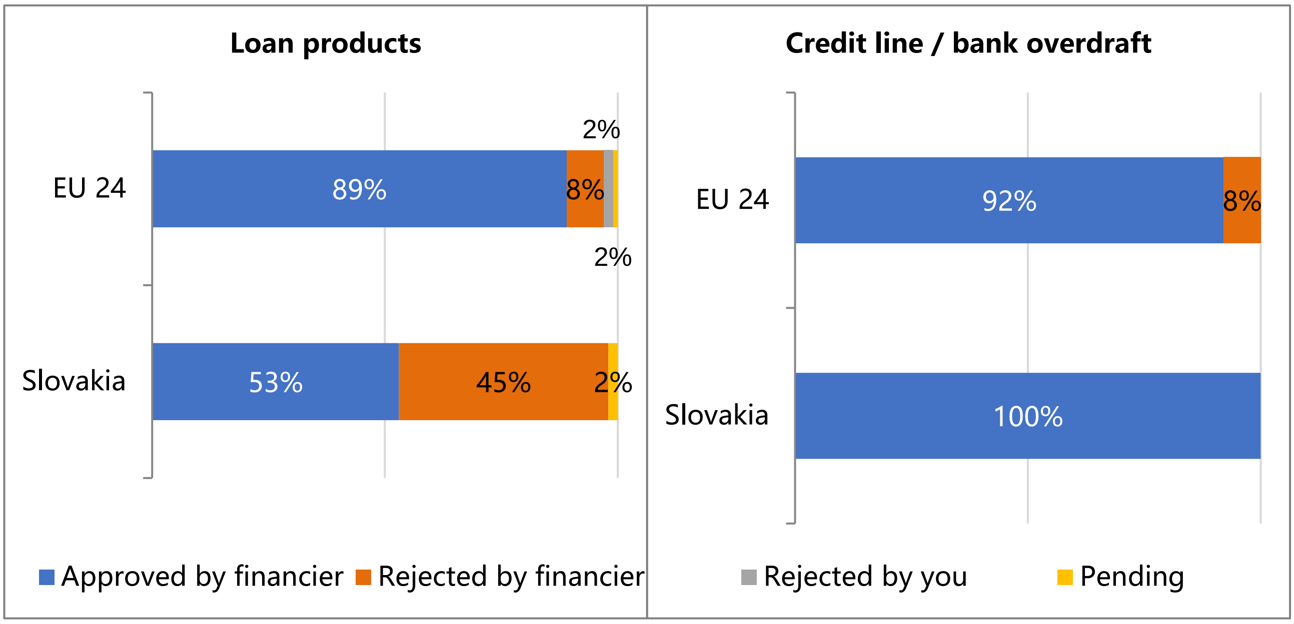
Source: Agri-food survey.

62 *fi-compass*, 2019, feasibility study in support of the implementation of Financial Instruments combining EAFRD and EFSI within the framework of the Rural Development Programme of Slovakia for the 2014-2020 programming period, Final report.

Discouragement is higher among small-sized enterprises. Interviews with the Slovak Agriculture and Food Chamber also revealed that small-sized enterprises are discouraged from applying due to a lack of knowledge and familiarity of the banking system, even if they are viable businesses. Enterprises are often discouraged from applying based on the stringent requirements for collateral and because they consider the process as being too lengthy. Small -sized enterprises are more often discouraged from applying for loans and, as an outcome, 77% of the total unmet demand for finance affects small-sized enterprises.[63]

The share of rejected loans is very high. Based on the Agri-food survey, it appears that 45% of loan applications (in total for short, medium and long-term loans) were rejected by banks (Figure 26). This rate is much higher compared to the EU 24 average. At the same time, no rejections were recorded in the survey for credit lines and bank overdrafts.

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



Source: Agri-food survey.

Reasons for rejections of loan applications can vary. Based on the interviews with the representatives of banks in Slovakia,[64] several reasons exist as to why loan applications from the agri-food sector are rejected:

(i) **Weak position within the supply chain**. Banks evaluate the position of the processor within the supply chain and focus on the bargaining power. Small-sized agri-food firms that supply only one large retailer are considered very risky as their situation entirely depends on one contract. This weak position also leads to low profitability. Banks prefer enterprises with more diversified sales options, processors who own shops, or those with increased bargaining power as a result of vertical cooperation, such as cooperatives.

(ii) **Highly competitive market and low expected EBITDA.[65]** Due to the high share of imports, the price competition within the food sector is high, making it difficult for small-sized agri-food firms to generate sufficient margins. It is mainly new entrants and start-ups that are rejected due to this reason. Banks

63 Agri-food survey, 2019.
64 Interview with banks (CSOB, VUB bank, TATRA bank and UniCredit Bank), September 2019.
65 EBITDA stands for earnings before interest, tax, depreciation and amortisation. Banks evaluate loan applications based on the economic viability using EBITDA, which determines loan repayment capacity.

do not have problems financing the modernisation of technologies in existing agri-food firms. They reject, in some cases, development projects due to low expected EBITDA.

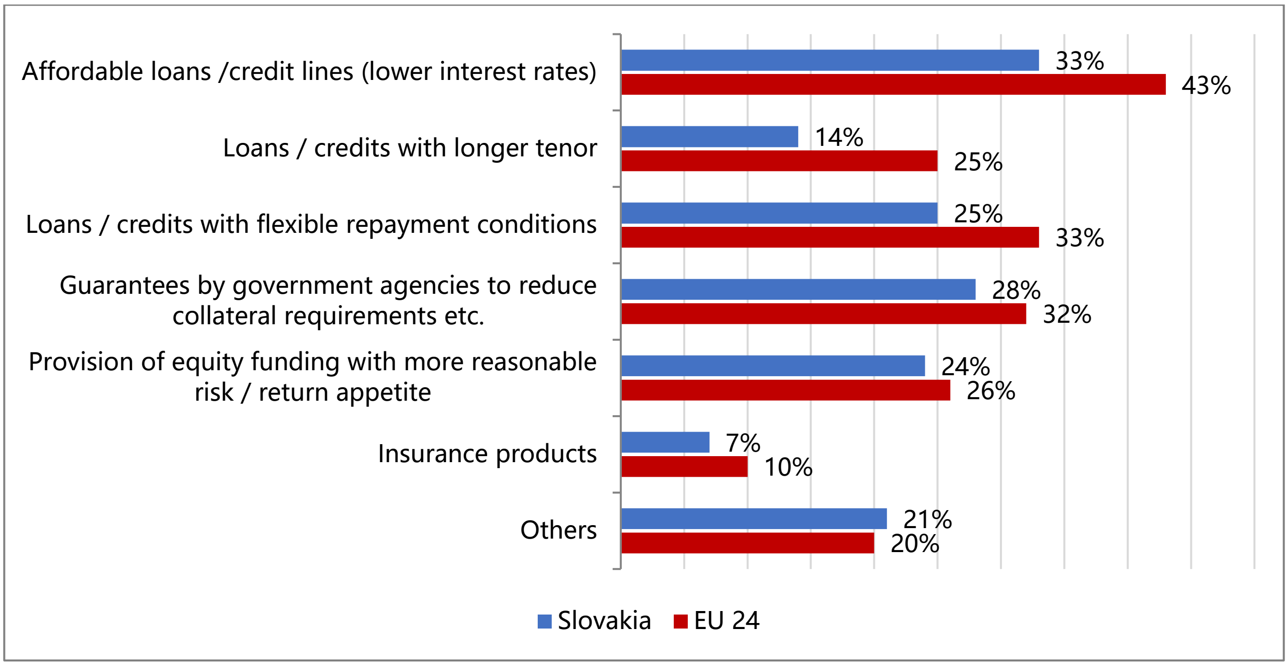
(iii) **Lack of collateral**. As many agri-food enterprises have limited assets, some agri-food firms are required to provide personal collateral to secure the loan. Even in cases where firms have sufficient assets, banks require the personal guarantee of the owner to even further decrease the risk of default. For large loans (over EUR 10 million), banks require a personal guarantee[66] even if the quantity and quality of assets are sufficient to secure the loan.

(iv) **Lack of flexibility of loan conditions, namely maximum loan maturity**. Banks in Slovakia offer agri-food firms a maximum loan maturity of only 10 years. Longer maturities requested are refused. This is due to the low stability within the sector which banks consider risky.

(v) **Higher risk of the meat processing sub-sector**. Due to poor financial track records within the meat sub-sector, meat processors are often considered riskier than other sub-sectors and therefore rejected more often.

One third of Slovak agri-food enterprises consider that their problems in accessing finance could be solved by affordable loans and credit lines with lower interest rates (Figure 27). Further, the provision of government-supported guarantees (28%) could help in facilitating access to finance. As reported above, interviews with financial institutions confirm that a lack of collateral prevents Slovak agri-food enterprises from seeking finance.[67] In addition, 25% of Slovak agri-food enterprises responded to the Agri-food survey that more flexibility is needed with respect to loan repayment conditions. Provision of equity funding is also important to 24% of the respondents to support better access to finance. Slovak agri-food enterprises see potential in alternative solutions, such as insurance products and loans with longer maturities.

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



Source: Agri-food survey.

66 For larger loans, banks in Slovakia require a personal guarantee in addition to the firm's collateral. The owners of the enterprise pledge their own personal assets and agree to repay the loan from personal capital in the case of default. Based on the availability of a personal guarantee, banks significantly decrease their credit risk.

67 Interview with banks (CSOB, VUB bank and UniCredit Bank), May 2019.

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

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

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

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

- There are three types of financial service providers to the agri-food sector in Slovakia: domestic banks, foreign banks and domestic leasing companies that are mostly associated with banks.
- Food processing is financed by most of the 27 banks in Slovakia, which have sufficient liquidity.
- The Slovak Guarantee and Development Bank offers loans for small and medium-sized agri-food enterprises at very competitive prices and it also provides guarantees.
- The average interest rates on market loans vary between 1.5-3.4%.
- Total outstanding bank loans to the agri-food sector were estimated to be EUR 576 million in 2019.
- In 2018, the volume of leasing offered to the agri-food sector for machinery and equipment amounted to EUR 18.7 million.
- The key constraints in the financial sector concern the absence of sufficient levels of collateral on the side of the borrower, as well as banks perceiving agri-food enterprises as being high risk, given their low margins.

3.3.1 Description of finance environment and funding availability

This section will provide an overview on the financial service providers in the Slovak agri-food sector. In addition, the section will shed light on the financial products available in the Slovak market to finance agri-food activities. Finally, a description on the trends of the financial market will be provided.

3.3.1.1 *Finance providers*

There are three main types of financial service providers to the agri-food sector in Slovakia. The 27 financial institutions operating in Slovakia can be divided between domestic banks, foreign banks and local leasing companies (Table 14). Unlike the agriculture sector, which is highly specialised and where the majority of financing is provided by a small number of banks, the agri-food sector benefits from a broader spectrum of financial institutions. These financial institutions currently have sufficient liquidity. Financing of the agri-food sector is, however, constrained by limitations on credit ceilings and risks.

Compared to banks, leasing companies play a minor role in providing finance to Slovak firms. Leasing is used by food processing companies to finance, in general, highly specific machineries and technologies. In 2018, the volume of leasing offered to agri-food for machinery and equipment amounted to EUR 18.7 million. The three leasing companies with the largest new business volume in 2018 are all linked to banks.[68]

68 Those are CSOB Leasing, a.s., UniCredit Leasing Slovakia, a.s., VÚB Leasing, a. s.; Source: The Association of Leasing Companies of the Slovak Republic, 2019, https://www.alssr.sk/sites/default/files/documents/2020_WLY_vysledky_2018.pdf.

Table 14: List of banks and leasing companies involved in the Slovak agri-food sector

Banks (27)	Leasing Companies (19)
BKS Bank AG	BKS-Leasing s. r. o.
BNP PARIBAS PERSONAL FINANCE SA	BPT LEASING, a.s
Československá obchodná banka, a.s.	ČSOB Leasing, a.s.
Československé úvěrní družstvo	Deutsche Leasing Slovakia, spol. s r.o
Citibank Europe plc	GRENKELEASING s. r. o.
COFIDIS SA	IMPULS-LEASING Slovakia s.r.o.
COMMERZBANK Aktiengesellschaft	IMPULS Trnávka s.r.o.
ČSOB stavebná sporiteľňa, a.s.	Mercedes-Benz Financial Services Slovakia, s.r.o.
Fio banka, a. s.	Oberbank Leasing s.r.o.
ING Bank N. V.	ESSOX FINANCE, s.r.o.
J & T BANKA	s Autoleasing SK, s. r. o.
KDB Bank Europe Ltd.	Scania Finance Slovak Republic s. r. o.
Komerční banka, a.s.	SG Equipment Finance Czech Republic s.r.o.
mBank S.A.	Tatra-Leasing, s.r.o.
Oberbank AG	Toyota Financial Services Slovakia s.r.o
OTP Banka Slovensko, a.s.	UniCredit Leasing Slovakia, a.s.
Poštová banka, a.s.	VFS Financial Services Slovakia s.r.o.
Prima banka Slovensko, a.s.	VOLKSWAGEN Finančné služby Slovensko s.r.o.
Privatbanka, a.s.	VÚB Leasing, a. s.
Prvá stavebná sporiteľňa, a. s.	
Raiffeisen Centrobank AG Slovak Branch	
Slovenská sporiteľňa, a.s.	
Slovenská záručná a rozvojová banka, a. s.	
Tatra banka, a.s.	
UniCredit Bank Czech Republic and Slovakia, a.s.	
Všeobecná úverová banka, a.s.	
Wüstenrot stavebná sporiteľňa, a.s.	

Source: National Bank of Slovakia, 2019.

The Slovak Guarantee and Development Bank (SZRB) also provides finance to Slovak agri-food enterprises. The details have already been outlined in section 2.3.1.1 and more information on the products for the agri-food sector can be found in section 3.3.1.2.

3.3.1.2 Financial products

There are no specific financial products offered by banks to the agri-food sector. This is despite the sector being considered an integral part of the Slovak manufacturing industry. Within the manufacturing sector, the maximum loan amounts offered by banks are based on the client’s turnover.

Short-term loans are commonly used to satisfy working capital needs. All major banks offer short-term loans to provide working capital to agri-food enterprises. Some banks require the purpose of the loan to be made explicit while others do not.[69] The loan is normally provided by a one-off provision to the client's current account. Banks also offer bank overdrafts.

69 Interview with banks (CSOB, VUB Bank and UniCredit Bank), May 2019.

Medium and long-term loans are used for investments in fixed assets. The maturity of these loans is up to 10 years. Agri-food enterprises use medium and long-term loans to finance the purchase of buildings, machinery or investments in technology for modernisation purposes. Some banks offer also loans to allow clients to meet the co-financing requirements of EU projects.

The Slovak Guarantee and Development Bank offers loans to small and medium-sized enterprises, which have already been described in section 2.3.1.2. No figures on the value of financing or guarantee amount to the agri-food sector can be presented as it is considered as part of the manufacturing sector. In 2018, funding to the manufacturing sector was EUR 17 million in total[70] and guarantees amounted to EUR 3.6 million.

The main benefits to agri-food enterprises are the subsidised interest rate on loans and the more favourable conditions compared to those offered by commercial banks, in terms of maturity. The guarantees provided help agri-food enterprises to overcome the challenges of pledging collateral, contributing to an increase in access to finance. However, as already highlighted with reference to the agriculture sector, the main shortcomings of the scheme are the high administrative costs and bureaucracy as well as the focus on loan provision (with guarantees only being provided to a much lesser extent).

3.3.1.3 Description of the financing market

In 2017, the total corporate debt in Slovakia (all companies, including agri-food) reached EUR 48.9 billion. Loans made up a major part of the corporate debt (EUR 42.1 billion) while the remaining part is made up by bonds in the amount of EUR 6.8 billion. Of the EUR 42.1 billion of loans, EUR 9.2 billion were provided as inter-firm loans (from firm to firm) or from other domestic entities. Companies obtain more than 36% of their loans from abroad. A vast majority of foreign loans are drawn by multinational corporations operating in Slovakia. Slovak subsidiaries are increasingly financed through their parent companies.

After the stagnation of loans in the post financial crisis period, loan volume started to increase in 2016. In 2018, loans to industry grew by 5% compared to 2017, which is above the median growth rate in the EU. Since 2015, the growth rate of long-term investment loans started to decline and in 2019. The decline was partially compensated by the higher growth of short-term loans.[71]

In Slovakia, the share of non-performing loans is declining.[72] It has reached 3.59% of all loans, which is the lowest level in the post crisis period. This reflects a stable macro-economic environment in Slovakia.

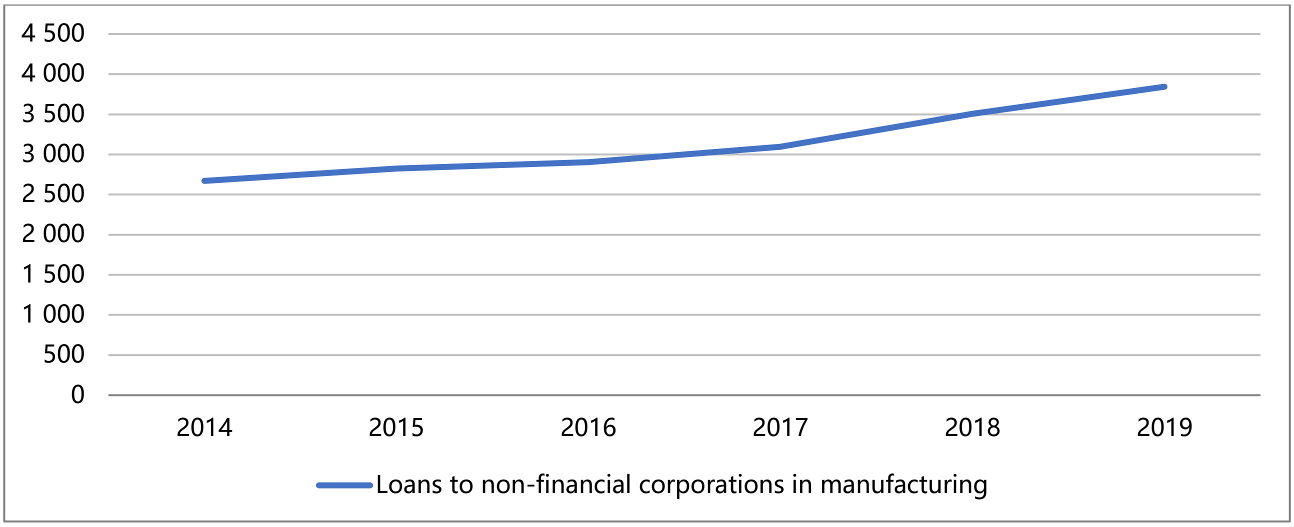
Interest rates increased in 2018. The increases were greater for large-sized enterprises, but occurred also for SMEs.[73] The average interest rate in 2018 for loans over EUR 1 million was about 2.3% and the rate for loans below EUR 1 million was 3.2%. In 2019, interest rates decreased again and, at the end of 2019, stood at 1.5% for loans above EUR 1 million and 3.4% for loans below EUR 1 million.[74]

3.3.2 Analysis of the supply of finance

Lending to the manufacturing sector has been increasing for the past six years. Compared to 2014 it increased by 44% as of end 2019 and the outstanding portfolio stood at EUR 3 843 million at the end of 2019 (Figure 28).

70 SZRB Annual Report, 2018.
71 NBS, 2019, Financial stability report.
72 Failed or defaulted loans are bank assets for which the bank has identified decrease in value of more than 50% or if the debtor is in default of more than 90 days.
73 NBS, 2019, Analysis of the Slovak Financial Sector 2018, p. 29.
74 NBS, 2019, Statistical Bulletin Q3.

Figure 28: Loans to non-financial corporations in manufacturing sector, 2014-2019, EUR million



Source: Calculations based on National Bank of Slovakia Statistical Bulletins, 2017 and 2019.

The exact figure for the outstanding loans to the agri-food sector cannot be presented. But the evolution of loans to manufacturing may be used as a proxy for the evolution of loans to the agri-food sector. It is assumed that in line with the share of food and beverage products in industry output (15% in 2019)[75] the agri-food sector accounts for 15% of loans. Hence, total outstanding loans to the sector was estimated to be EUR 576 million in 2019.

Given high ratios of debt levels compared to own resources (53% in 2018), banks are very cautious in lending to the agri-food sector. Debt to equity ratios are significantly higher than the median debt to own resources ratio in the region of Central and East Europe and for all EU member states. Not only does high financial leverage expose firms to higher risk in times of economic crisis, but it also prohibits banks from lending more to those enterprise. Banks doubt that enterprises have sufficient repayment capacity.

In addition to the comparatively high debt levels, banks are challenged to provide additional financing as many agri-food enterprises are operating on small profit margins with limited overall competitiveness. In the interviews with banks, many of them communicated that they have doubts on the repayment capacity of agri-food enterprises given their low economic performance and low level of profits. This is particularly the case for bakeries and poultry processors which rely on manual production technology that is relatively unproductive. Banks believe that those enterprises would benefit from investments into automation and this is an area that has large future investment potential.

Further, banks would be more inclined to lend to the sector if the capacities of food processors were being fully utilised. Many agri-food enterprises cannot operate their facilities at full capacity due to a lack of supply of inputs. This is particularly relevant in milk processing. Increased aggregation would allow banks to finance more agri-food enterprises as they would generate the profits needed to repay a larger loan.

The absence of adequate collateral makes it challenging to lend to the agri-food sector. Throughout the interviews, banks mentioned that agri-food enterprises often lack the quantity and quality of collateral necessary to secure loans. All clients interested in a loan need to be able to provide collateral. In this respect, banks prefer fixed assets that are liquid and can easily be resold. In the interviews banks pointed out that many agri-food enterprises, particularly small-sized agri-food enterprises, do not have sufficient levels of collateral.

75 National Bank of Slovakia Statistical Bulletins, 2017 and 2019.

3.4 Financing gap in the agri-food sector

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

Key elements on the financing gap in the Slovak agri-food sector

- The financing gap is estimated at EUR 37 million.
- 77% of the financing gap affect small-sized enterprises (under 50 employees).
- Short-term and long-term loans are equally affected by the overall financing gap.
- The key constraint is the lack of collateral, in the case of small-sized firms, and unfavourable lending conditions which discourage enterprises from accepting the loan offer or from even from applying.
- In addition, the low economic margins of the sector limit the bank's interest in providing finance as the sector is considered risky. This particularly affects start-ups. Small-sized firms also lack know how on the financial products available to them.

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 Slovak firms (see annex A.5 for more information). The methodology used for calculating the gap is the same as the methodology used for the agriculture sector (see Annex A.3).

The financing gap arises from unmet financing demand from economically viable firms.[76] As explained in section 2.2, the unmet demand for finance includes:

(i) lending applied for but not obtained; or

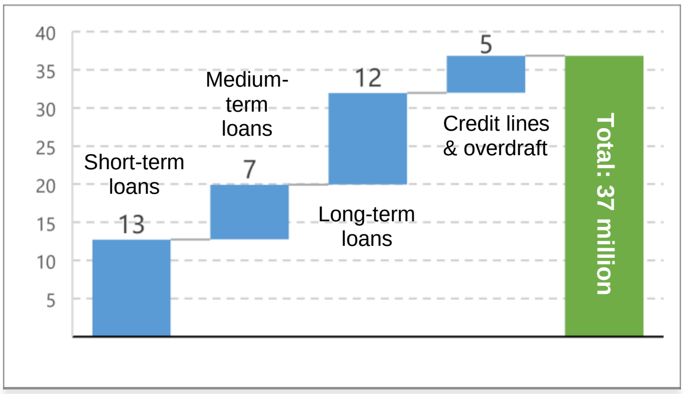
(ii) a lending offer refused by the potential borrower; as well as

(iii) lending not applied for due to expected rejection.

For the purpose of this 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. Using the results for the Slovak firms from the Agri-food survey, the following results are obtained.

76 The financing gap presented in this section is different from the total unmet demand presented in Section 3.2. 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 29: Financing gap by product in the agri-food sector in 2018, EUR million



Source: Calculation based on results from Agri-food survey.

The financing gap for the Slovak agri-food sector is estimated at EUR 37 million. The financing gap mainly concerns small-sized enterprises. The type of loans for which the gap is the largest are short and long-term loans (Table 15). Of the EUR 37 million financing gap, long-term loans make up EUR 11.9 million, medium-term loans EUR 7.2 million and short-term loans and credit lines EUR 17.7 million. Small-sized enterprises (under 50 employees) are those most affected by the financing gap (77.4%).

Table 15: Financing gap by firm size and product in the agri-food sector in 2018, EUR million

	Total	Short-term Loan	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Small-sized firms	**28.5**	9.5	5.7	9.5	3.9
Medium-sized firms	**6.5**	2.8	1.1	1.9	0.8
Large-sized firms	**1.8**	0.5	0.4	0.6	0.3
Total	**36.8**	**12.7**	**7.2**	**11.9**	**4.9**

Source: Calculation based on results from the Agri-food survey.

Several facts point towards an underestimated financing gap. Interviews with relevant stakeholders[77] indicate that the financing gap might be underestimated. The EAFRD-EFSI feasibility study indicates that the financing gap for agri-food enterprises for long-term loans ranges between EUR 67.7 million and EUR 174.6 million.[78]

Unfavourable loan conditions and a lack of sufficient guarantees are the main drivers behind the financing gap. Banks evaluate the position of agri-food enterprises within the supply chain, because their position has a direct effect on their economic performance. The common weak position of agri-food enterprises results in unfavourable loan conditions being offered to them. In addition, high levels of collateral are often required, which is something many agri-food companies are unable to provide and, therefore, another reason

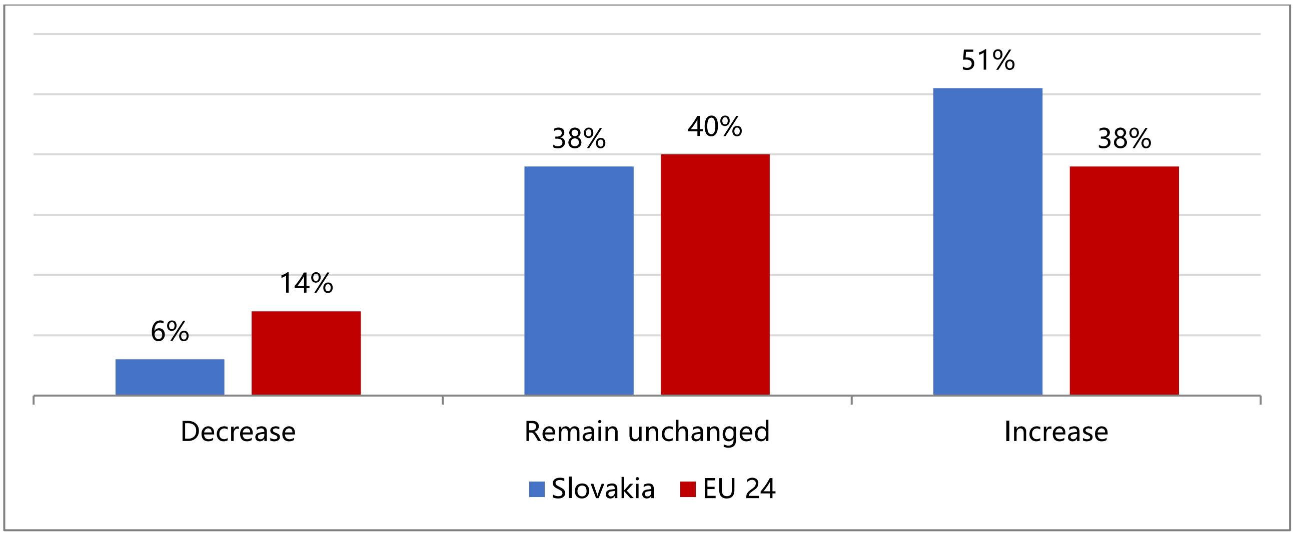
77 Focus group meeting 2019.
78 *fi-compass*, 2019, Feasibility study in support of the implementation of financial instruments combining EAFRD and EFSI within the framework of the Rural Development Programme of Slovakia for the 2014-2020 programming period, Final report.

for rejection. Additionally, 15% of firms did not apply for loans in Slovakia due to unfavourable conditions and 16% did not apply due to lengthy and complicated procedures.

According to the Agri-food survey, and as confirmed by experts from the agri-food and banking sectors,[79] 33% of firms in Slovakia would have their financing problems alleviated by lower interest rates and 28% by guarantees provided by the government. Respondents also stated other reasons that would improve their access to finance, such as loans with longer maturity and loans with flexible repayments.

The financial needs of agri-food firms will increase in the future. The increasing revenues of the sector, the need for product differentiation, and the shortage of skilled labour will increase the demand for finance.[80] Further, 51% of the Slovak agri-food enterprises responded in the Agri-food survey that they expect financial needs to be increased within the next 2-3 years, while 38% said that they expect it remain the same (Figure 30). Thus, the financing gap can be expected to increase, unless the factors underlying the gap are addressed.

Figure 30: Agri-food companies' expectations on future financing needs, 2018



Source: Agri-food survey.

While the Slovak Guarantee and Development Bank is offering preferential loans to agri-food enterprises, the uptake of the loans is limited. Interviews with stakeholders[81] confirm that either additional financial instruments or additional resources for existing instruments are needed in the form of guarantees, in the case of small-sized firms, and interest rate subsidies, in the case of small, medium and large-sized firms. The agri-food sector would also benefit from the implementation of financial instruments that increase flexibility and lower administrative burden compared to the current investment grant system existing within the RDP.

79 Interview with banks (VUB Bank, TATRA Bank and UniCredit Bank) and Agri-food Associations, September 2019.
80 Interview with Slovak Agriculture and Food Chamber (SPPK) and Agri-food Associations, July 2019.
81 Interview with banks (VUB bank, TATRA bank and UniCredit Bank) and Agri-food Associations, September 2019.

3.5 Conclusions

After a period of stagnation, the level of investments in the Slovak agri-food sector has been increasing since 2016. In 2018, total investment was 21% higher compared to 2013. The demand for finance in the sector reflects the efforts to (i) modernise enterprises, (ii) remain competitive at both the domestic and EU market level, (iii) adjust production in accordance with consumer preferences, (iv) manage stricter standards, and (v) deal with a shortage of skilled labour.

This report has identified a number of constraints, on both the demand and the supply side of the market, which cause viable loan applications by agri-food enterprises to be rejected, refused or enterprises to be discouraged from submitting a loan application. The main problems relate to the low economic margins of the sector, which cause banks to have a high-risk perception and to limit the provision of finance. In addition, their financial offer often includes unfavourable terms and conditions, specifically with regards to collateral requirements, that particularly affect small-sized enterprises. The study suggests as well that small-sized enterprises have a limited financial knowledge.

The report shows that there is a financing gap estimated at EUR 37 million. Around 77% of the gap value relates to small-sized enterprises (below 50 employees). In terms of financial products, the gap mainly relates to short and long-term investment loans. Interviews with relevant stakeholders indicate that the financing gap might be higher.

Agri-food enterprises can count on the Slovak Guarantee and Development Bank, which offers loans and guarantees to small and medium-sized enterprises. The main benefits to agri-food enterprises are the subsidised interest rate on loans and the more favourable conditions compared to those offered by commercial banks, in terms of maturity. The guarantees provided help agri-food enterprises to overcome the challenges of pledging collateral, contributing to an increase in access to finance. However, as already highlighted with reference to the agriculture sector, the main shortcomings of the scheme are the high administrative burden. Overall, the uptake of current financial instruments is very low.

Based on the analysis conducted for this study, the following **recommendations** for public interventions are suggested:

- An EAFRD guarantee fund may complement the support provided by the Slovak Guarantee and Development Bank and improve the access to finance for farmers (particularly young farmers) who lack sufficient assets. The financial instrument to be set-up should minimise the administrative costs for final beneficiaries.
- One of the constraints faced by small-sized farms is linked to the high interest rates applied by banks, due to the high-risk perception of the sector and the lower profitability of small loans. For this reason, an EAFRD risk-sharing loan instrument might also be considered, as it would combine the provision of risk coverage with a reduction in the financing cost.
- Stakeholders indicate that additional resources for financial instruments could close the financing gap and solve problems of the current RDP grant schemes.
- For both types of instruments, the easier combination of financial instruments and grant support offered by the new legal framework might be considered to better address the needs of small-sized enterprises.
- The combination of a financial instrument with technical support may also be beneficial, as this would increase the financial know-how of the sector, including in the preparation of business plans.
- Technical support and awareness raising might also be considered for small-sized enterprises to address their lack of knowledge on available funding opportunities.

ANNEX

A.1. References

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A.2. Stakeholders interviewed

Type of Stakeholder	Name of institution/organisation
Farmers organisations representative	Agrarian Chamber of Slovakia (AKS)
Farmers organisations representative	Agrarian Chamber of Slovakia (AKS)
Young farmers organisation	Association of Young Farmers in Slovakia
Young farmers organisation	Association of Young Farmers in Slovakia
Financial institution (with a focus on agri and agri-food sector)	Československá obchodná banka, a.s.
Financial institution (with a focus on agri and agri-food sector)	Československá obchodná banka, a.s.
Food Industry representative	Food chamber Slovakia
Food Industry representative	Food Union of Slovakia
Food Industry representative	Food union Slovakia
Managing authority (in charge of the Rural Development Programme in your country)	Ministry of Agriculture and Rural Development of the Slovak Republic
Managing authority (in charge of the Rural Development Programme in your country)	Ministry of Agriculture and Rural Development of the Slovak Republic
Food Industry representative	Poultry union Slovakia
Farmers organisations and Food Industry representative	Slovak Agriculture and Food Chamber (SPPK)
Farmers organisations and Food Industry representative	Slovak Agriculture and Food Chamber (SPPK)
Representative from Agricultural Cooperatives and producer organisations	Slovak Association of Dairy Farmers (SZPM)
Food Industry representative	Slovak Meat Processors Union
Food Industry representative	Slovak sugar association
Financial institution	Tatra banka, a.s.
Financial institution (with a focus on agri and agri-food sector)	UniCredit Bank Czech Republic and Slovakia, a.s.,
Financial institution (with a focus on agrand agri-food sector)	UniCredit Bank Czech Republic and Slovakia, a.s.,
Financial institution (with a focus on agri and agri-food sector)	Všeobecná úverová banka, a.s.
Financial institution (with a focus on agri and agri-food sector)	Všeobecná úverová banka, a.s.
Financial institution	Všeobecná úverová banka, a.s.

A.3. Methodology for financial gap calculation

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

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

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

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

The share of *Viable* firms is measured by the share of total firms that have a non-negative turnover growth[82] or a non-negative turnover and that are not in a situation of cost increase (these two criteria might be used to obtain an upper and lower boundary for the calculations).

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

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

Step1: Ratio of viable farms with unmet demand for finance

$\boldsymbol{Rejection\ Rate^{Viable}}$ **:** 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 $j = Short - term\ , Medium - term, Long - term\ Loans, Credit\ lines.$

$\boldsymbol{Discouraged\ Rate^{\ Viable}}$**:** 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 $j = Short - term\ , Medium - term, Long - term\ Loans, Credit\ lines.$

$\boldsymbol{Unmet\ demand\ Rate^{\ Viable}}$**:** 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

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

$\boldsymbol{N.of\ Farms\ in\ unmet\ demand_{ij}^{Viable}}$: 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 TGI, this total population is adjusted by removing farms having a Standard Output[83] (SO) below EUR 8 000 EUR 4 000 or EUR 2 000, depending on the Purchasing Power Parity Index (PPI) of the country. The EUR 8 000 EUR 4 000 or EUR 2 000 SO thresholds are used for countries with their 2017 PPI respectively above the 66th percentile, between the 33th and 66th percentile, or below the 33th percentile of the PPI index in the EU. We assume equal rates of rejections among small, medium and large-sized farms, and disentangle the share of farms with constrained in obtaining credit by financing product.

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

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

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

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

Step 3: Standard Loan Application Size

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

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

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:

83 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.

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 Slovakia Table 16 and Table 17 report the elements used in the calculation of the financing gap for the agricultural and agri-food sector, respectively.

Table 16: Elements for the calculation of the financing gap in the agriculture sector in 2017

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Lower bound: farms with a non-negative turnover growth and no cost increase	Share of respondents rejected by creditor or farmer	0.12%	0.99%	1.85%	0.00%
	Share of respondents that have not applied because of possible rejection	3.82%	3.82%	2.89%	3.82%
	Total (sum of rejected and discouraged)	3.94%	4.81%	4.74%	3.82%
Upper bound: farms with a non-negative turnover growth	Share of respondents rejected by creditor or farmer	0.50%	3.10%	2.96%	1.16%
	Share of respondents that have not applied because of possible rejection	9.11%	7.02%	7.95%	7.21%
	Total (sum of rejected an discouraged)	9.61%	10.12%	10.91%	8.38%
Total unmet demand: all farms	Share of respondents rejected by creditor or farmer	0.50%	3.10%	3.08%	1.16%
	Share of respondents that have not applied because of possible rejection	10.15%	8.26%	9.06%	8.45%
	Total (sum of rejected an discouraged)	10.65%	11.36%	12.14%	9.61%
Farms with constrained access to finance, **lower bound**	Small-sized farms	536	655	645	520
	Medium-sized farms	111	135	133	107
	Large-sized farms	94	115	114	92
Farms with constrained access to finance, **upper bound**	Small-sized farms	1 308	1 378	1 485	1 140
	Medium-sized farms	270	285	307	235
	Large-sized farms	231	243	262	201
Standard loan application size (EUR)	Small-sized farms	11 884	28 829	79 506	10 729
	Medium-sized farms	11 884	28 829	79 506	10 729
	Large-sized farms	44 410	69 730	155 448	63 385

Source: fi-compass survey.

Table 17: Elements used for the calculation of the financing gap in the agri-food sector in 2018

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Firms with a non-negative turnover growth and no cost increase	Share of respondents rejected by creditor or firms	0.00%	0.00%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	5.02%	2.21%	1.29%	1.83%
	Total (sum of rejected an discouraged)	5. 02%	2.21%	1.29%	1.83%
Total unmet demand: all firms	Share of respondents rejected by creditor or firms	0.00%	0.00%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	5.02%	2.21%	1 29%	1.83%
	Total (sum of rejected an discouraged)	5.02%	2.21%	1.29%	1.83%
Firms with constrained access to finance	Small-sized firms	166	73	43	61
	Medium-sized firms	6	3	2	2
	Large-sized firms	1	1	0	0
Standard loan application size (EUR)	Small-sized firms	56 778	77 727	220 459	64 108
	Medium-sized firms	451 078	424 757	1 181 594	343 204
	Large-sized firms	444 806	743 937	2 088 343	698 000

Source: Agri-food survey.

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

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

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

Overall, the survey consists of 7 659 respondents, of which 73% own the agricultural enterprise, 8% are member owners, 8% are owner's relatives, 7% administrative managers, 3% other employees, and 1% human resource managers. Table 18 reports the number of respondents by Member State.

Table 18: *fi-compass* survey sample size per Member State

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

Source: fi-compass survey.

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

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

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

A.5. TG II: Agri-food survey

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

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

The survey was conducted targeting the completion of a minimum of 45 questionnaires for each Member State. The minimum sample size obtained varied per country mirroring the differences in the size of the sector. Table 19 reports the sample size per country:

Table 19: Agri-food survey sample size per Member State

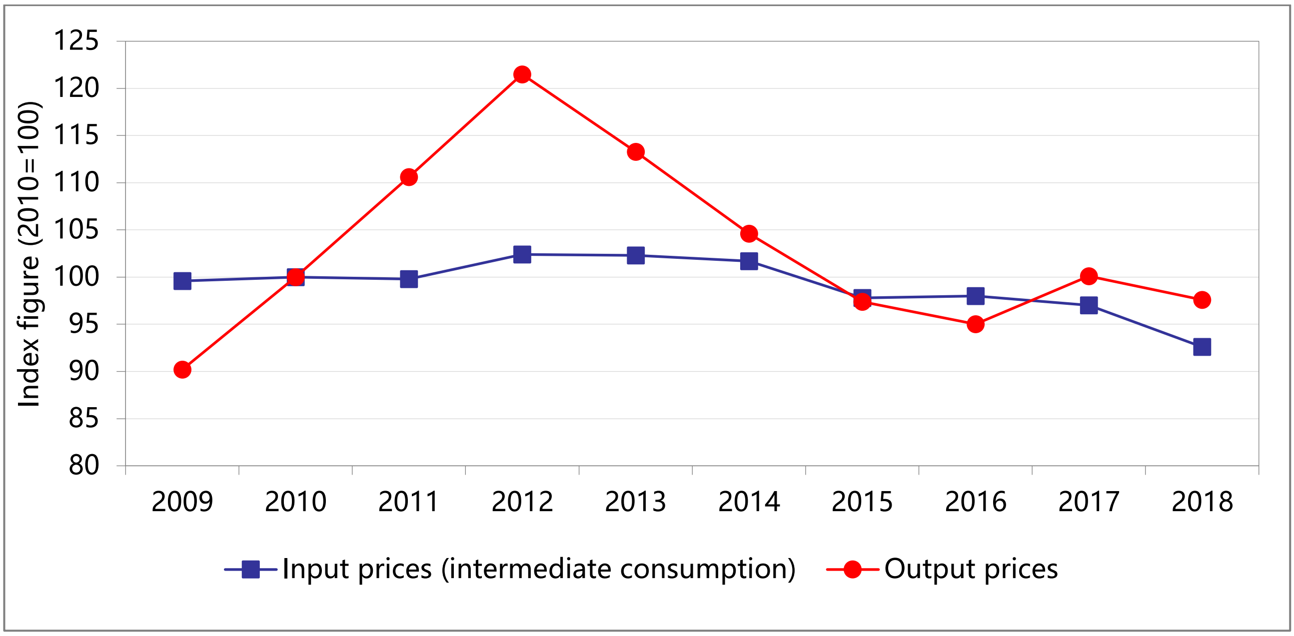
Country	No. of Respondents	Country	No. of Respondents
Belgium	100	**Latvia**	50
Bulgaria	100	**Lithuania**	50
Czech Republic	66	**Hungary**	46
Denmark	50	**The Netherlands**	80
Germany	186	**Austria**	50
Estonia	50	**Poland**	130
Ireland	50	**Portugal**	100
Greece	70	**Romania**	150
Spain	197	**Slovenia**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

Source: Agri-food survey.

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

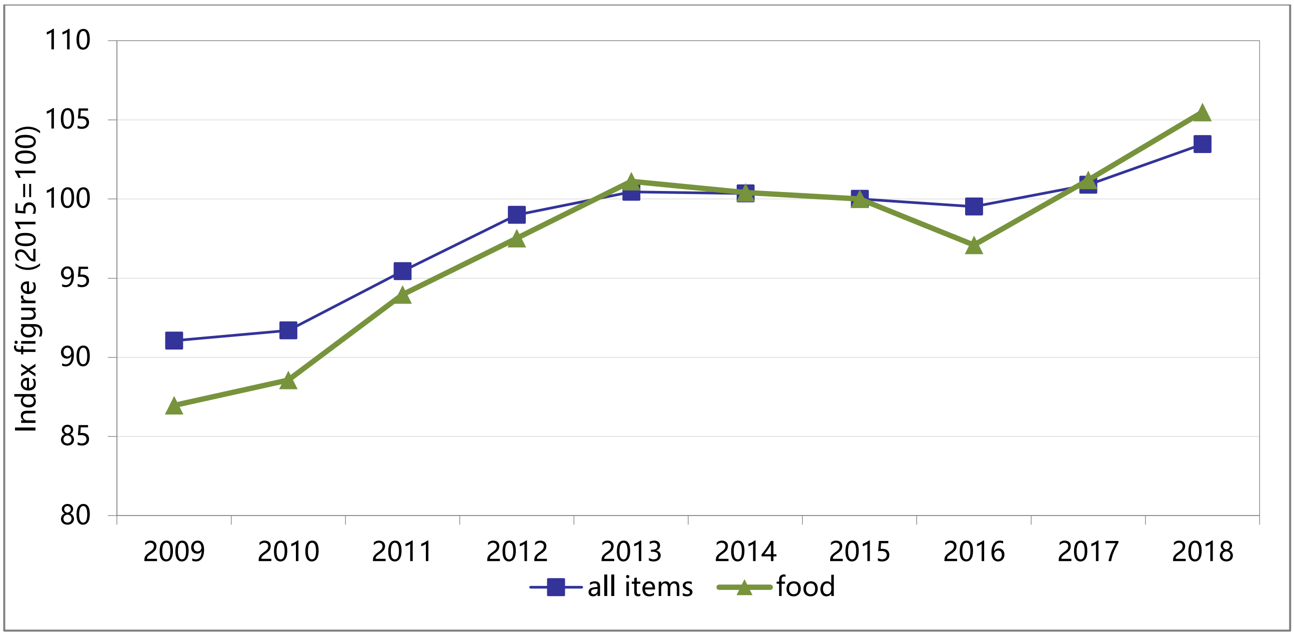
A.6. Data from the agriculture statistical factsheets

Figure 31: Evolution of agriculture input and output prices



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

Figure 32: Evolution of harmonised indices of consumer prices



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

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