



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



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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.
Agrya	Hungarian Young Farmers Association
ASZK	Agricultural Széchenyi Card (Agrár Széchenyi Kártya)
AVHGA	Rural Credit Guarantee Foundation
CAP	Common Agricultural Policy
COSME	EU Programme for Competitiveness of Enterprises and SMEs
EAA	Economic Accounts for Agriculture
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EIB	European Investment Bank
EIF	European Investment Fund
EU	European Union
EU 13	EU 13 refers to the new EU member states who joined since 2004. These 13 new countries are: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.
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
EXIM Loan	Loan provided by the Eximbank
Eximbank	Hungarian Export-Import Bank Plc.
FADN	Farm Accountancy Data Network
FDI	Foreign Direct Investments
NHP	Funding for Growth Scheme (Növekedési Hitelprogram)



<i>fi-compass</i> survey ¹	Survey on the financial needs and access to finance of 7,600 EU agricultural enterprises carried out by <i>fi-compass</i> in the period April-June 2018 and based on respondent's financial data from 2017.
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
ha	Hectare
KSH	Hungarian Central Statistical Office
MFB	Hungarian Development Bank
MA	Ministry of Agriculture
MEHIB	Hungarian Export Credit Insurance Plc.
NFA	National Land Fund Managing Organisation
RDP	Rural Development Programme
SAFE	Survey on Access to Finance of Enterprises
SME	Small and medium-sized enterprise
SO	Standard Output
UAA	Utilised Agricultural Area

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>.



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EXECUTIVE SUMMARY

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

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

Financing gap for the agriculture sector in Hungary

The agriculture sector in Hungary shows a positive investment trend, reflected in the growing total outstanding loan volume since 2015. The demand for finance is particularly strong for long-term loans and from small-sized farms. However, there are important disparities within the agriculture sector, exacerbated by a polarised farm structure. Hungary has a very high share of small-sized farms (< 5 ha). These are managed by individual farmers and account for less than 5% of the total utilised agricultural area (UAA). On the other hand, a small share (< 3%) of very large-sized enterprises accounts for more than 50% of the total UAA. The demand for finance varies significantly between these two main farm types, and for the ones in-between. The investment levels for small-sized farms have increased in recent years, while the levels for large-sized farms have remained relatively stable.

Overall, the study identifies several investment drivers:

- (i) **Expansion of production capacity:** the ongoing consolidation process in the sector has resulted in investments in machinery, buildings and to some extent land, although land purchases can only be undertaken by individual agricultural producers and not by agricultural enterprises.
- (ii) **Reductions in production costs:** replacing old machinery or buying modern equipment allows farmers to decrease their production costs and carry out complementary activities. It also allows them to provide contracting services to others, which generates additional income for the farmer.
- (iii) **Improving standards**, especially in the animal and fruit and vegetable sectors, **in order to comply with legal requirements.**

The need for working capital is a major driver of the demand for finance in agriculture. In recent years, over 50% of the contracted loans have been used to finance operating costs. This high demand for working capital finance stems from an increase in production costs and the low economic margins in sector.

The Common Agricultural Policy (CAP) payments improve both the access to and the demand for finance. The analysis shows that direct payments facilitate farmers' access to credit as they provide an income support used by banks as a guarantee for those in need of liquidity during campaigns, as banks accept to issue loans of up to 90% of the CAP support to be obtained. In this regard, pre-financing is an important aspect of the Hungarian financing market. According to the results of this study, approximately 80% of the farmers in the arable sector rely on CAP support to meet their financial needs. As with CAP payments, the investment support provided by the European Agriculture Fund for Rural Development (EAFRD) has triggered an increase in the demand for finance, with many producers applying for long-term loans to complement the public support provided from the 2014-2020 Rural Development Programme (RDP). The analysis reveals that the increase in investment loans taken out by individual farmers since 2015 is highly correlated with the availability of support from the RDP.



Financing to the agriculture sector is provided by 17 banks, with three banks accounting for 70% of the market. According to the results of this study, more than 52% of agricultural loans are subsidised. This mostly occurs through the Agricultural Széchenyi Card and the Funding for Growth Scheme (NHP). Various loans provided by the Hungarian Development Bank (MFB) also play an important role in financing the agriculture sector.

The total supply of finance to the agriculture sector is estimated at EUR 2 billion. Bank loans to the sector increased by more than a quarter (27%) between 2015 and 2017. This increase was largely due to the uptake of loans by small-sized farms which, according to the analysis, was triggered by the 'Land for Farmers' Programme and the availability of the RDP investment support measures.

This study shows that there is a significant financing gap in the Hungarian agriculture sector, which is estimated to be between EUR 248 million and EUR 992 million. This market gap is comprised of separate components:

- The first component of the gap consists of the estimated value of the loan applications submitted in the preceding year by viable enterprises that were rejected by banks, or translated into loan offers refused by the applicants due to non-acceptable lending conditions.
- The second component of the gap relates to the estimated value of loan applications that are not submitted by farmers due to discouragement from fear of possible rejection.

While the *fi-compass* survey results show that discouragement is the most significant component of the financing gap, the rejection rate of agriculture loan applications in Hungary is still higher than the EU 24 average. This is especially the case for short-term loans where, according to the *fi-compass* survey, 45% of applications were rejected. Overall, the financing gap is highest for small-sized farms and long-term loans. Small-sized farms under 20 ha account for approximately 55% of the financing gap, while almost 85% of the gap relates to medium and long-term investment loans. In addition, the conditions offered by Hungarian banks have led 9% of farmers to refuse medium-term loans offers and 21% to refuse long-term loan offers. Furthermore, 79% of Hungarian farmers reported that banks required a guarantee for the loan.

A number of factors cause viable loan applications by farmers to be rejected or refused, or for farmers to be discouraged from applying. These include:

- **Insufficient levels of collateral, exacerbated by excessive collateral requirements:** banks request high levels of collateral from farmers as they perceive lending to the agriculture sector as being high risk. An additional complication for Hungarian farmers is that some banks do not accept land as collateral, or only accept it partially, due to the strict and illiquid land market.
- **A lack of or insufficient business data:** this makes it difficult for banks to assess the economic viability of farms. This lack of data is explained by tax incentives aimed at administrative simplification for micro sized farmers, which at the same time encourage individual farmers to declare agricultural income as part of their personal income tax filing. This prevents banks from making an accurate assessment of a farm's economic viability and therefore leads to higher rejection rates.
- **Other constraints in accessing finance include:** a lack of an appropriate business plan, a lack of credit or business history, low down payment capacity and limited professional skills, and on the supply side the low appetite of banks to finance smaller scale businesses due to higher transactions costs. According to bank interviews, and further confirmed by the *fi-compass* survey, poorly written financial plans are the most common reason for rejection. This particularly affects small-sized farms who cannot hire consultants to help with the preparation of their business plan. It also reflects the lack of financial literacy among farmers in the sector.

Nearly half of the gap (48%) might be attributed to young farmers. According to the *fi-compass* survey, approximately 55% of rejected viable loan applications and 46% of discouraged applicants came from young farmers. Young farmers and new entrants face considerable constraints because they lack both business and credit history. Furthermore, they generally have limited assets for collateral and no land that can be mortgaged. Some of the preferential loan programmes have helped to improve the situation of these farmers. However,



these programmes have mostly addressed short and medium-term financial needs without solving the main problem of financing the initial investments for setting-up the business.

RECOMMENDATIONS

The identified gap and financial situation suggest that further actions related to financial instruments, including under the EAFRD, could be considered. However, given the diversified offering of support measures already available, any new action should start from a detailed analysis of the available instruments and schemes (which is not in the scope of this report) to create synergies.

Based on the analysis from this study, the following key areas of intervention could be addressed:

- The lack of collateral, particularly for small-sized enterprises and new entrants, which is not fully addressed by the currently available guarantee instruments.
- The need to cover the financial needs of individual farmers operating on the market that are not yet ready to become fully commercialised. This could be done through a financing facility that provides for micro-finance and bridges the gap to the level at which other conventional state subsidised loans can play a role and, subsequently, market loans become accessible (quasi mentoring into bankability).
- The lack of or insufficient business data provided in loan applications, which seems to be a key element given that it increases banks' risk perception of the sector, with negative implications for the lending conditions offered (including collateral requests). Improving financial literacy among farmers might help them to better present their business ideas and be more successful in their contacts with banks.
- The reluctance of banks to finance small-scale businesses might be addressed through a combination of grants, interest rate subsidy, or technical support (e.g. through the EAFRD) to offset the higher transaction costs.
- In addition, capacity building for bank staff might help to develop adapted (alternative) methods for assessing the economic viability of individual farms in the absence of fully-fledged accounts normally required for standard credit assessment procedures for applications.
- A focus on specific needs of young farmers is necessary, either within currently operating or to be established future schemes or instruments, since they account for nearly half (48%) of the financing gap in the sector.

Financing gap for the agri-food sector in Hungary

The investment dynamic in the Hungarian agri-food sector is positive, with the volume of loans to the sector increasing by 22% between 2015 and 2018. The sector's revenues and exports also increased significantly throughout this period.

The demand for finance in the agri-food sector is driven by large companies investing to expand their production capacity and to reduce their costs, in order to increase their competitiveness. The Top 10 companies with the largest levels of investment accounted for 20-25% of total investments in the sector over the 2016-2018 period. Large companies are the driving force of investments in the sector. According to the Agri-food survey, two thirds of the investments in tangible assets made in 2018 were in machinery. This was followed by investments in buildings and vehicles.

For micro and small-sized enterprises, the need for working capital is one of the main drivers of the demand for finance, according to the Agri-food survey. In general, small-sized agri-food companies have poor financial indicators and low levels of assets. This means that their opportunities to invest from their own resources or to obtain bank loans are limited. Many of them have obsolete equipment and high production costs, and this situation cannot be easily reversed without making large investments. The economic margins of small-sized companies do not allow them to undertake this kind of investment and banks are hesitant in providing lending to the sector due to its limited profitability. Also, banks often require detailed business plans,



including specific information on the market access of the company, which indicates their lack of trust in the sector.

The agri-food sector lacks financial resources for technological development and innovation, due to the sector's low profitability. The high number of applications from micro and small agri-food businesses for processing and marketing support from the RDP also seem to indicate that there is an important unsatisfied demand for finance in the sector. The high share of applications that were not approved (almost 50%) due to a lack of budget is an indicator of the unmet demand for finance in the sector. Additionally, support for processing and marketing provided from the RDP has had an important impact on the long-term investment loans taken out by micro and small-sized enterprises in 2018.

The supply of finance to the sector is provided by a large number of banks as well as the state-owned Hungarian Export-Import Bank Plc. (Eximbank) and the Hungarian Export Credit Insurance Plc. (MEHIB). Overall, the growing supply of credit indicates that banks have an increasing interest in the to the agri-food sector. As with the agriculture sector, several different preferential loan programmes exist. These provide subsidised interest rates to enterprises or guarantees. Two-fifths (40%) of loans provided to the sector are publicly subsidised, which is an indicator of the difficulties firm's face in accessing credit on regular conditions. Despite the substantial offer of preferential loans, many firms cannot access finance due to their low economic performance.

This study estimates the financing gap in the Hungarian agri-food sector to be EUR 80 million.

According to the Agri-food survey, unmet financing needs are concentrated in small-sized firms, with 95% of the value of the gap relating to enterprises with under 50 employees. In terms of financial products, almost 75% of the gap relates to long-term investment loans. The gap results show that there is the potential for new financial instruments to help improve the access to finance for smaller agri-food enterprises.

The low economic performance of small-sized enterprises is the main reason applications for investment loans are rejected, or enterprises are discouraged from applying. The low level of equity of enterprises, as well as their high level of indebtedness, makes banks hesitant in providing finance to the agri-food sector. For example, the debt level of enterprises in the sector is approximately 50%. Additionally, the bankruptcy rate of agri-food companies is twice as high as the rate for the agriculture sector. Collateral requirements are an additional constraint to the access of finance, as banks require higher amounts of collateral to compensate for the sector's risk. The possibility for agri-food enterprises to use assets as collateral is limited, due to their relatively small size, their aged machinery, and their low performance indicators.

Overall, there is limited interest from banks to provide lending to small-sized enterprises. The small size of loan applications, in comparison to the relatively high cost of assessment, limits the interest of private sector banks in lending to small enterprises in the sector. In addition, banks consider that firms in the food processing industry are risky, due to their generally high debt-to-equity levels. From a banks' point of view, the food processing industry is particularly risky as its aggregated level of equity is lower than its total outstanding debts.

In addition, **start-ups have issues relating to a lack of credit and business history.** In general, low financial knowledge is not the main constraint in accessing finance. Rather, problems relate to the performance of the business and the high start-up costs involved. Furthermore, their high debt-to-equity ratio means banks are hesitant in funding smaller enterprises in the sector.

RECOMMENDATIONS

Some financial instruments already serve the sector and support access to finance. The recently implemented interest rate subsidy scheme (which was being implemented by the Hungarian Government at the end of 2019, and whose first loans are expected to be approved in December 2019) is expected to further facilitate the access to finance for agri-food enterprises. However, the sector is still characterised by a significant unmet demand, which suggests that further policy actions, including in the field of financial instruments, could be considered. As already pointed out for the agriculture sector, given the diversified offering of support measures



already available, any new action should start from a detailed analysis of the available instruments (which is not in the scope of this report) for creating synergies.

Based on the analysis from this study, the following key areas of intervention could be considered:

- The lack of collateral and business history, particularly for small-sized enterprises and new entrants / start-ups, which is not fully addressed by the currently available guarantee instruments.
- There is a need to create innovative financing approaches to allow agri-food companies to modernise their technologies, equipment and buildings, catering at the same time for their current indebtedness and rather low level of profits. In this context, the setting up of a fully-funded loan fund, where collateral requirements are replaced by re-payments based on the submitted business plan and forecasted cash flows, could be considered as an avenue for public and potentially EAFRD intervention in the coming years. A combination of grants, interest rate subsidies or technical support may be used to offset higher transaction costs.
- Targeted and appropriate training programmes and advisory services could be used to improve the financial literacy of entrepreneurs of small-sized enterprises, thereby addressing the lack of adequate business plans.



1. INTRODUCTION

Objective

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

Approach

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

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

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

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

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

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

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

Report structure

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



2. PART I: AGRICULTURE SECTOR

2.1. Market analysis

Key elements on the Hungarian agriculture sector

- With a total value of EUR 8.3 billion in 2018, the agriculture sector plays an important role in the Hungarian economy.
- The sector accounted for 4.3% of Hungary's Gross Value Added (GVA)² in 2018 and 5% of the total workforce.
- Crop production accounts for 61% of total agricultural output, while animal production accounts for 33.6%.
- The sector is characterised by a dual farm structure, with production divided between a small number of very large holdings, and a large number of small holdings (78% manage just 4.8% of the Utilised Agricultural Area).
- An ageing workforce is one of the most significant challenges for the Hungarian agriculture sector – approximately 60% of farmers are over 55 years of age, while just 12.6% are under 40.
- The agricultural trade surplus in Hungary has remained stable at approximately EUR 3 billion per year over the 2014-2018 period.

Agriculture plays an important role in the Hungarian economy. In 2018, the total value of agriculture production was EUR 8.3 billion. The sector accounted for 4.3% of the Gross Value Added (GVA), which was significantly higher than the EU 28 average of 1.6%. In terms of employment, the agriculture sector accounts for 5% of the total workforce,³ which is again significantly higher than the EU average. More than half of the land (57.6%) is used for agriculture. Crop production accounts for 61% of total agricultural output, while animal production accounts for 33.6%. Crop production is the dominant sub-sector, although it shows particular vulnerabilities to climate change, reflected in fluctuating level of agricultural production over the 2016-2018 period.

The agriculture sector is characterised by one of the most pronounced dual farm structures in the EU. Small farms that manage under 5 ha account for up 81% of the farm population, but just 4.8% of the utilised agricultural area (UAA). Large farms, on the other hand, account for less than 3% of all farms, but manage more than 50% of the UAA. Farms yielding less than EUR 4 000 in standard output⁴ are a common occurrence in Hungary (79%).⁵ These small farms concentrate on labour-intensive crops, such as fruits and vegetables, which account for 9% of Hungarian agriculture production, while larger agricultural enterprises specialise in less labour-intensive crops, such as cereals.

Like for most other EU member states, an ageing workforce is one of the most significant challenges for the Hungarian agriculture sector. There are approximately 149 000 farmers over the age of 65.⁶ In 2019,

² Also includes forestry and fishing.

³ European Commission, June 2019, DG Agri Statistical Factsheet for Hungary.

⁴ 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

⁵ European Commission, June 2019, DG Agri Statistical Factsheet for Hungary.

⁶ Eurostat 2019^a data.

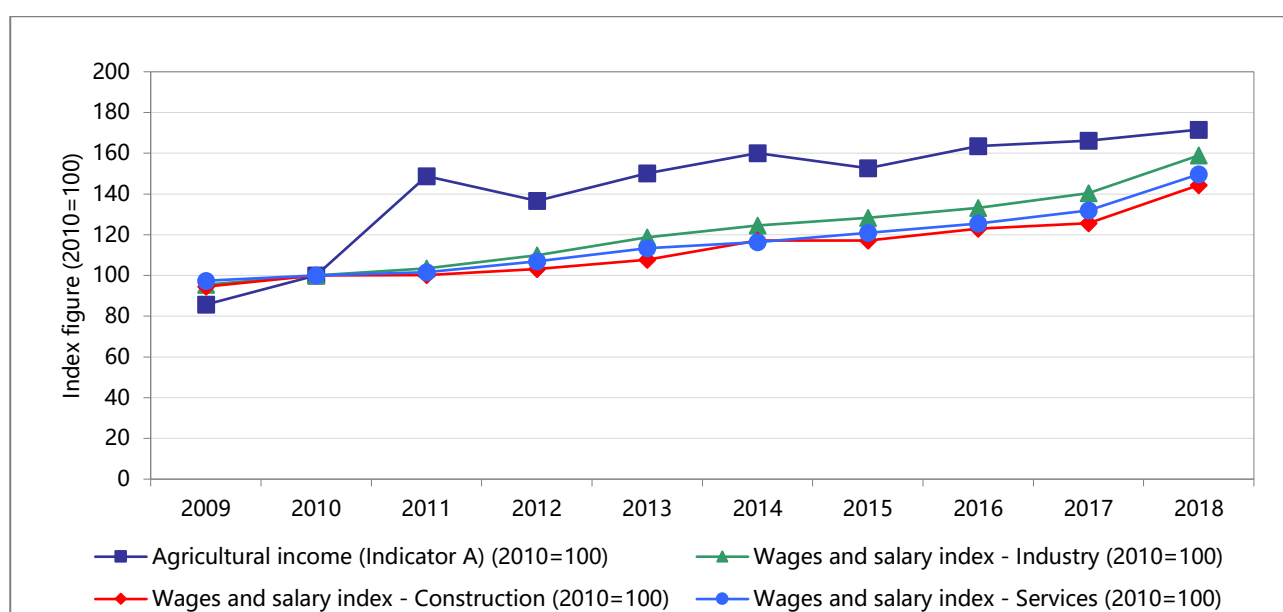


only 12.6% of farmers were under 40 years old, while 59.5% were older than 55. In the medium and long-term, this will continue to be one of the most significant challenges for the Hungarian agricultural development.

Agricultural exports are a strength of the Hungarian economy. Over the last few years, the agricultural trade surplus has been around EUR 3 billion. Hungary has the second largest trade surplus amongst new EU member states, after Poland.⁷ However, while primary agriculture products are mostly exported, higher value processed products are mostly imported. This indicates a potential growth opportunity for both the agriculture and agri-food sectors within the country.

Agricultural income has developed more favourably compared with other sectors of the economy. In 2010 and 2011, agricultural income grew faster than in other sectors, and it has since maintained its level. The phasing-in of direct payments, over a 10-year period following EU accession in 2004, helps explain this favourable development. While the trend has been consistent over the last eight years, the wages and salaries in other sectors have increased faster than in agriculture since 2017 (Figure 1).

Figure 1: Evolution of the agricultural income, 2009-2018

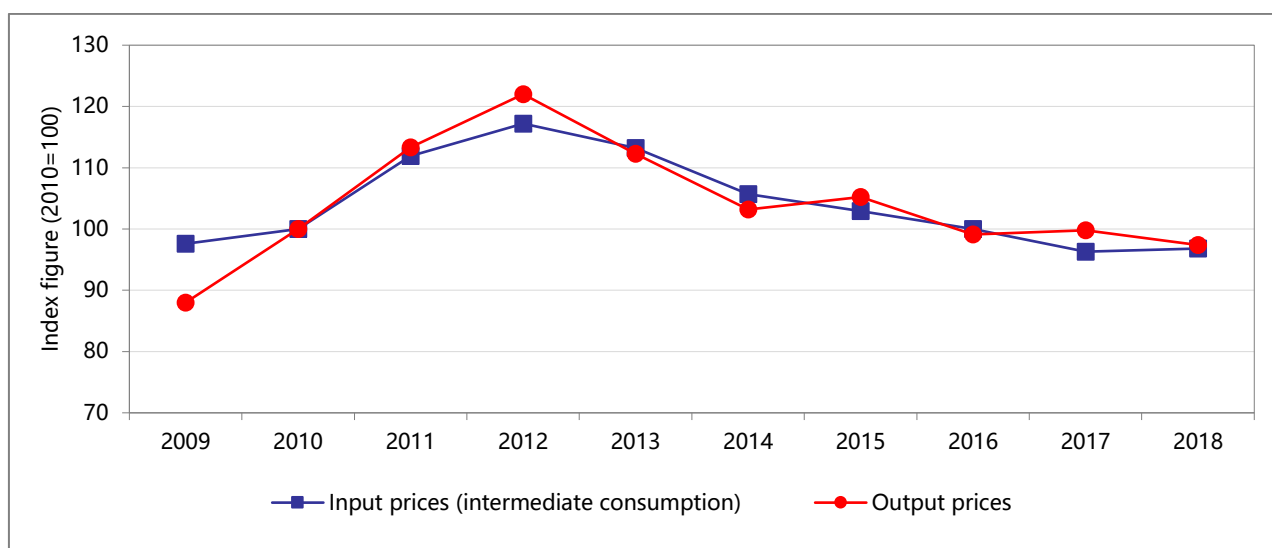


Source: European Commission, DG AGRI, Statistical Factsheet for Hungary, June 2019.

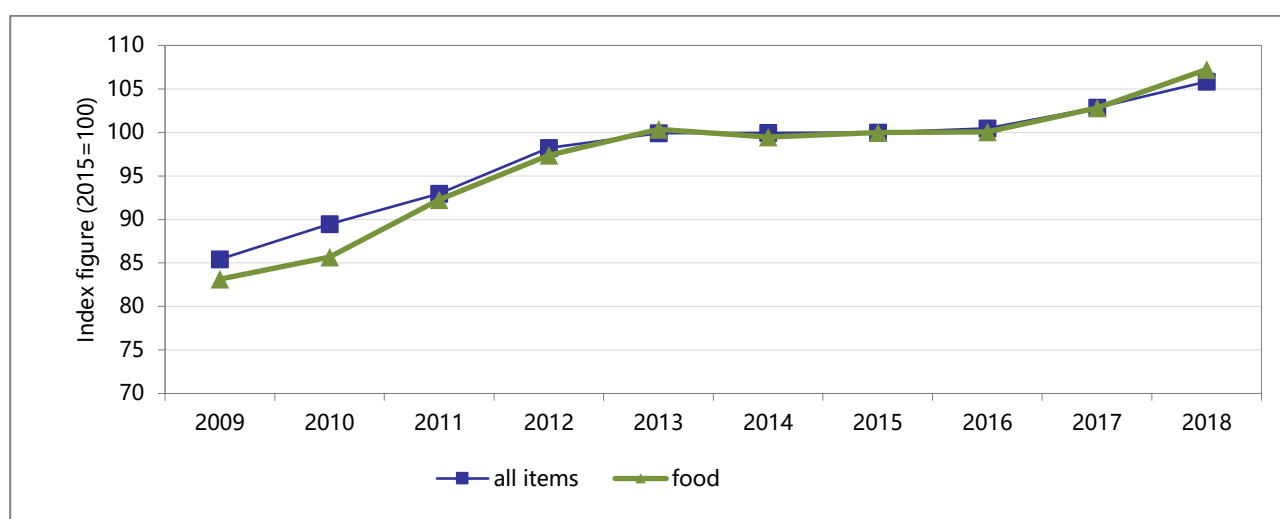
Aggregate agricultural input and output prices moved in tandem over the 2009-2018 period (Figure 2). Agricultural prices were trending upwards until 2012, before trending down until 2018.⁸ Food prices have run in parallel to the consumer price for all goods since 2009 (Figure 3).

⁷ European Commission, 2018.

⁸ European Commission, June 2019, DG Agri Statistical Factsheet for Hungary.

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

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

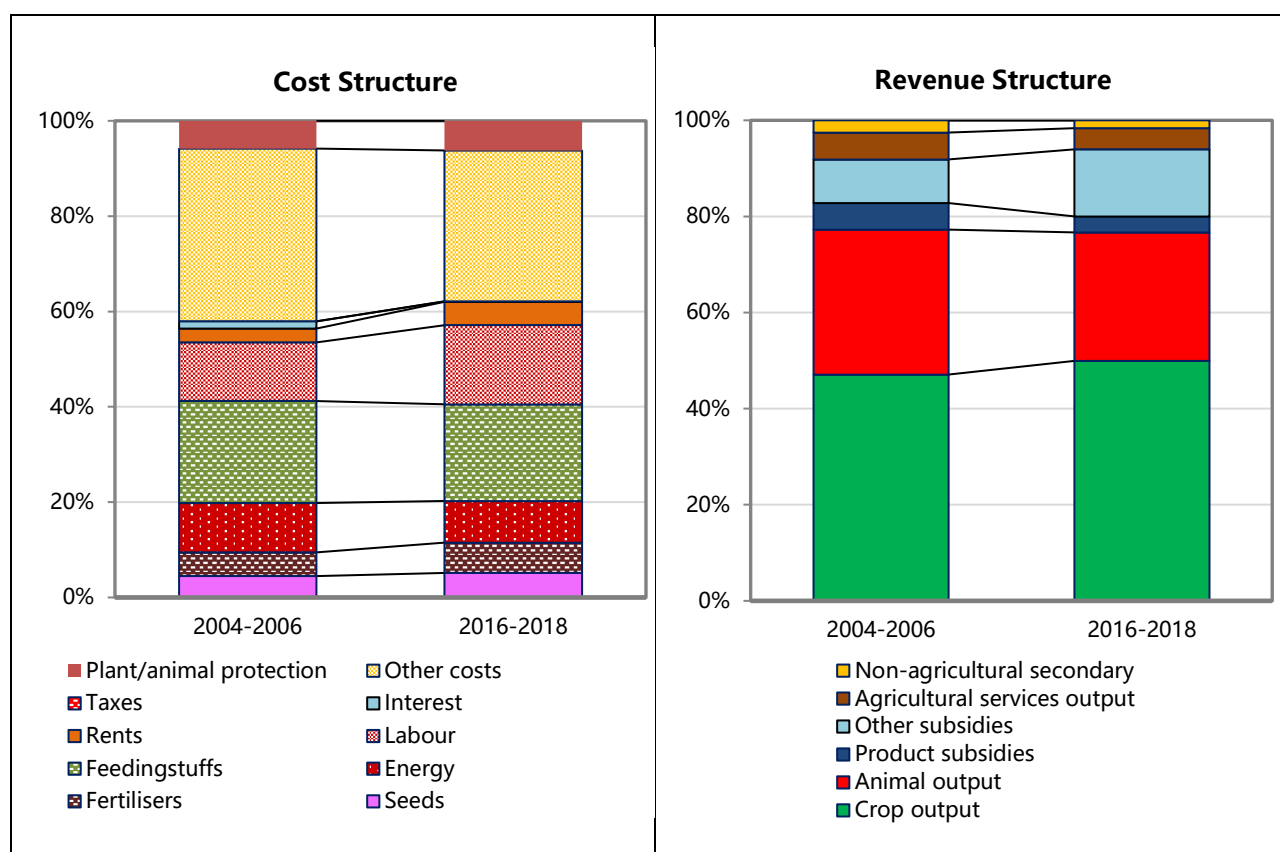
Figure 3: Evolution of harmonised indexes of consumer prices, 2009-2019

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

As for the cost and revenue structure of the agriculture sector (Figure 4), the costs for energy and feed stuffs decreased over the 2004-2006 to 2016-2018 period, while the costs of labour and rent increased. On the revenue side, the share of revenues stemming from animal production and agricultural service output decreased, while the share from crop output and public support increased.



Figure 4: Agricultural income – only the cost and revenue structures in Hungary 2004-2018



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

Statistical factsheet Hungary, 2019

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



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

This section describes the drivers of demand for finance in the agriculture sector and analyses the met and unmet demand. It seeks to identify the main reasons for farms to request financing and the agriculture sub-sectors showing 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 examination of the demand for agricultural finance is based on the findings from the *fi-compass* survey results of 315 Hungarian 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 Hungarian agriculture sector

- The major concern of Hungarian farmers is the increasing cost of their production, which reduces their profit margins.
- Access to short and long-term credit was considered a bigger problem by Hungarian farmers than in the EU 24. However, different funding programmes, such as the Agricultural Széchenyi Card (ASZK) for short and medium-term loans, or the Funding for Growth Scheme (NHP) for medium and long-term loans, have helped to reduce the financial constraints.
- Access to land is a concern, because the market is strictly regulated (only Hungarian citizens can buy land). This means that many enterprises operate entirely on rented land.
- Most agricultural investments are in machinery, followed by buildings.
- Obtaining finance is closely related to the receipt of direct payments under the Common Agricultural Policy (CAP) and/or national support.
- Integrators⁹ play an essential role in financing micro and small-sized farms. One third of all agricultural loans in Hungary are provided through these private entities.
- The unmet demand for agriculture finance was estimated at EUR 1.48 billion for 2018.
- A large part of the unmet demand stems from the rejection of loan applications by banks. Rejection rates were substantially higher in Hungary than for the EU 24, particularly for short-term loans.
- Rejection is mainly due to a lack of business data, but also to insufficient levels of collateral, inadequate business plans and a lack of credit history.
- Refusals of loan offers by farmers were also more common in Hungary than for the EU 24, especially for medium and long-term loans, reflecting the high levels of collateral requested by banks.

2.2.1. Drivers of total demand for finance

Investments in the Hungarian agriculture sector are on the rise, although investments in physical assets remain below the EU 28 average. The share of Gross Fixed Capital Formation (GFCF)¹⁰ in GVA has

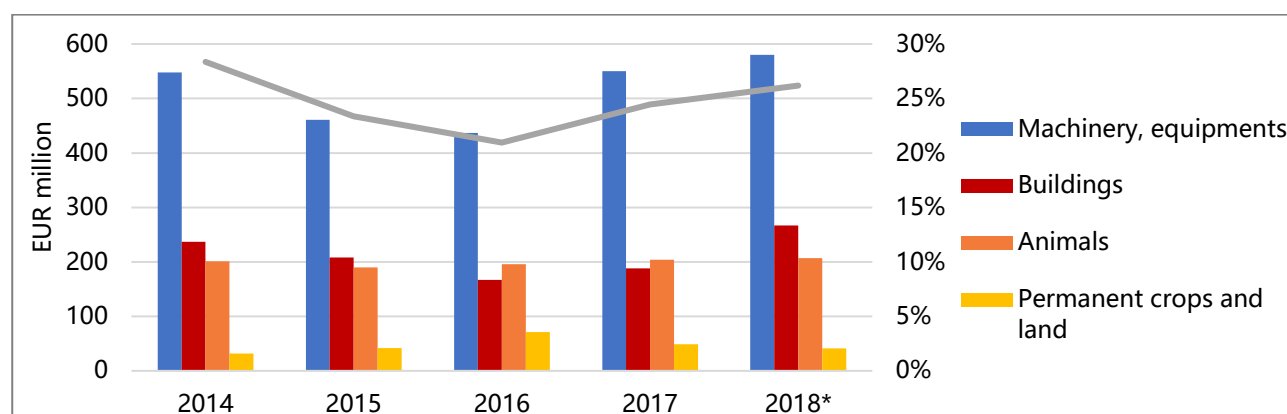
⁹ See section 2.2.2. for the definition of Integrators.

¹⁰ The GFCF measures the value of acquisitions of new or existing fixed assets by the business sector, less disposals of fixed assets. GFCF is a component of the expenditure on gross domestic product (GDP), and thus shows how much of the new value added in the economy is invested rather than consumed. Fluctuations in this indicator can give indications about future business activity, business confidence and the pattern of economic growth. In times of economic uncertainty or recession, fixed assets investment 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. Conversely, in times of robust economic growth, fixed investment will increase across the board.



hovered around 25% since 2014 (Figure 5). This implies that one fourth of GVA was used for capital investments in physical assets during this period. This share, however, is much lower than the EU 28 average of 33.6%.¹¹ The increasing levels of investment in Hungarian agriculture are mostly due the inflow of investment support provided by the EAFRD through the national Rural Development Programme (RDP), the 'Lands for Farmers' programme, and the national support given for leasing agricultural machinery. The low interest rate environment over the last few years has also had a positive impact.

Figure 5: Development of Gross Fixed Capital Formation by agricultural assets, 2014-2018



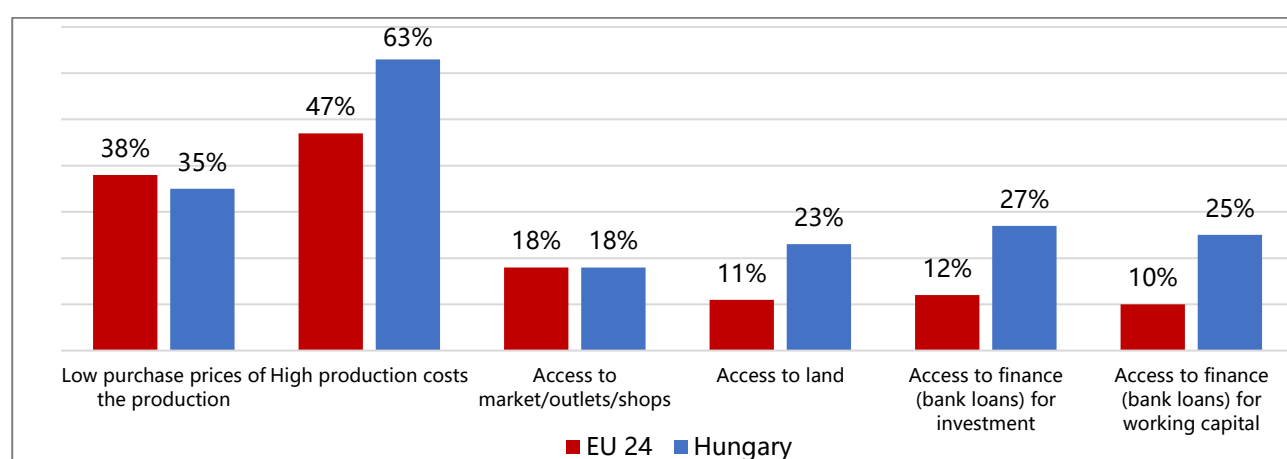
Note: * Own estimation.

Source: Based on data from HG (2016, 2018, 2019) and Eurostat (2019b).

Production costs, access to finance, and access to land are the main concerns of Hungarian farmers.

According to the *fi-compass* survey, 63% of the farms had difficulties with increased production costs compared to only 47% for the EU 24 (Figure 6). This was followed by low selling prices of production (35%). Access to short and long-term loans were also a difficulty for Hungarian farmers, at 25% and 27%. Due to the characteristics of the land market where only local farmers can buy holdings, in a process described as long and bureaucratic (while foreigners and non-farmers are excluded), 23% of Hungarian farmers considered access to land to be a difficulty, which is more than twice the EU average of 11%.

Figure 6: Difficulties experienced by farmers in 2017



Source: *fi-compass* survey.

¹¹ Eurostat, 2019.



Investments are mostly made in machinery and technical facilities. During the 2014 to 2018 period, over 50% of total investments were made in machinery. This share increases to 69%-77% if investments in technical facilities are included. The major investment items for the different asset categories include tractors, poultry houses, and cattle.¹²

The consolidation process of agricultural holdings and the reduction in production costs are the major drivers of investments. Overall, the demand for finance in the Hungarian agriculture sector is driven by:¹³

- (i) Expansion of production;
- (ii) Reduction of operational and production costs;
- (iii) Provision of complementary activities, such as contracting services for income diversification;
- (iv) Improvements in the quality of products;
- (v) Compliance with legal requirements (e.g. animal welfare, quality, hygiene and safety standards, etc.).

The expansion of production by Hungarian farms has been partly driven by the farm consolidation process that has increased the average size of holdings over the last decade. This consolidation process has been driven by the ageing workforce within agriculture (section 2.1) and the low attractiveness of farming. Farmers often sell their farm assets when they retire, mostly to larger, existing farms, rather than to new farmers who are eager to enter the sector. Predominantly, micro or small-sized farms are disappearing, as can be seen by the increasing average size of individual farms. This process has been also driven by regulatory changes. For example, over the few last years, many arable crop producers benefited from changes to the national land regulations and the accompanying 'Land for Farmers' loan programme (see further explanation below) that have provided beneficial loans to those buying agricultural land.

Investments have been undertaken to increase productivity and reduce costs. Investments in machinery have been made to internalise the part of production that had previously been outsourced through contracting. This was particularly the case for small scale producers that wished to optimise their production. In addition, farmers can earn a complementary income by providing contracting services to other farmers using their new machinery. Many small-sized farms, which typically invest less in innovative technologies due to their limited production needs (i.e. small production and the focus on local market), have been able to diversify their activities and income streams, only when they are partly subsidised (e.g. through the EAFRD).

Additionally, crop producers, to some extent, have also invested in new technologies and precision farming. These investments are undertaken by the larger-sized farms, who can easily operate with own and/or borrowed resources.

Livestock farmers invest mostly in new technologies and the upgrading of stables. They invest into more cost-effective production techniques or better integration in the agri-food chain, for example automated stables (including feeding or vaccination), slaughterhouses and further processing. The support of the EAFRD played an important role in this context.

Quality standards and compliance with legal requirements are other reasons for investments. For the horticulture sub-sector, quality improvement, as demanded by customers, was the most important driver of investment. For other sub-sectors, such as livestock production, it was mentioned during interviews that investments have been undertaken to comply with legal requirements, particularly with animal welfare standards. In order to facilitate the investments to meet these requirements, EU and national support have been provided. However, a lack of resources to make the investments necessary to meet legal requirements was also a reason why some farmers had to stop their farming activity.

Most Hungarian farmers seek financing to cover their working capital needs. This reflects the decreasing profit margins of the sector, driven by increasing costs of production and decreasing selling prices. According

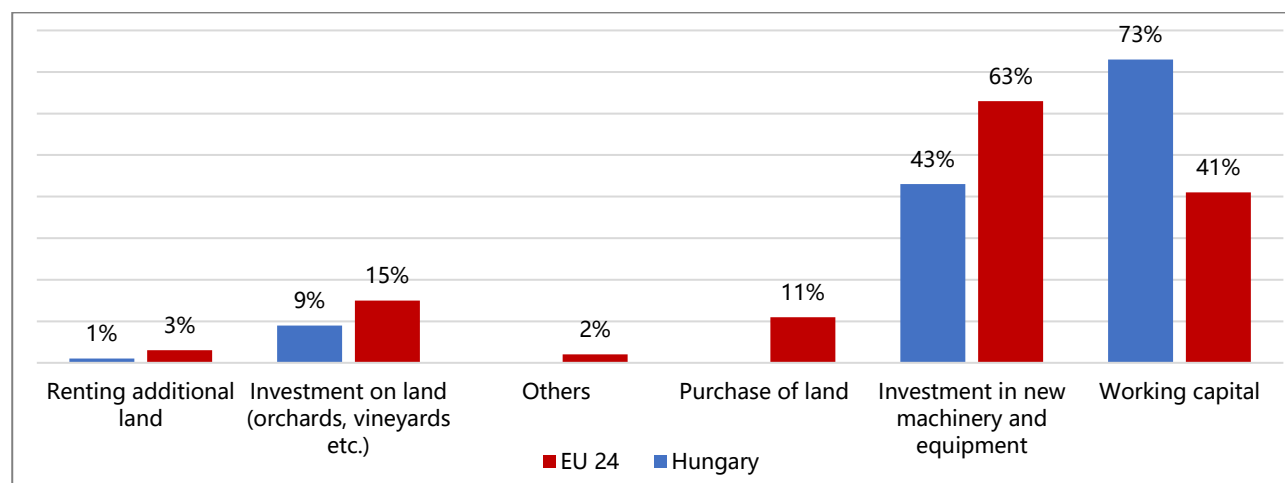
12 According to data from the Hungarian Ministry of Agriculture.

13 Interview with Farmers Association, 2019.



to the *fi-compass* survey, 73% of Hungarian farmers apply for loans to finance their working capital needs (Figure 7). This is significantly higher than the EU 24 average of 41%. Banks confirmed the survey results in interviews and said that more than 50% of their loans are used to finance daily farm operations rather than long-term investments. Interviews also underlined the important role of the Agricultural Széchenyi Card (ASZK) scheme, which has significantly improved access to working capital financing by providing preferential conditions to farmers (see section 2.3 for more information on this product). According to the *fi-compass* survey, the need to invest in new machinery, equipment or facilities is the second largest driver of the demand for finance (43%), followed by investments on land (9%). However, these two drivers are significantly lower in Hungary than for the EU 24 average (63% and 15%, respectively).

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



Source: *fi-compass* survey.

The demand for finance for the purchase of land is insignificant in Hungary. As shown in Figure 7 above, the purchase of land was not mentioned as a purpose for bank loans in Hungary, according to the *fi-compass* survey. This is despite the fact that 23% of Hungarian farmers consider access to land an issue (Figure 6). This apparent contradiction has a twofold explanation. Firstly, purchasing land is only allowed for natural persons in Hungary, and so agricultural enterprises (legal entities) can only rent land. Secondly, the New Land Act,¹⁴ introduced in 2013, set up a rigorous system of pre-emption rights that reduced the number of potential buyers.¹⁵ Hence, these two constraints limit the finance demand for the purchase of land. However, the 'Land for Farmers' programme (see box below), which was set up in order to provide preferential loans to individual farmers for land acquisition, has had a significant impact on the level of credit taken up. That programme has taken over the normal bank financing. The competition for agricultural land, however, is high and it creates difficulties for those willing to stabilise and/or expand their business, through renting or buying land.

14 Act No. CXXII of 2013 concerning agriculture and forestry land trade; <https://www.ecolex.org/details/legislation/act-no-cxxii-of-2013-concerning-agriculture-and-forestry-land-trade-lex-faoc128905/>.

15 According to the 2013 New Land Act, there is a list of pre-emption rights. If a landowner would like to sell their land, they are not free to choose who to sell it to, even if they sign a contract with a potential buyer. There is a ranking amongst potential buyers and if there is anyone who wants to buy that land and he or she has a higher position in the ranking, then the owner has to sell the land to that person. After the National Land Centre, the first in line is the farmer who lives nearby (neighbouring farmer, within 20 km of the administrative border of the place where the piece of land belongs).



'Land for Farmers' programme

In 2015, the state-owned Hungarian Development Bank (MFB) introduced a land purchase loan programme with a budget of approximately EUR 810 million (HUF 250 billion). The programme aimed to tackle the rigidity of the land market. It closed on 20th March 2017.

The programme made it possible for individuals to buy land from the former National Land Fund Managing Organisation (NFA) with 20% of their own financial resources, or 10% if the applicant had already rented the land or had signed a rental contract for the future. During land auctions of 3 ha or more, the best offers were selected. Between 2016 and 2017, approximately 200 000 ha were sold through the 'Land for Farmers' programme, which was operated via commercial banks.

The available loan amount was between EUR 9 700 (HUF 3 million) and EUR 970 000 (HUF 300 million). The maximum interest rate was set at 1.95% for the first ten years and the loan maturity was up to 20 years. The access was facilitated through a simplified assessment and subsidised interest rate.

The programme carried a low risk for banks due to the buyback right of the NFA in case of default.

During 2016 and 2017, the 'Land for Farmers' programme, alongside the EAFRD, represented a significant driver of investments undertaken by individuals. The investment loans undertaken by individuals peaked significantly between 2016 and 2018, compared to previous years, whereas those undertaken by agricultural enterprises remained relatively stable, although on a decreasing trend in recent years. In 2016 and 2017, the investment loans for individuals were EUR 551 million and EUR 674 million, respectively, compared to only EUR 175 million in 2015 (Table 1). This coincides with the implementation of the 'Lands for Farmers' programme (2016 and 2017) and the payments of investment support from the RDP (see more on this topic below). Thus, the impacts of the 'Land for farmers' programme can be assumed to have been significant in triggering long-term investments in land by individual producers. The impact from the programme can also be seen from the fact that the volume for other types of loans was more stable over the same period. On the other hand, agricultural enterprises have mostly market-based loans and they usually have an investment strategy independent from the available subsidised loans.

Table 1: Outstanding loans by product type and farm type, 2015-2018, EUR million

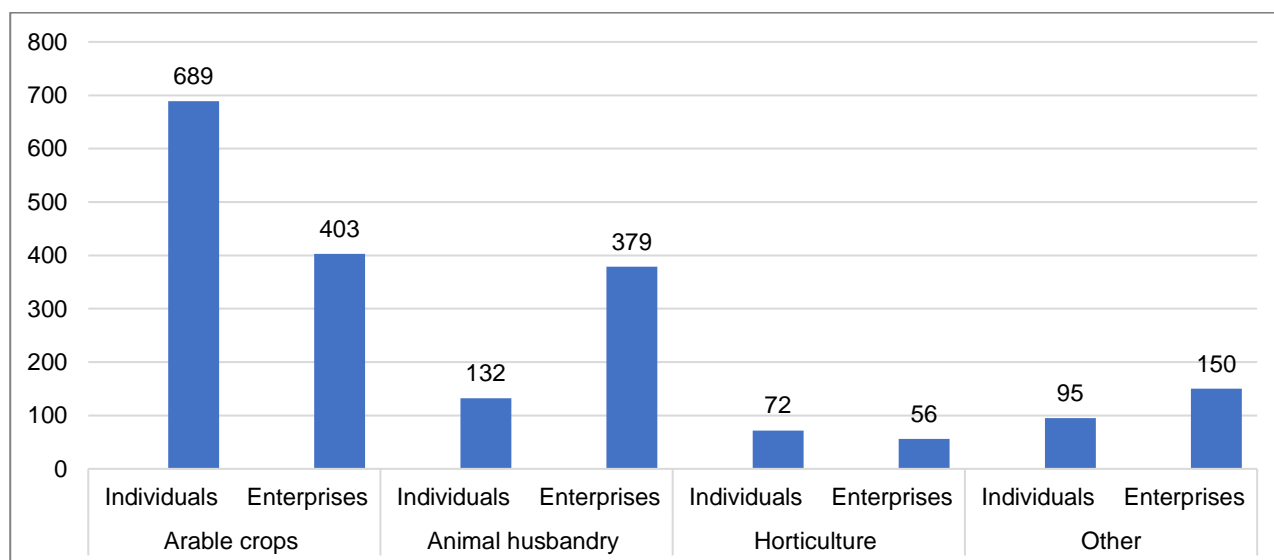
	Individuals				Enterprises		
	2015	2016	2017	2018	2016	2017	2018
Investment loans	175	551	674	621	388	374	336
Working capital loans	106	99	106	97	300	265	243
Bank overdraft	38	65	68	83	81	120	120
Other short-term loans	25	15	42	37	116	155	181
Other loans	24	83	96	131	108	73	104
Total	368	813	986	969	992	987	984

Source: Ministry of Agriculture statistical reports on agricultural loans. Please note that a breakdown of outstanding loans to agricultural enterprises for the year 2015 does not exist, and so the information provided is as of 2016.



Investments are higher in the arable sub-sector. The two major types of farms (individual producers and enterprises)¹⁶ influence the investment pattern. Individuals operate more in arable crop production and so they tend to invest more into this sub-sector compared to enterprises (Figure 8). The 'Land for Farmers' programme contributed greatly to this, as only individuals, rather than agricultural enterprises, are allowed to buy agricultural land. Enterprises are more frequently present in animal husbandry, where they have invested almost three times more than individuals (EUR 379 million vs EUR 132 million).

Figure 8: Investments by sub-sectors, 2017, EUR million



Source: Elaborated based on data from HG, 2019.

Young farmers consider access to land and access to finance as important hurdles to their business.

A study by the Hungarian Central Statistical Office and the Agrya (Hungarian Young Farmers Association) investigated the problems faced by young farmers through an online questionnaire. The main issue identified was access to agricultural land.¹⁷ Although this problem has a financial dimension, it is mostly the result of the low liquidity (sales, purchase) in the Hungarian land market. Additionally, 42% of the farmers who participated in the survey reported problems with access to finance. Another interesting finding from the questionnaire was that young farmers show a high willingness to invest in their farming activities, with 85% of them expressing a willingness to invest within the next five years, mostly in buildings.¹⁸

¹⁶ See distinction between individual producers and enterprises provided in section 2.1.

¹⁷ Biacsi et al., 2013, A fiatal gazdák helyzete Magyarországon /The young farmers situation in Hungary/, Hungarian Central Statistical Office, Budapest, Hungary

¹⁸ Most young farmers interviewed in the Agrya study were individual producers (96%) and male (71%). 501 young farmers answered to the questions. 49% were crop producers, 25% were livestock producers and 26% were mixed farm. Most of them think that the income generated from agriculture production is very low (related to the bad reputation of the sector). 45% had applied for young farmer support and 31% received it. The respondents' agreed that support for young farmers is important and that it should be received within five years from the start of the production. The main issues identified were: access to land (63%), bureaucracy and changes of legal environment (55%), access to different supports (44%), access to loans (42%), weather (41%) and price volatility (32%). Only 3% of the respondents consider



CAP support significantly impacts farmers' access to finance. In 2017, almost EUR 2 billion was paid to support Hungarian farmers, including national co-financing. EUR 1 122 million was paid from Pillar I, mostly the Single Area Payment Scheme, whilst EUR 372 million was paid from Pillar II,¹⁹ matched by national co-financing. The agriculture sector is relatively dependent on CAP support. In 2018, CAP support made up 59% of the sector's total net income.²⁰

Direct payments ensure an improvement of the income and banks like using them as a source of guarantee when farmers apply for loans. An easy and effective way for Hungarian farmers to obtain short-term finance is by factoring the different supports, but mainly the basic payment. This implies that banks can provide loans equalling more than 90% of the total support level, in advance to the CAP payment, due to the very low level of risk. Based on our interviews, approximately 80% of the farmers in the arable crops sub-sector use this kind of financial tool to meet their financial needs during the production cycle.

Measures from the RDP also influence the overall demand for finance. Farmers are obliged to match the RDP investment grant with own contribution, which they often take from banks as loans. The support measure that most influences the demand for finance is sub-measure 4.1 'Support for investments in agricultural holdings'. Banks are also tolerant towards the beneficiaries as they know that a project contracted for support under the RDP, when successfully developed, would earn the grant it has been authorised. An approved application serves as a form of guarantee to the banks (see section 2.2.2 for further discussion on this).

By the end of 2019, data shows that **the demand for investment support under the RDP is significantly higher than the budget that has been made available.** The level of oversubscription was significant. Until 2019 a total of 12 274 applications have been submitted (before any administrative check and follow-up procedures to take place) under the grant calls for sub-measure 4.1, of which, at the end of the selection process, 7 755 have been approved for support. The budget made available, amounting to EUR 964 million, has been fully taken up. Applications amounting to approximately EUR 600 million could not be satisfied (Table 2).²¹

For the same period, in total 3 744 young farmers applied for start-up aid (sub-measure 6.1) for a total support of EUR 150 million (figures are before administrative checks). Only one third of them managed to receive financing under the programme - 1 277 applications have been approved for support for a total budget of EUR 121 million.

a lack of professional training/knowledge a burden. 85% of the young farmers would like to invest in the next five years, mainly in buildings (66%) and machinery (26%).

19 Calculation based on HG, 2019.

20 KSH data, 2019^a, for the period 2010-2018.

21 Keeping in mind that this value includes the amounts from any non-eligible, withdrawn and/or eligible, but not selected, application, as we look at the initial phase of the support process.



Table 2: Hungary: 2014-2020 RDP implementation data for sub-measures 4.1 and 6.1, total public finance, by the end of 2019

Sub-measure	Number of all submitted applications under the grant calls	Total support requested by all submitted applications (EUR million)	Number of approved and supported applications under the grant calls	Budget made available under the grant calls (EUR million)	Amount requested not being supported (EUR million)
4.1 Support for investments in agriculture holdings	12 274	1 624	7 755	964	660
6.1 Business start-up aid for young farmers	3 744	150	1 277	121	29

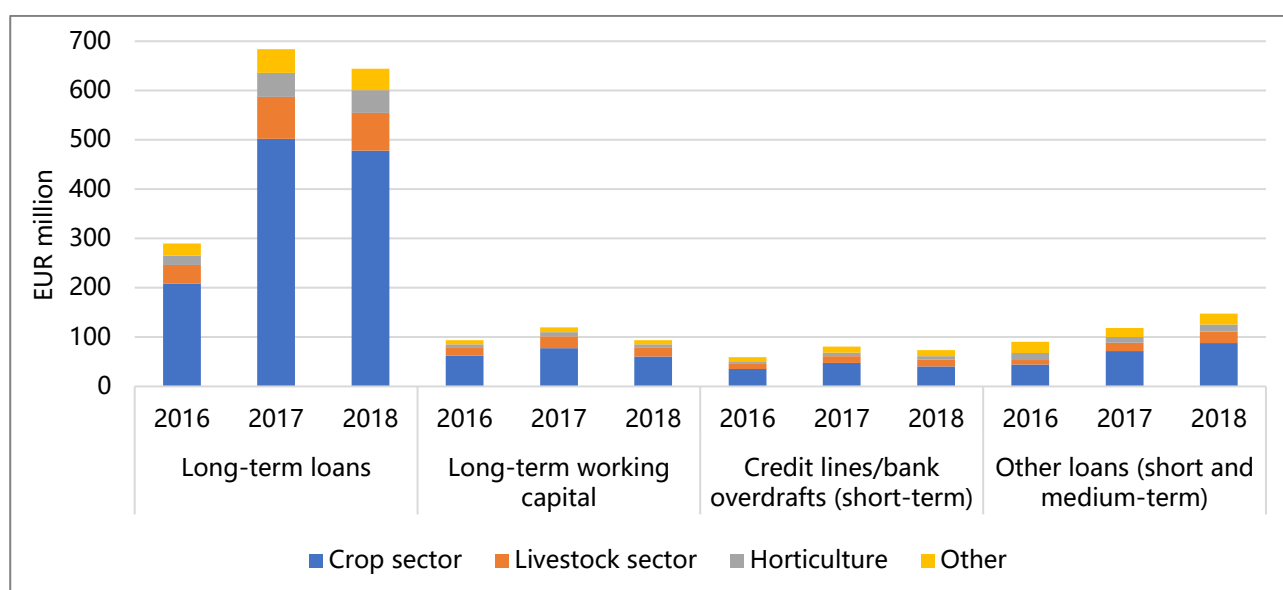
Source: Hungarian EAFRD Managing authority, 2019.

Note: The 'Total support requested' and the 'Amount requested not being supported' are calculated based on all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not allowing their evaluation, and/or with insufficient value-added, and/or ranked at a place for which the budget under the call has not been anymore available.

According to our interviews, the 2014-2020 RDP has favoured micro and small-sized enterprises and helped facilitate their access to finance. The payment of investment support is highly correlated with the increase in the uptake of long-term investment loans by individual producers. Besides the 'Land for Farmers' programme, the major explanation of this increase during the 2016 to 2018 period was the significant financial inflows from the RDP as of year 2017. The direct impact from the EAFRD funding on demand for finance can be seen in Figure 9. The increase of long-term investment loans, particularly for the crop sub-sector, but also for the livestock and horticulture sub-sectors, is evident.



Figure 9: Composition of total external financial sources of individuals by sub-sectors, 2016-2018



Source: Elaboration based on the MA statistical reports on agricultural loans.

Subsidies and subsidised loans are important drivers of the investments undertaken by individual Hungarian farmers. As shown in Figure 9, the volume of external finance is highest for long-term investment loans, followed by other loans, long-term working capital loans²² and credit line overdrafts. The high significance of the ‘other loans’ sub-category is because it includes ASZK, NHP, EIB refinanced loans, land mortgage loans, and leasing and pre-finance of different subsidies (see section 2.3.1.2 for a description of these instruments). It should be highlighted that while some of these other loans are long-term, there is no detailed composition in the MA statistical report.

In order to continue encouraging the uptake of investment loans by individual producers, the Hungarian Government launched another preferential loan programme. The first loans from this programme were foreseen to be paid out by December 2019. The reason for launching this loan programme, according to interviewees, is that while investments in the agriculture, forestry, and agri-food sectors have shown an increasing trend over the last few years, the funds available from the EAFRD / RDP investment support are running out and the funds from the next programming period will only be available around 2022, after the adoption of the CAP Strategic Plan and all procedures and rules for implementation. In order to maintain this favourable trend, producers from these sectors are encouraged to take up investment loans with favourable interest rates (see further description of this product under section 2.3.1.2).

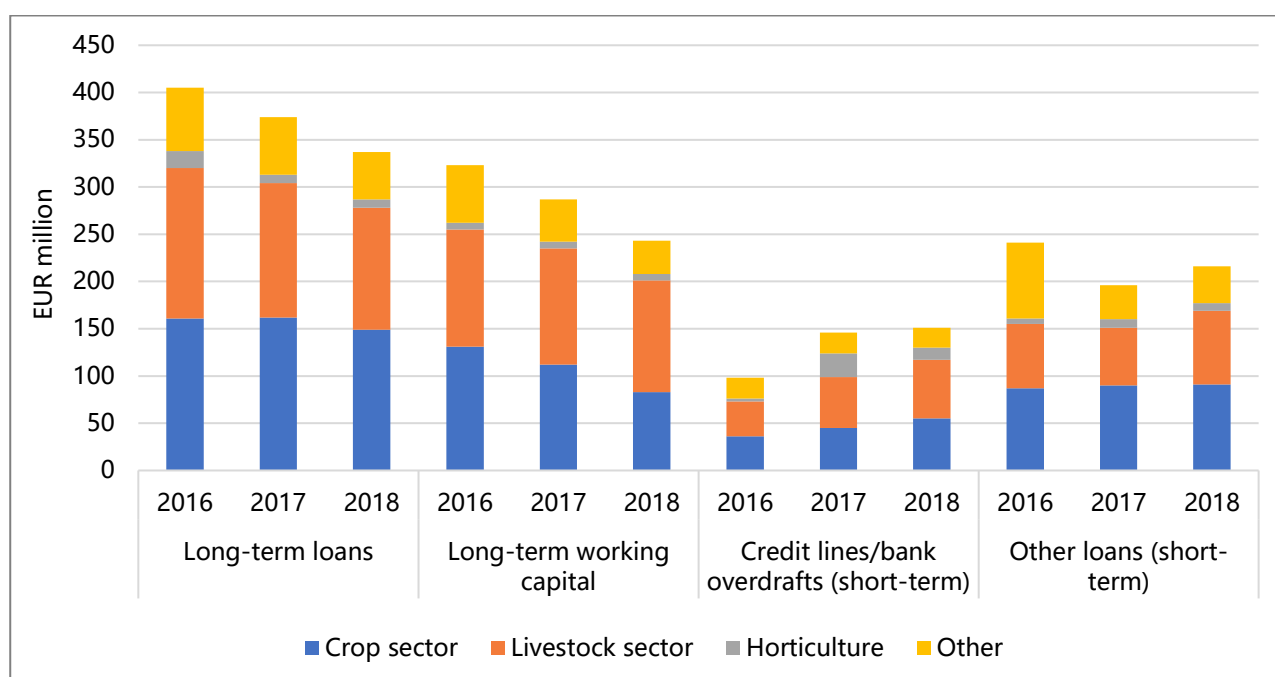
The investments undertaken by agricultural enterprises are largely market-based loans, in contrast with individual farmers. The loan structure across different sub-sectors is more balanced for agricultural enterprises, compared to individual farmers (Figure 10). The volume of loans provided to the crop and livestock sub-sectors are almost equal, with no big differences between the years analysed (i.e. no peak years as identified for individual farmers). However, unlike the case of for individuals, the total loans to agricultural enterprises show a decreasing trend. One of the main reasons for the absence of peak years is that the agricultural enterprises normally have better access to different kinds of credit, due to the availability of

²² Long-term working capital loans are used to finance current assets (just like regular working capital loans), but with duration of longer than a year. The classification is based on the aim of the loan, hence distinguishing it from loans that finance fixed assets (investment loans). It gives more financial flexibility to the debtors, which is particularly important for the agriculture sector (e.g. dealing with weather-related losses). When the farmer has sufficient income, he/she can use that instead, and so the long-term working capital loan serves as a kind of security reserve.



business data and higher levels of assets (see discussion under section 2.2.2 related to reasons for rejections). As a result, they are less dependent, for example, on the RDP grant cycle.

Figure 10: Composition of external financial sources of agricultural enterprises by sub-sectors, 2016-2018



Source: Elaborated based on the MA statistical reports on agricultural loans.

The livestock sub-sector faces more difficulties in accessing finance than the arable sub-sector. This is largely due to the area-based payments of the CAP, which mean that crop farms have a stronger financial position than other sub-sectors. According to interviews,²³ the livestock sub-sector has a weaker financial situation because it:

- (i) is subsidised less;
- (ii) is dependent on the output of the crop sub-sector and its production and price variation;
- (iii) is subject to high volatility, as witnessed during crises and diseases (dairy crisis or the ongoing swine fever), and
- (iv) has a lower level of valuable assets that can be provided as collateral.

However, there are significant differences amongst producers. In some cases, access to finance for cattle and dairy farms may be easier as they receive most of the coupled payments. Additionally, mixed farms might be able to compensate for losses in livestock production with profit from crop production.

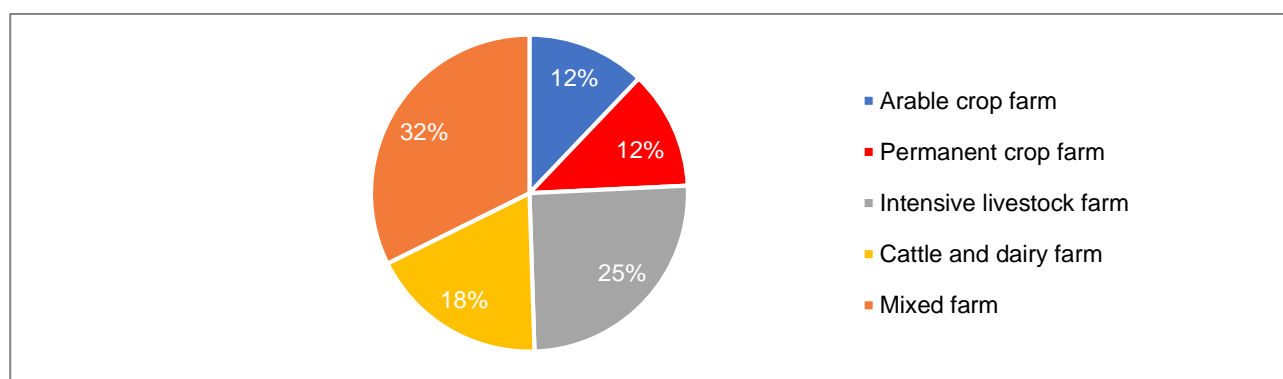
At the same time, mixed farms have the highest share of total liabilities (32%). This is followed by intensive livestock farms (25%) and cattle and dairy farms (18%). Arable and permanent crop farms have the lowest shares of liabilities (Figure 11). Based on the Hungarian FADN data, the average liabilities vary between EUR 9 700 and EUR 477 900 (individuals and holdings), while the national average of the sample farms was EUR 122 100 in 2017.²⁴

²³ Farm Associations.

²⁴ Calculations are based on Keszthelyi, Kis Csátári, 2019.



Figure 11: Share of liabilities by farm type categories, 2017



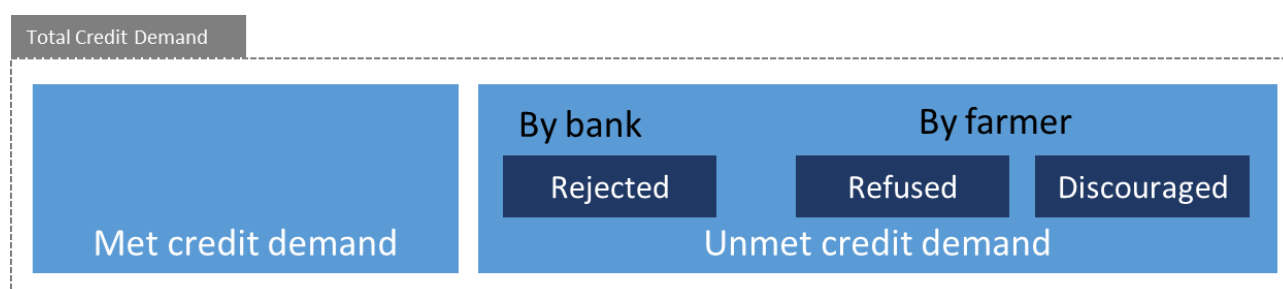
Note: Standard Output above EUR 2 000.

Source: Elaborated based on FADN data, 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 institutions, offers of credit refused by farmers, alongside cases when farmers are discouraged from applying for credit due to an expectations of rejection or refusal (Figure 12).

Figure 12: Schematic overview of the demand side of agriculture sector



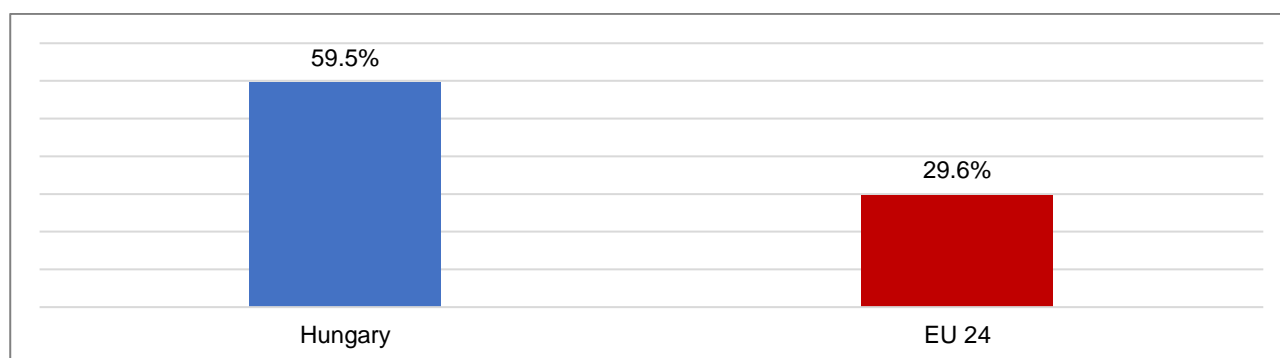
Source: Ecorys, 2019.

Based on the *fi-compass* survey, the annual unmet demand for finance in the Hungarian agriculture sector is estimated to be EUR 1.48 billion.

Hungarian farms have a high demand for finance, with almost 60% of the farms surveyed saying that they applied for finance in 2017, compared to only 30% for the EU 24 (Figure 13). However, a large part of the demand for finance is satisfied by resources provided by other private individuals (e.g. family members or friends), and so the demand for bank finance is more in line with the EU level. As previously discussed, access to both - short and long-term bank loans - is of a greater concern to Hungarian farmers than for the EU 24 (Figure 6).



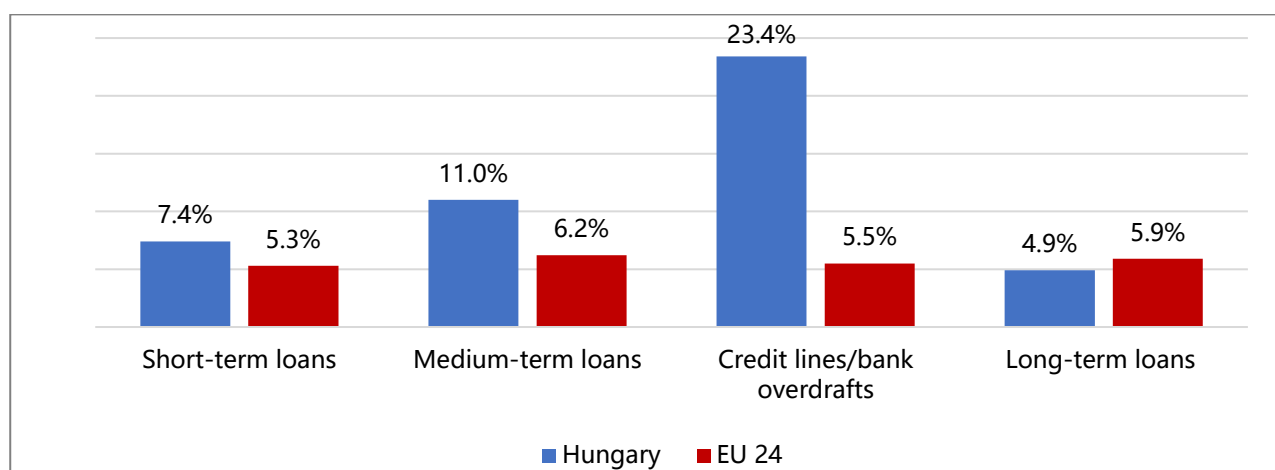
Figure 13: Hungarian farms applying for finance in 2017, all products



Source: *fi-compass* survey.

With regard to bank finance, **30.8% of Hungarian farmers applied for short-term loans and credit lines**, according to the *fi-compass* survey (Figure 14). This was followed by medium-term loans (11%) and long-term loans (4.9%). According to interviews, more than half of the loans obtained were used predominantly to finance the daily operations of the farms.

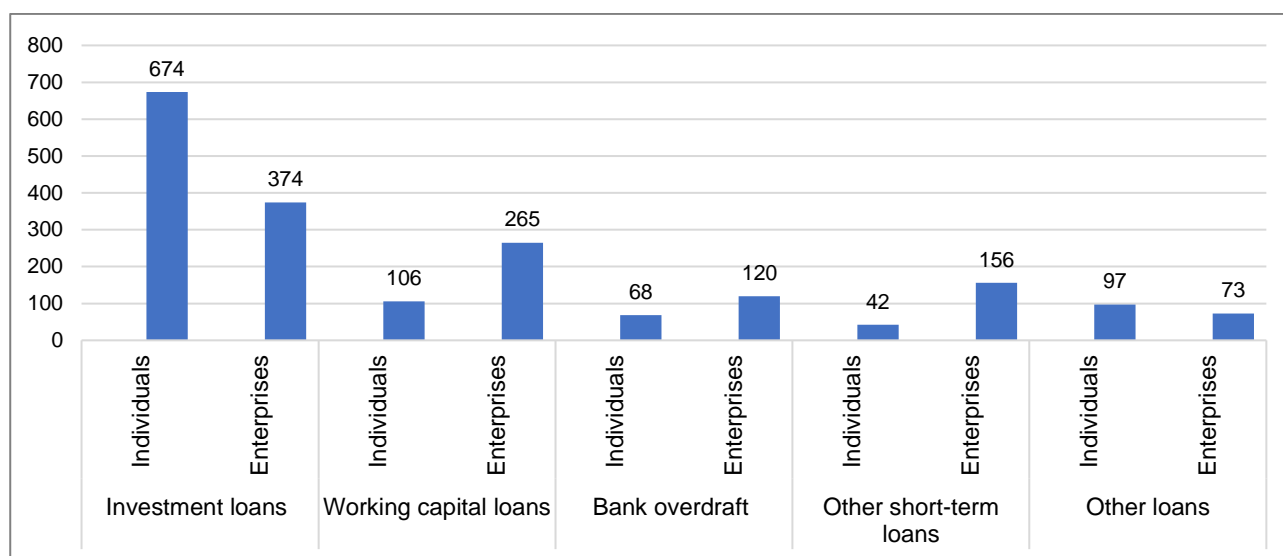
Figure 14: Hungarian farms applying for finance in 2017, by product type



Source: *fi-compass* survey.

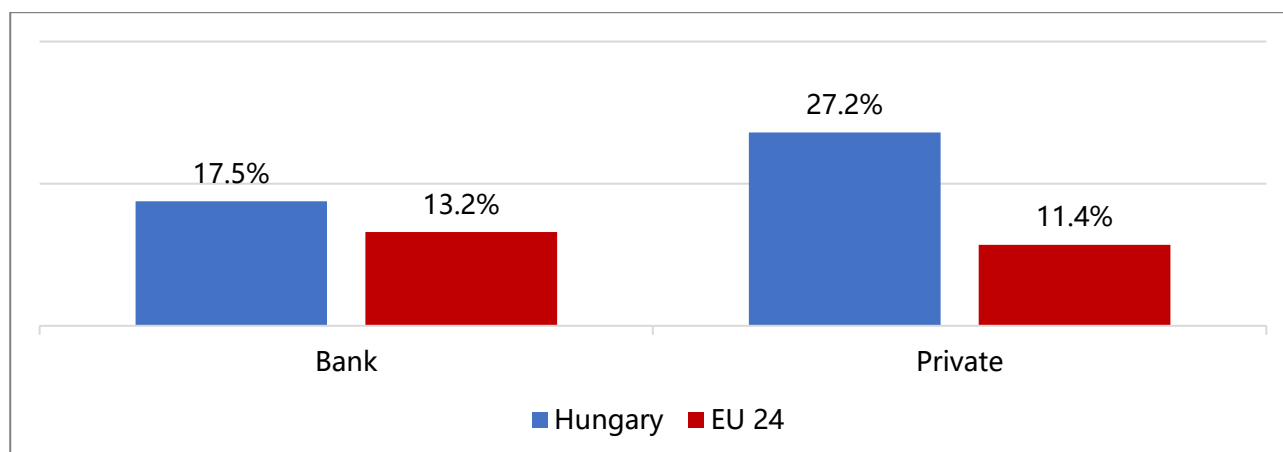
Investment loans with medium and long-term maturities accounted for the largest share of the total outstanding loans to agriculture in 2017 (Table 10). The high volume of investment loans taken out by individual farmers can be explained by both the preferential 'Land for Farmers' programme (see section 2.2.1), whereby only individuals were allowed to purchase subsidised agricultural land, and by the availability of investment support from the RDP, which supported individuals to a much greater extent than agricultural enterprises..

Compared to individuals, agricultural enterprises had a more balanced loan uptake. At the end of 2017, they held EUR 374 million in investment loans and EUR 265 million in working capital loans (which are usually short-term loans, although not always – see section 2.3). The total outstanding loan volume to agricultural enterprises was EUR 987 million in 2017 (Figure 15).

**Figure 15:** Investments in agriculture by loan type, 2017, EUR million

Source: Elaborated based on HG, 2019.

Financial support from friends and family is an important source of financing for the Hungarian agriculture sector. According to the *fi-compass* survey, 27% of Hungarian farmers requested finance from private individuals. Amongst the reasons for this are family members living abroad (with higher incomes), loans or financial transfers from family without interest rates and conditions, and the relatively low level of financial literacy and knowledge about financial deals and the market, especially amongst micro and small-sized farms.

Figure 16: Source of finance in 2017

Source: *fi-compass* survey.

According to the interviews, the high share of respondents who reported having requested private finance in the previous year might also include the credit provided by integrators. It is estimated that integrators provide approximately one third of the total agricultural loans.²⁵

²⁵ Interviews, 2019.



The role of integrators in Hungarian agriculture

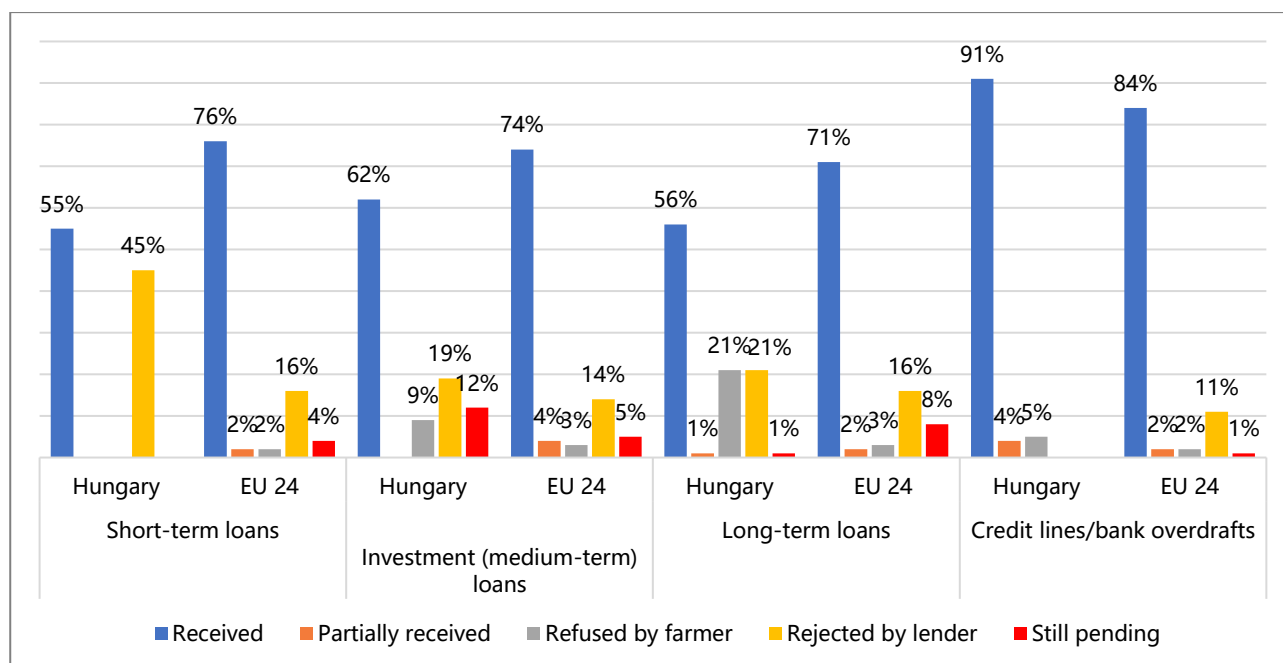
An integrator is a non-financial actor²⁶ whose activities include buying and distributing seeds and chemicals, providing advisory services and selling the commodities of financed farms. In addition, they can support micro and small-sized farms in accessing finance. The integrator receives a loan from the bank and distributes the amount amongst its contracted producers. Special working capital bank loans exist for integrators. These can reach up to 80% of the production value of the farms in the integrator's portfolio, based on contractual evidence. For the farmers, these loans are more expensive than normal loans as the farmer has to pay the interest rate and a margin for the integrator.

Farmers usually receive the loan before seeding and repay it after harvest. In many cases the debt is deducted from the revenue of the commodities sold. This system of providing loans is beneficial to the banks as it allows them to provide larger loans to reliable enterprises (i.e. the integrators), rather than having to assess and provide several individual micro-loans, and because it reduces their lending risk considerably. It is also beneficial to the micro and small-sized farms that receive finance from the integrators, as they would likely be ineligible for bank loans (e.g. due to lacking sufficient collateral).

A high percentage of short-term loan applications by Hungarian farmers are rejected by the banks.

According to the *fi-compass* survey, the rejection rate for short-term loans is 45% (Figure 17). This is significantly higher than the EU 24 average of only 16%. However, according to interviews, the situation for short-term loans in the Hungarian agriculture sector has improved significantly over the last couple of years, as the ASZK has become widely known and used by farmers (see section 2.3). Rejection rates for medium and long-term loans, at 19% and 21%, respectively, are also higher in Hungary than for the EU 24 (14% and 16%, respectively).

Figure 17: Results from application for finance in the agriculture sector in 2017



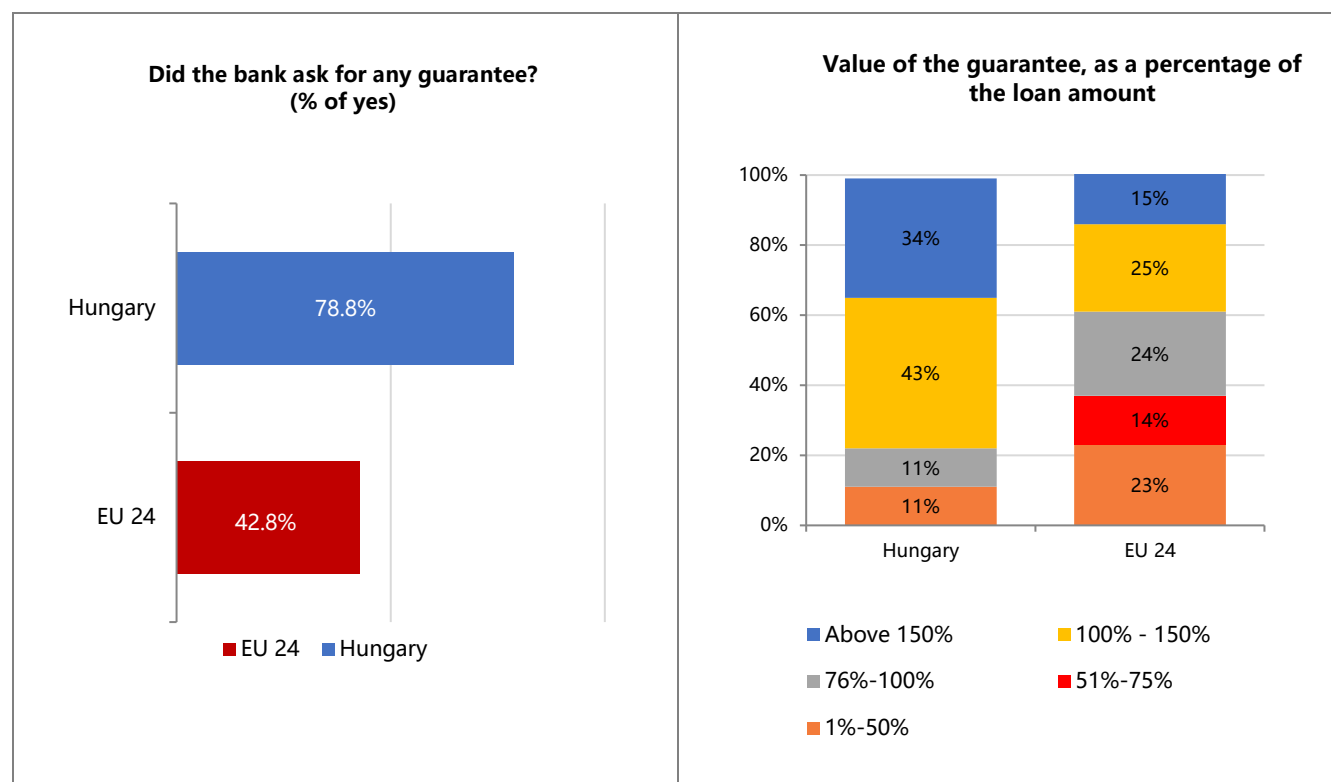
Source: *fi-compass* survey.

26 Regulated by the Annexes 35-37 of the 25/2004. (III. 3.) FVM rendelet.



There may be significant issues with the loan conditions offered by Hungarian banks, as farmers refused 9% of medium-term loan offers and 21% of long-term loan offers, according to the *fi-compass* survey (Figure 17). Furthermore, 79% of Hungarian farmers reported that banks required a guarantee for the loan, compared to only 43% for the EU 24 (Figure 18). In addition, 77% of farmers were asked to provide a guarantee equivalent to over 100%²⁷ of the loan amount, compared to only 40% for the EU 24 (Figure 18).

Figure 18: Information related to guarantees requested by agricultural producers, 2017



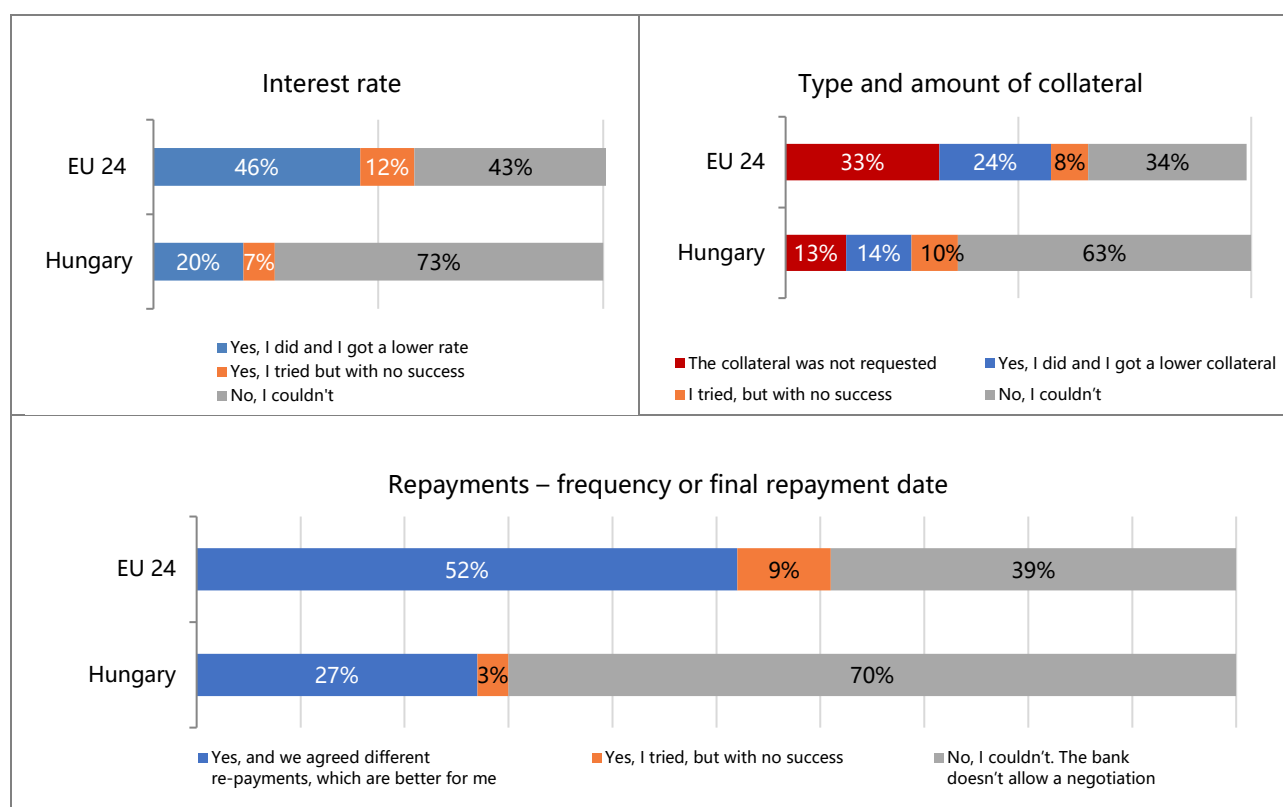
Source: *fi-compass* survey.

Ultimately, Hungarian farmers generally do not consider themselves to be in a position to influence or negotiate loan terms (i.e. interest rates, type and amount of collateral, and repayment amounts). Approximately 70% of Hungarian farmers could not negotiate loan terms, compared to between 34-43% for the EU 24 (Figure 19).

²⁷ From 100% to above 150%.



Figure 19: Negotiation of loan terms, 2017

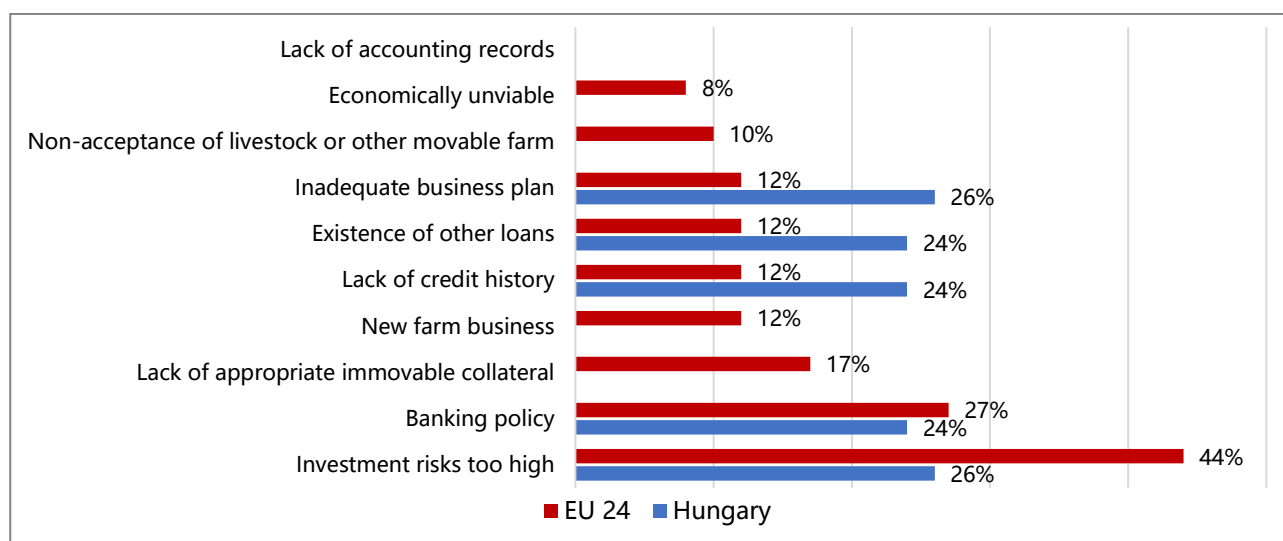


Source: *fi-compass* survey.

According to the *fi-compass* survey, there are a number of reasons why Hungarian farmers have their loan applications rejected (Figure 20). Compared to the EU 24, Hungarian farmers are twice as likely (or more) to have their application for finance rejected due to an inadequate business plan (26% of respondents), the existence of other loans (24%) or a lack of credit history (24%). Bank policy (24%) and investment risks that are considered too high by banks (26%) are also significant reasons for rejection, however they are less of a concern for Hungarian farmers than for the EU 24.



Figure 20: Reasons for applications' rejection in the agriculture sector in 2017



Source: *fi-compass survey*.

In interviews, banks confirmed that Hungarian farmers are often rejected for finance due to inadequate business plans. According to the banks, a poorly written business plan (e.g. with limited reliable information, overly optimistic market forecasts, no official documents from the potential buyers, etc.) is a common reason for rejection. It is often micro and small-sized farms to submit incomplete applications or inadequate business plans as they usually do not hire a consultant to help them in the preparation of a professional business plan.

The restrictive agriculture lending policy of banks is related to their need to their limit exposure to a specific activity or sub-sector (i.e. to a maximum percentage of the total loan portfolio). Above a certain level of farm debt, a bank requires more details and a higher amount of collateral to approve an application for finance. In interviews, banks mentioned that their policy factored in the fact that the cost of a loan assessment is unrelated to the amount of the loan application (i.e. it is a fixed cost). The same amount of time is needed for the assessment of an application, irrespective of the size of the loan. Hence, the potential profits from assessing and providing a small loan are relatively limited and so some banks apply a minimum loan application size. This type of bank policy mainly penalises micro and small-sized farms.

A lack of credit history was further confirmed in interviews as a reason for rejection, particularly for young farmers and new entrants. Following the 2007-2008 financial crisis, some Hungarian banks switched from asset-based credit to cashflow-based credit.²⁸ This significantly restricted access to finance for young farmers and new entrants, in particular, as they were unable to provide cash flow data for two or more consecutive previous business years.

According to bank interviews, there are a number of other reasons why agricultural clients may have their loan applications rejected:

- **A lack of business data and standard bookkeeping.** This reason for rejection is applicable to both young and experienced farmers who are unable to demonstrate their financial track records.
- **Low repayment capacity or requested loan amounts that are too high compared to revenue.** Occasionally, the loan amount applied for is far larger than justified, given the level of the farm revenue. While risk is reduced when RDP support is behind an application, the commitment of the applicant and its ability to manage the business might still be questioned. A lack of own financial resources is sometimes interpreted as a lack of real commitment.

²⁸ Interviews.



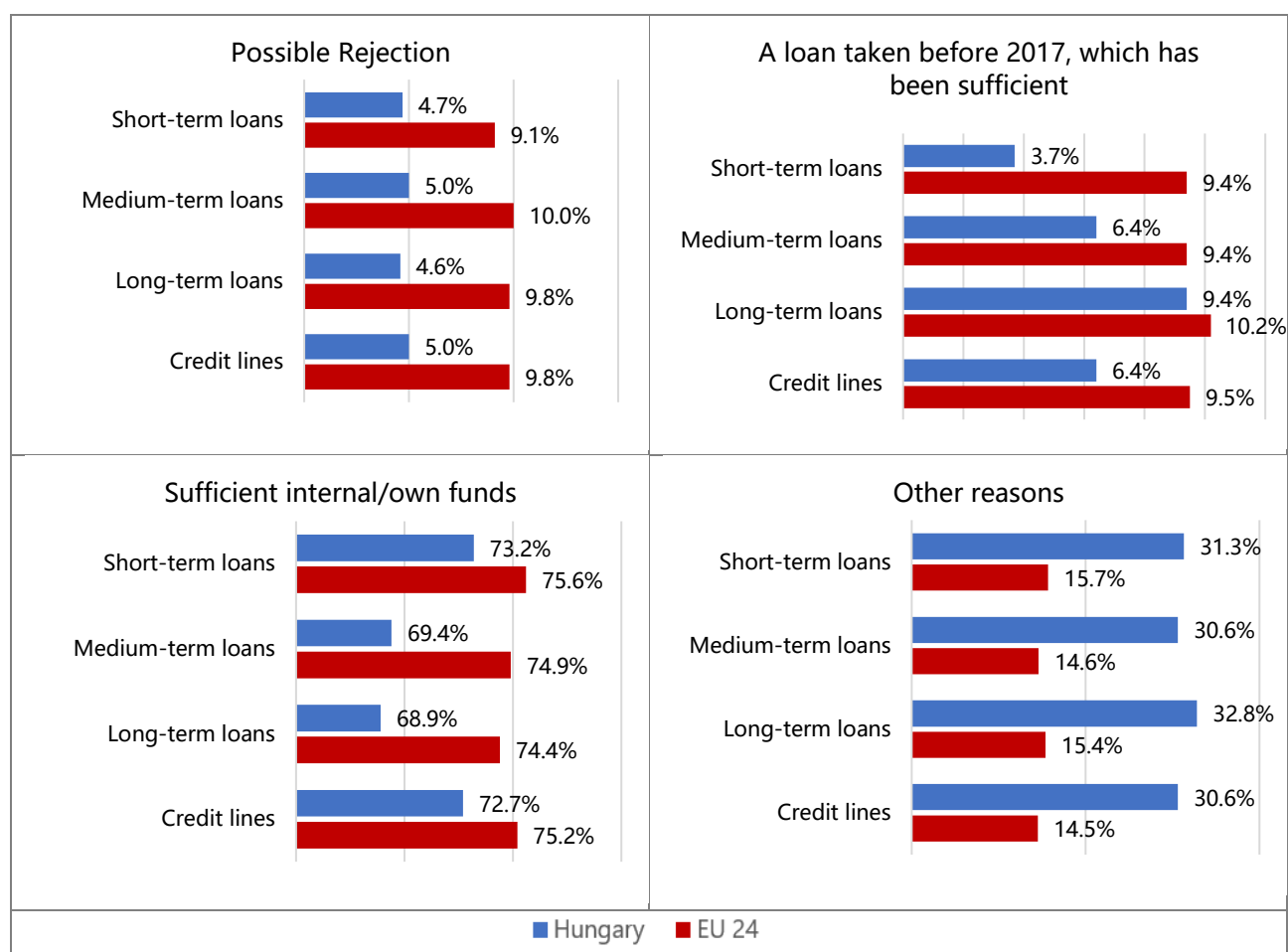
- **The need to prove the marketability of the final product.** In the case of short-term loans (pre-harvest loans), the marketability of the products needs to be proven. For example, a lack of commercial contracts from a retail chain is likely to result in rejection.

In addition, the farmer's relationship with the bank is important. Long-term relationships with financial institutions, other than just with the savings cooperatives near the production site, facilitate a good customer-client understanding and improves access to finance.

Small-sized farms, new entrants and young farmers are generally more likely to have their bank loan applications rejected, according to interviews and the *fi-compass* survey results. However, the problem is not restricted to just these groups. Some medium and large-sized farms also have problems in accessing finance. According to interviews, banks are now offering a pre-assessment of applicants (e.g. an informal assessment by the bank before the official application process starts), in order to reduce the high rejection rates for the agriculture sector.

The main reason Hungarian farmers do not apply for finance is the availability of sufficient own resources, followed by sufficient existing loans (Figure 21). A fear of being rejected, as a reason for not applying for finance, was identified by around 5% of Hungarian farmers. However, the rate could be higher than the data suggests. This is because the informal pre-assessments that are now being carried out by banks make farmers aware of their credit worthiness prior to the formal loan application process.

Figure 21: Reasons for not applying for loans in the agriculture sector in 2017



Source: *fi-compass* survey.



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 Hungary operates. It describes the main financial products offered, including any currently operating financial instrument targeting agriculture, with national and/or EAFRD resources. The section draws its information from interviews with financial institutions, as well as from national statistics.

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

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

- Loans to the Hungarian agriculture sector are provided by 17 banks, with three of them controlling 70% of the market.
- While banks offer various types of financial products, the pre-financing of CAP support is the most popular product.
- In 2018, the total outstanding loan volume was approximately EUR 2 billion, of which 51.5% were long-term investment loans, 18.8% were short-term working capital loans, 17.7% were long-term working capital loans, and 12.1% were other loans.²⁹
- More than half (52%) of Hungarian agricultural loans are subsidised, mostly through the Agricultural Széchenyi Card, Funding for Growth Scheme and loans provided by the Hungarian Development Bank.
- Agricultural producers are considered to be good clients overall, and the probability of default is considered low (at around 1.5%).
- Reliable accounting data is key for agricultural producers trying to access finance, especially for the individual producers.
- Interest rates for agriculture loans vary from a maximum of 1.5% for interest rate-subsidised investment loans, 2-4% for regular investment loans and 2.5-5% for working capital loans.

2.3.1. Description of finance environment and funding availability

2.3.1.1 Finance Providers

Loans to the Hungarian agriculture sector are provided by banks, with three of them controlling 70% of the market. A large variety of intermediaries provide a wide range of financial products to the Hungarian agriculture sector. Altogether, 17 banks with 1 375 branches provide loans to the sector (Table 3). According to interviews, the sector is dominated by three banks that hold a significant share of the market. These are K&H Bank, Takarékszövetkezet Group and OTP Bank (holding approximately 28%, 21% and 21%, respectively). All other banks operating in the sector have a market share below 10%.

The three major banks financing agriculture focus on different customer-groups:

- K&H Bank focuses on large, agricultural enterprises. Unlike other banks, K&H Bank does not provide ASZK subsidised loans.³⁰
- Takarékszövetkezet Group has a high number of small and medium-sized enterprises within its client base and it is the major provider of ASZK loans, accounting for almost three quarters of the card's total loans. Takarékszövetkezet

²⁹ Hungarian Ministry of Agriculture.

³⁰ For an illustration of the product see Section 2.3.1.2.



Group introduced a new agricultural financing branch in 2019, and it is aiming to set up 58 agricultural centres throughout the country by 2020 in order to become the major finance provider to the sector. The bank already has the highest coverage in terms of branches.

- OTP Bank is the largest bank on the national market, and it has the broadest offer of agriculture loans. They have a balanced agricultural portfolio, with one third of clients being individuals and two thirds being enterprises.³¹

In addition, the AVHGA (Rural Credit Guarantee Foundation) guarantee institution provides on-demand credit guarantees to micro, small and medium-sized enterprises that are engaged in the agriculture sector or whose activity is related to rural areas. These guarantees promote the financing of enterprises that lack sufficient collateral. AVHGA acts in the form of a foundation and as a financial provider equivalent to banks.

Rural Credit Guarantee Foundation AVHGA

AVHGA provides guarantees to micro, small and medium-sized enterprises, to agricultural enterprises or to enterprises in rural areas. The fund can count on a counter-guarantee on 85% of the portfolio.

In case of default, the fund covers up to 80% of the loss within a maximum of EUR 2.5 million per enterprise. The duration of the loan contract should be at least 91 days, but no more than 25 years. In case of factoring, these limits are one and three years.

Applicants may ask for a guarantee during the loan application process, or the banks may require it based on their assessment. Either way, banks send the guarantee application through an e-system (PartnerWeb) to AVHGA. When all the documentation is correctly provided, the assessment takes between one to eight working days. The decision can result in acceptance, partial acceptance or rejection. Due to the relatively high risk-taking policy of the fund, rejection is very unlikely.

The fund benefits also from a COSME counter guarantee of up to 50%, which is complemented by the fund's own resources to provide a guarantee of up to 80% of the loan value. The maturity is between 1-10 years. The fund's complementary guarantee is entirely borne by the fund, without governmental counter guarantees nor governmental fee support.

One of the services of the AVHGA is the guarantee promise. Enterprises may apply before submitting a loan application. In the case of a positive outcome, the guarantee promise can be used during the loan application process. Even in this case, there is no direct contact between the applicant and the AVHGA. The AVHGA has a partner agreement with all the relevant banks, which ensures the wide availability of the guarantee products.

Several banks have agriculture expertise amongst their staff, while others have a separate division for dealing with agri-food businesses. Many recruit new experts either from agriculture related research institutes or from the Ministry of Agriculture. Hence, the understanding of the specificities and needs of the agriculture sector is high amongst Hungarian banks.

31 Interviews, 2019.

**Table 3:** List of banks providing agricultural loans³²

Name of the financial institution	No. of bank branches	Types of agricultural loans
Budapest Bank	95	ASZK, NHP, Integrator loans, support factoring, MFB point, warehouse warrants loans
CIB Bank	83	NHP, support factoring, working capital loans, leasing, EXIM loans, credit line overdrafts
Duna Takarék	27	Support factoring
Erste Bank	125	Support factoring, credit line overdrafts, leasing, NHP
Gránit Bank	2	EXIM loan, MFB point
K&H Bank	210	Factoring, warehouse warrants loans, land loans, EXIM loan, NHP
MKB Bank	51	ASZK, leasing, NHP, EXIM loans, MFB point
NHB Bank	9	EXIM loans, MFB point
Oberbank	8	EXIM loans, NHP
OTP Bank	388	MFB point, credit line overdrafts, ASZK, factoring, EXIM loan, integrator loan, warehouse warrants loans, working capital loans, investment loans NHP, loans for RDP measures, land loans
Polgári Bank	22	ASZK, factoring, NHP, MFBNHPMFB working capital loans
Raiffeisen Bank	68	Factoring, NHP, leasing, EXIM loan, working capital loan, warehouse warrants loans
Sberbank	30	Factoring, EXIM loans, warehouse warrants loans, ASZK
Sopron Bank Burgenland	13	EXIM loan, NHP, factoring
Takarék Kereskedelmi Bank	51	MFB point, leasing, EXIM loans
Takarékbank	139	MFB point, ASZK, 'Gazdahitel' credit line overdrafts
Unicredit Bank	54	NHP, EXIM loan, leasing, working capital loans

Source: Based on information from the banks' websites.

32 An illustration of the different products mentioned in the table is provided in Section 2.3.1.2.



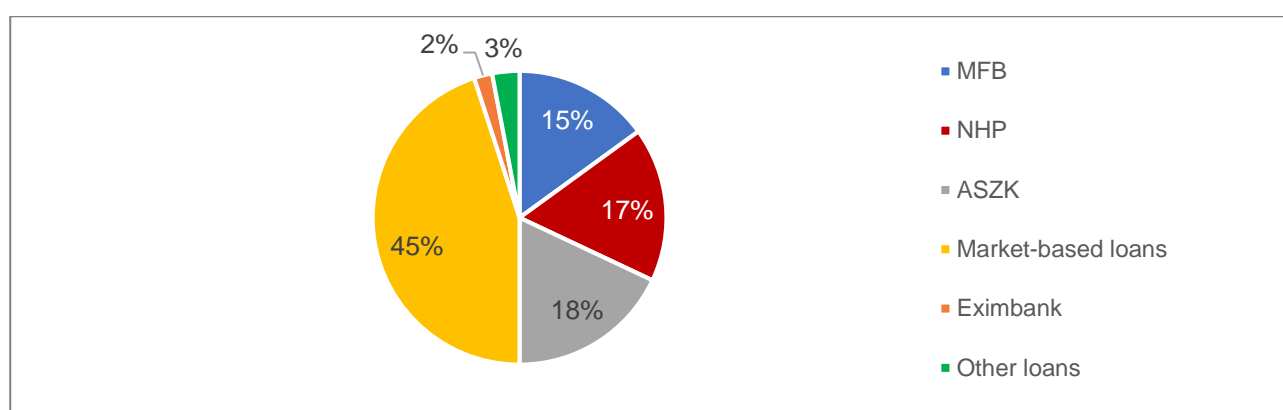
2.3.1.2 Finance Products

Only 45% of the agricultural loans are market-based, with the rest being subsidised in some way (Figure 22). The structure of the loan market has changed remarkably over the last few years, due to the new loan programmes of the Hungarian Government, as well as the activity of the Hungarian National Bank, the Hungarian Development Bank and the European Investment Bank (largely through its global loans). Furthermore, the agriculture sector has switched from foreign currency-based loans to HUF based loans. This has reduced the exposure of the sector to exchange rate volatility.

Table 4 below gives an overview of the main financial products available to farmers. These products are described in more detail further on.

In general, the possibility for the agriculture sector to use assets as a collateral is limited due to their relatively small size, the old age of their machinery and their low performance. This is particularly the case for micro and small-sized enterprises.

Figure 22: Composition of the Hungarian agricultural loans, 2018



Source: Lámfalus i– Domán – Péter, 2019.

**Table 4:** Overview of the main financial products offered to farmers

Type of Product		Purpose	Maturity	Interest Rate	Average Loan Size (EUR)
Interest Loans	Rate-Subsidised				
	ASZK	Working capital	Short and medium-term loans	1-3%	30 000-40 000
	NHP	Capital investment	Medium and long-term loans	Maximum 2.5%	50 000-70 000
	MFB	Working capital and capital investment	Short and medium-term loans	2-4%	20 000-30 000
Investment Loans		Capital investment	Mostly medium and long-term	1.5-4%	200 000-400 000
Working Capital Loans		Working capital	Short and medium-term loans	1.5-3%	100 000-200 000

Source: Elaboration based Hungarian National Banks' data, data mining and interviews.

(i) **Investment loans**

The Funding for Growth Scheme (NHP), introduced by the Hungarian National Bank, provides medium to long-term credit for micro, small and medium-sized enterprises, including to the agriculture sector. The commercial banks receive this funding at a 0% interest rate, and then lend it to borrowers at a maximum interest rate of 2.5%. In addition to the funding, the guarantee from the Hungarian National Bank covers half of the potential losses to commercial banks over the last five years. The major aim of this funding is to boost investment and thus economic development. The funding may also be used to pre-finance EU funds or to replace other less favourable loans. Thanks to this scheme and its extensions (NHP+ and NHP fix), the maturity of loans have increased. According to interviews, the agriculture sector has so far received more than one fourth of the total loans from the NHP fix scheme.³³ For the two previous schemes (NHP and NHP+), EUR 9 billion (HUF 2 800 billion) was provided to the whole economy, of which the agriculture sector received EUR 1.5 billion (HUF 480 billion), or 17%. The processing industry received EUR 1.45 billion (HUF 452 billion) of the total budget, a third of which went to agri-food companies.

The scheme aimed at providing support to those entities which encounter the most difficulties in accessing finance, such as micro or small-sized enterprises. However, the commercial banks participating in the scheme distribute loans according to their normal standards and assessment procedures, whereby the applicants still have to pass normal assessment procedures. As discussed in section 2.2.2, the lack of available business data makes succeeding in the bank assessment the major hurdle for many producers. Therefore, even though NHP has helped many actors, many agricultural producers have been left outside of the scheme.

33 MNB, 2017.



(ii) Working capital loans

Factoring is the financial product that provides pre-financing of different types of CAP support. This is the most common financing activity, and every bank provides this product due to its low risk level. Banks can provide loans equalling more than 90% of the total support level in advance, due to the very low level of risks (vis-a-vis the CAP direct payments that the farmer has to receive). According to interviews, approximately 80% of farmers in the arable sub-sector use this kind of financial tool in order to meet their financial needs during the production cycle.

The Agricultural Széchenyi Card (ASZK) was introduced to the agriculture sector in 2011 (and later extended). It is a flexible, purpose-free, working capital loan for micro, small and medium-sized enterprises with a subsidised interest rate and Governmental guarantee via the Rural Credit Guarantee Foundation (AVHGA).³⁴ The guarantee coverage has made it popular amongst the banks, while the low interest rate and easy access have made it popular amongst farmers. The introduction and extension of the card has simplified access to working capital financing for all farmers. For instance, even young farmers can apply for it, because a closed business year is not required. It is equivalent to a one to three-year loan provided by most of the commercial banks from approximately EUR 1 600 (HUF 500 000) up to EUR 320 000 (HUF 100 million).

(iii) Working capital and investment loans

MFB loans: several loan programmes (Table 5) are run by the Hungarian Development Bank (MFB). Garantiqa (Garantiqa Credit Guarantee), part of the MFB Group, is also essential in assisting farms in the process of financing, though to a lesser extent than in the agri-food sector. All the loan programmes have more or less the same subsidised interest rate of approximately 2%. The working capital loan programmes have been available since 2015. The other programmes started in 2018 and are still available, subject to budget availability. The loan programmes are presented in the table below.

Table 5: MFB loan programmes

Loan programmes	Loan size*	Total budget*	Duration
Agricultural Working Capital Loan Programme 2020	Min. EUR 3 200 (HUF 1 million), Max. EUR 160 000 (HUF 50 million) for agricultural producers	EUR 50 million (HUF 15 billion)	2-6 years
Producer Organisation Working Capital Loan Programme 2020	Min. EUR 160 000 (HUF 50 million), Max. EUR 800 000 (HUF 250 million) for producer organisations	EUR 26 million (HUF 8 billion)	2-7 years
Food Processing Working Capital Loan Programme 2020	Min. EUR 16 100 (HUF 5 million), Max. EUR 1.6 million (HUF 500 million) for food processors	EUR 20 million (HUF 6 billion)	Up to 6 years
National Machinery Financing Loan Programme	Min. EUR 480 000 (HUF 150 million), Max. EUR 9.7 million (HUF 3 billion) for agricultural machinery producers and distributors	EUR 100 million (HUF 30 billion)	Max. 15 years

³⁴ For other activities of AVHGA see box on at the beginning of section 2.3.1.



Agricultural Consumer Financing Loan Programme ³⁵	Min. EUR 3 200 (HUF 1 million), Max. EUR 320 000 (HUF 100 million) for agricultural producers for buying agricultural machinery produced within the European Economic Area and having at least a local representative in Hungary	EUR 160 million (HUF 50 billion)	Max. 7 years
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Source: MFB, 2019* average exchange rate applied was 310 HUF/EUR, and the amounts were approximated to a round number.

EXIM loans: The state-owned Hungarian Export-Import Bank Plc (Eximbank) and the Hungarian Export Credit Insurance Plc (MEHIB) also provide loans to the agriculture sector. These are mostly export related loans, but investment and working capital loans are also provided. While Eximbank is becoming an important partner of agri-food enterprises, the share of these loans to the agriculture sector is still marginal.

(iv) **Additional investment loan products**

The 'Land for Farmers' programme, described in detail in section 2.2.1, was a programme that ran between 2015 and 2017 that provided preferential loans to individual agriculture producers investing in land. As it is no longer available, it is not described in further detail in this section.

A new interest rate subsidy scheme for investment loans is being implemented by the Hungarian Government at the time of preparing this report.³⁶ Its purpose is to provide loans with subsidised interest rates for the agriculture, forestry and agri-food sectors.³⁷ The loans will be available for every type of enterprise, from micro to large-sized farms. The duration of the loans is between 3-10 years. The loan size, according to which the interest rate subsidy is available, is between EUR 10 000 and EUR 4.2 million (HUF 3 million to 1.3 billion) for agricultural producers and up to EUR 6 million (HUF 2 billion) for forestry and food processing.³⁸ The interest rate subsidy can reach a maximum of 80% of the interest rate, up to a maximum of 2% per year, and it can be requested if the market interest rate of the loan itself is a maximum of 2.5% (like the ceiling under the NHP). The first signed contracts were expected in December 2019. A loan taken from this programme can be combined with NHP Fix (some of the clients may be the same), therefore the subsidised loan size will be higher than for the Agricultural Széchenyi Card. Preferential guarantees are also available from AVHGA or Garantiqa.³⁹

The advantage of this loan programme, compared to the other Governmental loan programmes, is that it can be requested directly from the Government by the banks without the involvement of intermediaries (e.g. Hungarian Development Bank for MFB loans, or KAVOSZ Ltd. for Agricultural Széchenyi Card). However,

35 This loan is available for new entrants and can be used for investment or working capital (if for working capital loan then the maximum duration is six years).

36 The loans eligible for an interest rate subsidy cannot be used for the following purposes: investments supported by the rural development programme or other structural funds, irrigation investments, buying agriculture land, buying company shares from other owners, buying live animals, wages of a start-up, investment in the development of broadband networks, facility acquisition and development of research infrastructure. It can be combined with other programmes if the support intensity is below the EU ceilings.

37 Agriculture ministerial decree No. 42/2019 (IX. 20.).

38 Exchange rate 310 HUF/EUR applied, rounding the amounts.

39 Garantiqa Credit guarantee Co. Ltd. (Garantiqa) was founded in 1992 by the Hungarian State, Hungary's most significant commercial banks', cooperative savings associations, and some enterprise interest group associations, with the aim of operating as a catalyser in the lending process to national small and medium-sized enterprises and organisations established for the accomplishment of employer joint proprietor programmes by undertaking absolute guarantees.



banks will have to deal with the total administration of the loans, which will result in higher costs. Therefore, from a profit viewpoint, this programme may be less attractive to the banks.

The motivation behind this new loan programme is to support the positive investment trend identified for the agriculture, food and forestry sectors, and to bridge the gap until the EAFRD support for the 2021-2027 programming period is available.

There are many reasons behind the popularity of the subsidised agricultural loans. Subsidised loans are less risky for intermediaries due to the guarantee provided by the AVHGA and the counter-guarantee by the Government. From the farmers' perspective, the loans are less expensive as the interest rates are lower. Additionally, there are various programmes tailored to the different needs of agricultural entities and hence the products are adaptable to many different situations. Furthermore, access to the subsidised loans, compared to non-subsidised loans, is sometimes easier due to the lighter debtor assessment and the provision of guarantees.

However, access to different types of subsidised loans is still subject to a bank's assessment. This assessment requires business data, linked to the design of the taxation system, which is a major problem for many farmers (see section 2.2.2 for an in-depth discussion). Hence, even if comprehensive government programmes are in place that provide farmers with both subsidised interest rates and guarantees, many farmers still have restricted access to the programmes due to their lack of business data.

The current low interest rate environment means that loans with subsidised interest rates are less effective in increasing the supply of finance, as high interest rate costs are not a major concern for the sector. Amongst the various preferential loan programmes, the ASZK is said by interviewees to be the most successful in terms of outreach. ASZK is sometimes used to finance long-term investments, as preferential investment loans are harder to obtain due to the more careful assessment of the applicant that requires, for example, information on potential markets, which can be difficult to obtain. Additionally, according to the stakeholders interviewed, the 'Land for Farmers' programme required a less stringent assessment of the borrower, thereby contributing to its more successful outreach.

Interviewees mentioned that another obstacle with the preferential loans is that they require a substantial amount of paperwork and administration. Sometimes this offsets the gains from the lower interest rates offered or prevents unmotivated agricultural producers from going through the process. It should also be highlighted that none of the existing preferential loan programmes have been particularly successful in providing loans to young farmers, as implied by some interviewees.

In addition to the above-mentioned products, Hungarian banks also provide products based on financial instruments that aim to improve the access to loans. These include the Guarantee Facility under the **EU Programme for the Competitiveness of Enterprises and SMEs (COSME)** running from 2014-2020, which provides a capped portfolio guarantee for newly generated SME financing portfolios (commercial banks, promotional banks, guarantee societies, leasing companies, etc.) with a maximum guarantee rate of 50%. Agriculture and agri-food sectors can also benefit from COSME guarantees, with the exception of the production of, and trade in, tobacco and distilled alcoholic beverages and related products. In Hungary, as of the end of 2018, COSME had provided access to finance for 477 SMEs in the agriculture, forestry and fishing sector for a total of EUR 25 million (9.5 % of the total portfolio in the country)⁴⁰.

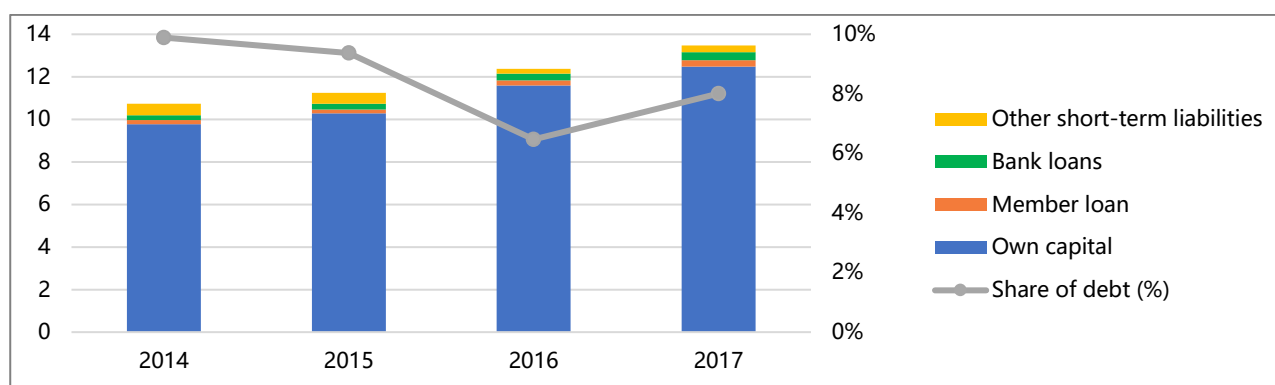
40 Source: European Investment Fund.



2.3.1.3 Description of the financing market

The dual agricultural structure influences the supply of bank loan products to the sector. Bank loans are growing in importance for individual farmers, whilst other short-term liabilities (including non-bank loans, provisions and accrued expenses and deferred income) have become less important over the previously analysed years. Nevertheless, in 2017, farmers own capital represented EUR 12.5 billion of investment financing compared to EUR 0.3 billion for bank loans. According to these figures, individual producers operate with a relatively low level of indebtedness, with a less than 10% share of debt (Figure 23).

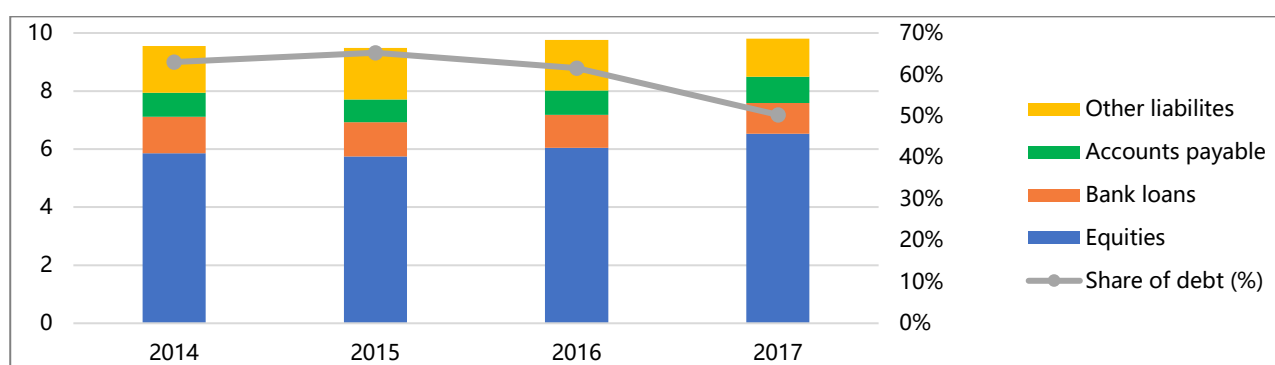
Figure 23: Development of financial sources of individual agricultural producers, 2014-2017, EUR billion



Source: Based on the data from the Hungarian Managing authority' yearly reports on the situation of agriculture.

Contrary to the individual producers, agricultural enterprises use a high share of market-based financial resources. Bank loans are important sources of financing for both short (working capital) and long-term (investment) objectives. Bank loans (a total of EUR 1.1 billion) are followed by accounts payable (EUR 0.9 billion), where suppliers finance the farming operation with different payments. A higher share of external financial sources results in higher levels of indebtedness. Although showing a decreasing trend between 2014 and 2017, the share of debt was still above 50% at the end of 2017 (Figure 24).

Figure 24: Development of financial sources of agricultural enterprises in Hungary, 2014-2017, EUR billion



Source: Based on the data from the Hungarian Managing authority' yearly reports on the situation of agriculture.

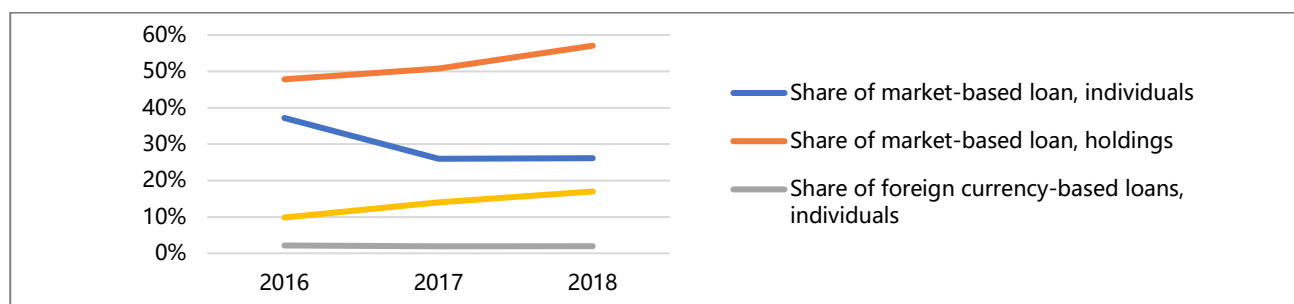
Within the category of bank loans, individual farmers use less market-based loans than agricultural enterprises. In general, individual farmers have a higher share of subsidised loans compared to agricultural enterprises, and their loans are mostly nominated in HUF. Conversely, individual producers operate with a lower share of market-based loans. They have less than one third (26.2% in 2018) of market-based loans and less than 2% of them were nominated in a currency other than HUF. Integrators play an important role in



shaping the supply of agricultural finance, as discussed in section 2.2.2. According to interviews, they provide one third of the loans and are particularly important to small-sized farms.

Agricultural enterprises use mostly market-based loans. In 2018, 57.1% of loans were market-based, of which 17% were nominated in foreign currencies (Figure 25). Due to their generally higher production volumes, some agricultural enterprises have significant export activities and are therefore more likely to use, for example, a EUR- denominated loan in case that revenues are received in EUR.

Figure 25: Share of market and foreign-currency based agricultural loans by the type of producers, 2016-2018



Source: Based on the data from the Hungarian Managing authority's statistical reports on agricultural loans.

2.3.2 Analysis of the supply of finance

The total lending to the agriculture sector has grown since 2015 and amounted to almost EUR 2 billion in 2018 (Table 2). In 2017,⁴¹ 52.8% of the outstanding loans were long-term investment loans. This was followed by long-term working capital loans (20.3%), other loans (15.7%), and credit lines overdraft (11.3%) (Figure 26).

Table 2: Development of total outstanding loan volume and breakdown by products, 2015-2018, EUR million

	2015*	2016	2017	2018
Investment loans		939	1 048	957
of which investment loans for individuals	175	551	674	621
Working capital loans		399	470	340
Bank overdraft		146	188	203
Other short-term loans		131	197	218
Other loans		191	169	235
Total outstanding loan volume	1 547	1 805	1 973	1 953
of which total outstanding loans for individuals	367	813	986	969

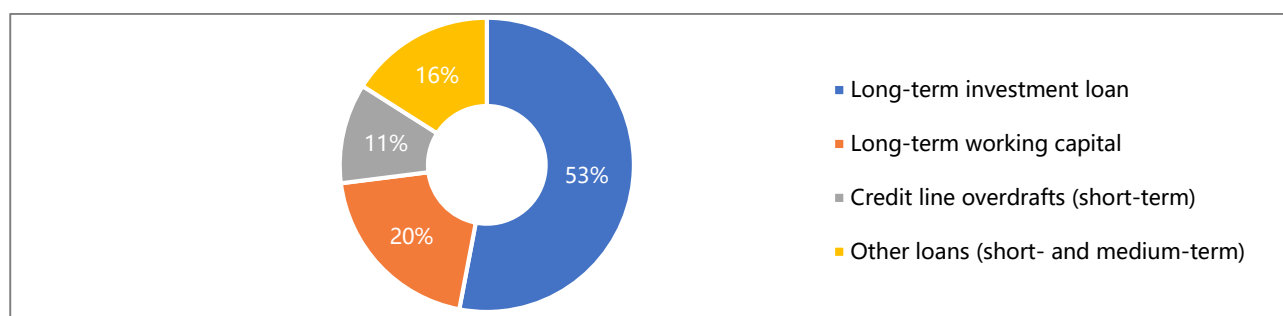
Note: No breakdown between products is provided for the agricultural enterprises for 2015.

Source: Ministry of Agriculture Hungary.

41 The year the *fi-compass* survey was carried out, whereby the comparison is relevant.



Figure 26: Breakdown of loan volume by financial products and maturity, 2017



Source: Based on the data from the Hungarian Managing authority's statistical reports on agricultural loans.

According to 2016 data from the national bank, the increase in the total outstanding loan volume was driven by the uptake of investment loans by individual farmers. As previously discussed in detail in section 2.2.2, this was most likely triggered by the 'Land for Farmers' programme and the availability of EAFRD support. At the same time, the uptake of investment loans by agricultural enterprises decreased from EUR 388 million in 2016 to EUR 336 million in 2018. The uptake of bank overdrafts increased by 50% during the same time, from EUR 81 million to EUR 120 million, and uptake of other short-term loans also increased by almost 50%, from EUR 116 million to EUR 181 million. The volume of short-term loans has also increased for individual producers, but less so for agricultural enterprises.

The leasing of agriculture machinery by farm individuals is mostly financed by the leasing companies and not directly by the banks (although some banks have their own leasing companies). In 2017, the total value of leasing for both individuals and enterprises was EUR 46.86 million (HUF 144.9 billion).⁴² Leasing was strengthened by the NHP programme, where it became available from 2014, as a part of the investment loans.

Between 2016 and 2018, the volume of new loans supplied annually to the agriculture sector contracted by more than 25% (Table 3). The annual volume of new investment loans decreased across all sectors and the largest decrease came from the arable crop sub-sector. In contrast, the annual volume of short-term loans and bank overdrafts increased over the same period.

⁴² HG, 2019.

**Table 3:** New loan volumes, by sub-sector, 2016-2018, EUR million.

		Crops	Livestock	of which poultry	of which pig	of which cow	Horticulture	Other	Total
2016	Investment loans	355.4	60.1	10.2	16.3	20.4	24.7	34.0	474.2
	Long-term working capital	76.2	52.1	16.7	8.3	23.4	5.8	18.8	152.9
	Bank overdraft	57.0	22.0	4.2	6.0	9.8	5.8	8.1	93.0
	Other short-term loans	67.4	62.2	18.7	14.0	27.7	2.2	36.1	167.9
	Other loans	65.9	21.0	4.4	4.1	8.1	6.7	23.2	116.8
	Total	621.9	217.4	54.2	48.6	89.4	45.2	120.3	1 004.8
2017	Investment loans	189.2	58.9	19.4	12.8	14.3	22.0	33.5	303.7
	Long-term working capital	204.9	55.7	10.3	14.6	28.6	9.8	11.9	282.2
	Bank overdraft	56.5	26.5	4.1	8.5	10.5	4.9	9.5	97.4
	Other short-term loans	78.3	81.8	23.6	16.0	38.3	16.9	39.8	216.8
	Other loans	44.9	17.3	2.4	6.3	5.8	7.0	8.0	77.2
	Total	573.7	240.2	59.8	58.1	97.4	60.6	102.8	977.3
2018	Investment loans	76.8	46.6	15.2	13.3	15.3	8.6	20.1	152.1
	Long-term working capital	47.9	58.6	17.7	8.7	28.6	4.9	23.4	134.9
	Bank overdraft	50.5	37.2	11.2	11.4	12.7	5.8	12.6	106.2
	Other short-term loans	86.4	71.7	23.8	15.0	30.8	2.9	43.3	204.3
	Other loans	66.2	31.7	6.9	14.3	6.5	12.6	17.3	127.8
	Total	328.0	245.9	74.8	62.7	93.8	34.8	116.7	725.4

Source: Ministry of Agriculture of Hungary, 2019.

Access to loans for individual producers is highly linked to the availability of CAP support. This makes crop producers popular clients with banks. Due to the relatively high share of direct payments available to the



arable crop sub-sector, arable crop producers have a higher propensity to apply for bank loans.⁴³ Direct payments can easily be calculated and evaluated by banks, which facilitates arable crop producers' access to finance. Sub-sectors with lower levels of CAP support face more difficulties obtaining loans. The livestock sub-sector is one example. According to interviews, the sector is considered riskier by banks because the costs of production are volatile, and the risks of diseases are relatively high. The risk level of the horticulture sub-sector is considered to be between that of the crop and the livestock sub-sectors. It receives less support than the arable crops sub-sector but is less risky than the livestock sub-sector. Interviewees also pointed out that the possibility of obtaining loans differs significantly within sub-sectors. Producers capable of adding value to their product (for example by processing it or by providing complementary services) usually have easier access to loans.

A major constraint in the supply of finance is the information asymmetry that prevents banks from assessing the economic viability of many agricultural producers. The lack of available business data is linked to the incentives provided by the taxation system, which exempt farmers from paying taxes from their agricultural activities up to a certain threshold, if they include their agricultural activities in their personal tax declaration (see section 2.2.2 more information). According to the banks interviewed, the current low interest rate environment, together with the high level of liquidity in the banking sector, has resulted in almost no constraints in access to investment loans for enterprises that operate transparently.

Interviewees reported that the current system of public guarantees helps agriculture producers to deal with collateral issues. About one third of the total outstanding loans to the agriculture sector (amounting to approximately EUR 2 billion in 2017) are guaranteed by the guarantee institutions. However, the main problem for farmers is whether they will successfully pass the banks' assessment, which is based on several other elements, as highlighted in this report. A negative assessment also prevents farmers from accessing the public guarantee support available to them for a loan, creating a potentially vicious cycle.

Overall, the available national financial schemes (both loans and guarantees) support access to credit through the provision of liquidity and risk protection to banks. However, the difficulties in accessing bank finance illustrated in this report indicates that they may not be fully effective in addressing the existing market constraints for agricultural producers.

43 Interviews with banks.



2.4 Financing gap in the agriculture sector

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

Key elements of the financing gap in the Hungarian agriculture sector

- The financing gap is estimated to be between EUR 248 million and EUR 992 million.
- The largest gap is identified for long-term financing.
- The group with the highest need for financing is small-sized farms, including micro-sized farms.
- The key constraints to access to finance are a lack of business data, a lack of an adequate business plan and insufficient levels of collateral. The existence of these factors signifies a high repayment risk, and so banks are reluctant to lend. The agricultural land ownership aspects that determine the functioning of the land market also affect access to finance.
- Young farmers and new entrants face serious difficulties in accessing finance, due to their lack of business and credit history. Often, they are unable to provide collateral and have no access to public guarantees. This difficulty is further worsened by banks' risk aversion.
- CAP support plays a key role in the demand for and access to finance. It influences the amount that can be pre-financed through short-term financing and the overall willingness of banks to lend to farmers. To a large extent, it also drives the demand for long-term finance.

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

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

All the calculations are based on the results of the *fi-compass* survey for Hungarian farms and statistics from Eurostat (see annex A.3 for more information).

The financing gap arises from unmet financing demand from economically viable farms.⁴⁴ The unmet demand for finance includes:

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

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

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

⁴⁴ 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.



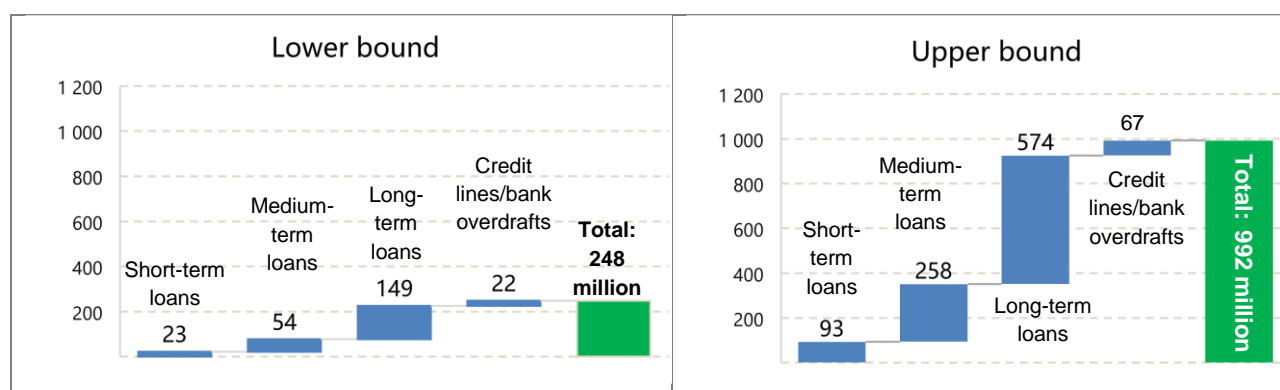
The financing gap for the Hungarian primary agriculture sector is estimated to be between EUR 247.9 million and EUR 992.2 million (Table 4). Unmet financing needs, however, are concentrated in specific segments of the sector. The financing gap mainly concerns small-sized farms and it is largest for long-term loans. Applications for long-term loans by small-sized farms are rejected the most often by banks.

Table 4: Financing Gap by farms size and product, 2017, EUR million

		Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Upper bound	Small-sized farms	737.9	63.9	195.1	436.5	42.4
	Medium-sized farms	135.9	14.0	32.0	81.8	8.1
	Large-sized farms	118.4	15.6	30.8	55.7	16.3
	Total	992.2	93.4	257.9	574.1	66.8
Lower bound	Small-sized farms	183.8	15.5	41.0	113.2	14.0
	Medium-sized farms	34.0	3.4	6.7	21.2	2.7
	Large-sized farms	30.1	3.8	6.5	14.4	5.4
	Total	247.9	22.7	54.3	148.8	22.1

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

Figure 27: Financing gap by product in the agriculture sector, 2017, EUR million



Source: Calculation based on *fi-compass* survey.

The main driver of the gap is the lack of reliable business data. The tax system in Hungary incentivises small-scale farming by allowing these producers to declare income from their agricultural activities as part of their personal tax declaration. Consequently, many farms do not hold a separate balance sheet or profit and loss sheet from their agriculture activity. This means that financial institutions face difficulties carrying out assessments of the economic viability of these farms and this leads to many loan applications being rejected.

As previously discussed, **other drivers of the gap include the lack of an adequate business plan and a lack of credit and business history.** According to bank interviews, poor financial plans are a common reason for rejection. This was further confirmed by the results from the *fi-compass* survey. Small-sized farms face the greatest difficulties in providing adequate business plans as they cannot hire consultants to help them with the preparation. This issue also reflects the low level of financial literacy in the sector. A lack of credit history mostly affects young farmers and new entrants, and a lack of a financially recorded business year is also a problem for these farmers. Interviews with banks, as well as the *fi-compass* survey results, confirm that these two issues are major obstacles for farmers for obtaining finance in Hungary.

Another driver of the gap includes the limited down payment capacity of farmers. This reflects the low profitability of sector and the requests for high loan amounts compared to revenue. It also reflects the low level of financial awareness among many small-sized farms.



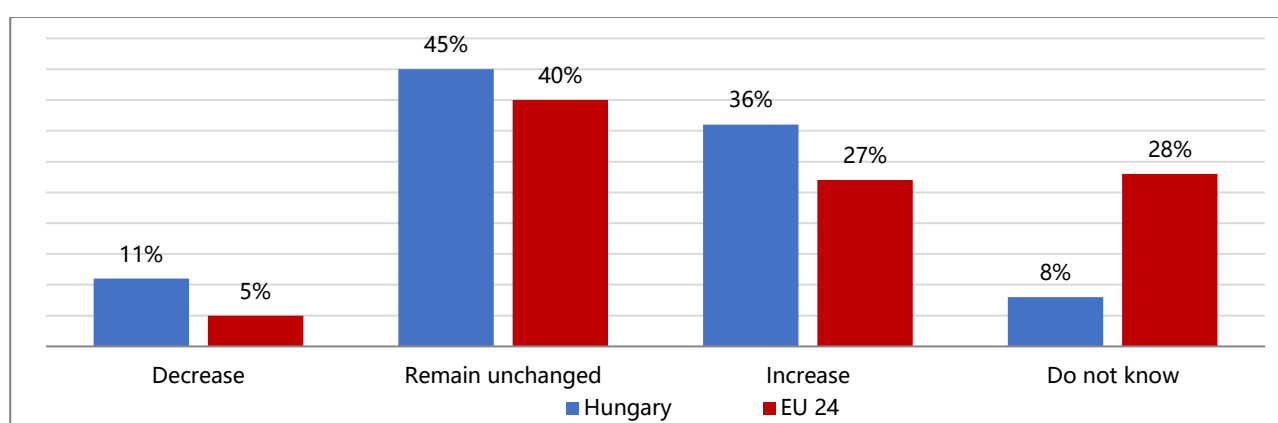
Overall, banks' perceive lending to the agriculture sector as risky, which leads them to request unusually high levels of collateral. This further constrains farmers access finance. An additional complication for Hungarian farmers is that some banks do not accept land as collateral or only accept it partially, due to the strict and bureaucratic land market. Additionally, many farmers do not have access to the established and generous system of public guarantees (see section 2.3.1 for details), as they do not pass the bank assessments that are a pre-requisite for both subsidised and non-subsidised loans.

These constraints particularly affect smaller farms, young farmers and new entrants. Approximately 48% of the overall gap might be attributed to young farmers, and it mainly relates to long-term financing. In fact, approximately 55% of rejected and viable loan applications came from applicants under 40 years old. Similarly, up to 46% of the discouraged applications came from young farmers.⁴⁵ Using this information to provide a different breakdown of farms with constrained access to finance results in a financing gap for young farmers of up to EUR 474.2 million. The modified ASZK, which does not require data from a closed business year, has helped to improve the situation for these farmers. However, this scheme has only addressed short and medium-term financial needs, without solving the main problem of financing the initial investments for setting-up the business. Additionally, even if young farmers and new entrants can get a guarantee from one of the specialised institutions, they may still fail the banks' assessment procedure.

The financial needs of the agriculture sector are expected to continue growing (Figure 28), which may further increase the financing gap for smaller farms, and in particular those requiring longer-term investment loans. Based on the interviews carried out for this study, the major reasons farmers are likely to seek additional financing in the future are:

- A lack of continuity in farming (i.e. fewer farms are passed from the parents to the children), which combined with the ageing farm population, suggests that there is a need for facilitating the access to credit for the potential buyers of the farms, especially if they are young farmers or new entrants.
- The demand for high quality foods is increasing, the need to adapt to stringent standards, require additional investments.
- New challenges and opportunities, like innovation and digitalisation.
- The need to reduce the currently increasing production costs through additional investments.
- The continuous consolidation process of the agriculture sector, which requires investments in additional land, machinery and buildings.

Figure 28: Farmers' expectations on future financing needs, 2017



Source: *fi-compass survey*.

⁴⁵ *fi-compass survey*.



2.5 Conclusions

The analysis reveals a steep increase in investments amongst individual agricultural producers between 2015 and 2019, triggered by the inflow of CAP / EAFRD payments and other public support.

The Hungarian agriculture sector is characterised by a polarised farm structure, with a high share of small production units (< 5 ha) run by individual farmers, and a small share (<3%) of very large holdings that are usually operated as agricultural enterprises. The investment trends vary significantly between these two groups. Whilst the agricultural enterprises have a relatively stable, although recently declining, investment trend, the individual farmers have an investment trend that is highly correlated with the availability of different support programmes, including the RDP.

Half of the loans provided to the agriculture sector are subsidised loans. Individuals have the highest uptake of subsidised loans. This support is usually provided for short and, to some extent, medium-term loans. Integrators also play an essential role in providing finance, by taking up larger loans with banks and then dividing the loan between many micro and small-sized farms farmers who would otherwise have not been able to access loans on their own.

This study shows that there is a financing gap for the Hungarian agriculture sector, estimated to be between EUR 248 and EUR 992 million. Overall, the gap is highest for small-sized farms and long-term loans. The rejection rate for agricultural loan applications to Hungarian banks is very high compared to the EU 24 average. Additionally, the share of loan offers that are refused by applicants due to unfavourable loan conditions is also high.

The main constraint faced by farmers in accessing finance is a lack of business data. This is largely due to the tax system in Hungary, which allows small-scale farmers to declare income from their agricultural activities as part of their personal tax declaration and which means they do not have to hold a separate balance sheet for their farming operation. Other constraints in accessing finance include a lack of sufficient collateral (unusually high levels of collateral are required by farmers, as banks' have a high risk perception of the sector), a lack of credit history, farmer's lack of an adequate business plan, and the minimum thresholds for loan amounts that some banks apply due to profitability issues. These constraints mostly affect small-sized farms (i.e. a lack of collateral and an adequate business plan) and young farmers and new entrants (i.e. a lack of credit history and business history, and insufficient levels of collateral). Approximately 48% of the overall gap can be attributed to young farmers, and it relates mainly to long-term financing. None of the existing preferential loan programmes have been successful in providing loans to young farmers.

The constraints point towards additional technical support for farmers. The various reasons for rejecting farmers' applications implies that there is the significant potential for increasing the economic analysis skills and financial awareness of farmers. Financial education training could generate benefits for the sector through, for example, modules on business development services, the preparation of business plans, basic accounting knowledge on existing subsidised loans, a selection of the most appropriate financial products according to farm needs, etc. Local advisors that are organised by the Hungarian Chamber of Agriculture could be important in this process. Bank employees could also receive training on how to assess a farms' economic viability when there is no or limited business data available.

The identified gap suggests that further actions related to financial instruments, including under the EAFRD, could be considered. However, given the diversified offering of support measures already available, any new action should start from a detailed analysis of the available instruments (which is not the scope of this report) to ensure synergies.

Based on the analysis from this study, the following key areas of intervention could be addressed:

- The lack of collateral, particularly for small-sized enterprises and new entrants, which is not fully addressed by the currently available guarantee instruments.
- The need to cover the financial needs of individual farmers operating on the market that are not yet ready to become fully commercialised. This could be done through a financing facility that provides for micro-



finance and bridges the gap to the level at which other conventional state subsidised loans can play a role and, subsequently, market loans become accessible (quasi mentoring into bankability).

- The lack of or insufficient business data provided in loan applications, which seems to be a key element given that it increases banks' risk perception of the sector, with negative implications for the lending conditions offered (including collateral requests). Improving financial literacy among farmers might help them to better present their business ideas and be more successful in their contacts with banks.
- The reluctance of banks to finance small-scale businesses might be addressed through a combination of grants, interest rate subsidy, or technical support (e.g. through the EAFRD) to offset the higher transaction costs.
- In addition, capacity building for bank staff might help to develop adapted (alternative) methods for assessing the economic viability of individual farms in the absence of fully-fledged accounts normally required for standard credit assessment procedures for applications.
- A focus on specific needs of young farmers is necessary, either within currently operating or to be established future schemes or instruments, since they account for nearly half (48%) of the financing gap in the sector.



3. PART II: AGRI-FOOD SECTOR

3.1. Market analysis

Key elements on the Hungarian agri-food sector

- The Hungarian agri-food sector is dominated by micro and small-sized enterprises (92%).
- The agri-food industry is labour-intensive, due to low labour costs.
- In terms of production value, the five main agri-food sub-sectors are: milk processing and dairy products (9.6%), meat processing and preserving (9.4%), poultry meat processing and preserving (9.3%), other fruit and vegetable processing and preserving (7.2%), and beverages and mineral water production (7.1%).
- Over the last five years, turnover and sales have increased significantly, driven mainly by exports. However, between 2014 and 2017 the number of enterprises decreased by almost 10%.
- Exports are mostly destined to Eastern EU countries (EU 13). In general, export-oriented agri-food companies perform better than those focused on the local market.
- The major problem for the sector is a lack of financial resources for technological development and innovation, due to the sector's low profitability.

The agri-food sector plays a crucial role in the Hungarian economy. While only representing 1.8% of GDP, 2.2% of GVA, 3.0% of total investments and 3.3% of total employment in 2017,⁴⁶ it plays a crucial role in increasing the overall value added of the production chain. The total turnover of the agri-food sector was EUR 11.8 billion in 2017.⁴⁷ Between 2013 and 2017, the value of sales increased by 11.2%. This was largely driven by exports, with sales abroad increasing by 14%, compared to an increase of only 8.6% for the domestic market over the same period.⁴⁸

The agri-food sector in Hungary is dominated by micro and small-sized enterprises. In 2017, there were 4 829 registered agri-food enterprises,⁴⁹ of which 92% were micro and small-sized.^{50,51}

The processing of animal products dominates the agri-food industry. In 2017, the major sub-sectors of the Hungarian agri-food industry, by share of total production value, were: milk processing and dairy products (9.6%), meat processing and preserving (9.4%), poultry meat processing and preserving (9.3%), other

46 KSH, 2019b, A mezőgazdaság szerepe a nemzetgazdaságban, 2018, The role of agriculture in the Hungarian economy. Hungarian Central Statistical Office, Budapest, Hungary.

47 Illés Keményiné Horváth, 2019.

48 MA, 2019, Agricultural statistics: <https://www.kormany.hu/hu/foldmuvelesugyi-miniszterium/agrargazdasagert-felelos-allamtitkarsag/hirek/statisztika>

49 Illés Keményiné Horváth, 2019, Az élelmiszer-termelés gazdálkodó szervezeteinek a pénzügyi helyzete, 2017, Agricultural Research Institute, Budapest, Hungary, 2017, The financial situation of agriculture and the food industry, .

50 Calculation based on Illés Keményiné Horváth, 2019.

51 Some of the large-sized enterprises are called 'forced', meaning that they surpass the work force limit required for SMEs, but are far below the turnover or balance sheet limits. Hence, at the EU level, they can be considered as medium or even small-sized enterprises based on their balance sheet, but not on their number of employees. This specificity excludes them from (EU) size-limited support programmes.



processing and preserving of fruit and vegetables (7.2%), beverages and mineral water production (7.1%), vegetable oil production (6.4%), feed production (6.0%) and pet food production (6.0%).⁵²

Large companies account for most exports and exports are mainly made to other Eastern EU member states (EU 13), particularly fruit and vegetable products.⁵³ Hungary's accession to the EU in 2004 was an important event that shaped the development of its agri-food industry. The access to the common European market resulted in accelerated growth of exports and imports, despite increased competition with other EU producers. The sub-sector with the highest level of non-EU exports is the animal products sector (e.g. live animals and meat products),⁵⁴ which accounted for 28.5% of total non-EU agri-food exports in 2017. Hungarian consumers generally have a lower purchasing power compared to export markets, which makes exporting attractive to many Hungarian enterprises.⁵⁵ Exports are dominated by larger companies who are more efficient and have better financial performance. The most export oriented sub-sectors are pet food production (77.9% of the production was exported), other food products production (76.6%), dietary food production (74.4%) and other processing and preserving of fruits and vegetables (66.9%).⁵⁶

The agri-food sector remains vulnerable to the domestic retail sector. Access to domestic market outlets is still considered a challenge by agri-food enterprises (Figure 31). The most important development in the agri-food sector over the past three decades has been the privatisation of enterprises. The new, often foreign owners made significant investments in production systems. However, with this development, the mutually beneficial cooperation with agricultural producers and other processors was mostly lost. As a result, the agri-food sector became vulnerable to the retail sector.⁵⁷ EU accession brought an influx of international retail players from Austria, France and the United Kingdom, with Spar, Auchan and Tesco leading the concentration process of the retail sector. The more concentrated retail sector has more bargaining power when negotiating conditions with agri-food producers, such as lower prices, higher quantities demanded, and longer payment terms.⁵⁸ The retail sector has also had success with own branded products.⁵⁹ This development has put particular pressure on the small and micro-sized enterprises that have limited means of cutting costs and increasing efficiency.

The agri-food sector is characterised by low labour productivity, due to relatively low labour costs, and a lack of financial resources for technological development and innovation.⁶⁰ The lack of resources to invest in R&D is driven by the relatively low profitability of the sector, and is undoubtedly the main problem faced by enterprises.⁶¹

52 MA, 2019, Agricultural statistics: <https://www.kormany.hu/hu/foldmuvelesugyi-miniszterium/agrargazdasagert-felelos-allamtitkarsag/hirek/statisztika>.

53 For definition refer to Glossary and definition section.

54 WITS database, 2019.

55 Kürthy et al., Agricultural Research Institute, Budapest, Hungary, 2016, A magyarországi élelmiszeripar helyzete és jövőképe, The current situation and the future of the Hungarian food industry.

56 MA 2019, Agricultural statistics. Available at: <https://www.kormany.hu/hu/foldmuvelesugyi-miniszterium/agrargazdasagert-felelos-allamtitkarsag/hirek/statisztika>

57 Kapronczai, 2009, Tulajdonosi és szervezeti változások a hazai élelmiszeriparban /Ownership and Organisational Changes in Hungarian Food Industry/. Agricultural Research Institute, Budapest, Hungary

58 Kürthy et al., 2016, A magyarországi élelmiszeripar helyzete és jövőképe /The current situation and the future of the Hungarian food industry/. Agricultural Research Institute, Budapest, Hungary.

59 Kürthy et al., 2016, A magyarországi élelmiszeripar helyzete és jövőképe /The current situation and the future of the Hungarian food industry/. Agricultural Research Institute, Budapest, Hungary.

60 Panyor, 2016, A magyar élelmiszergazdaság jellemzői és kihívásai a XXI. században, Jelenkori Társadalmi és Gazdasági Folyamatok, 12(3), pp. 107-112.

61 Interviews, 2019.



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

This section describes the drivers of demand for finance in the agri-food sector and analyses the met and unmet demand. It seeks to identify the main reasons for agri-food enterprises to request financing and the agri-food sub-sectors showing the largest need for finance. The section also provides an assessment of the type of agri-food enterprises which face more constraints in accessing credit. The examination of the demand for agri-food finance is based on the findings from the Agri-food survey results of 46 Hungarian firms, as well as interviews with key stakeholders in the agri-food sector and on the Structural Business Statistics.

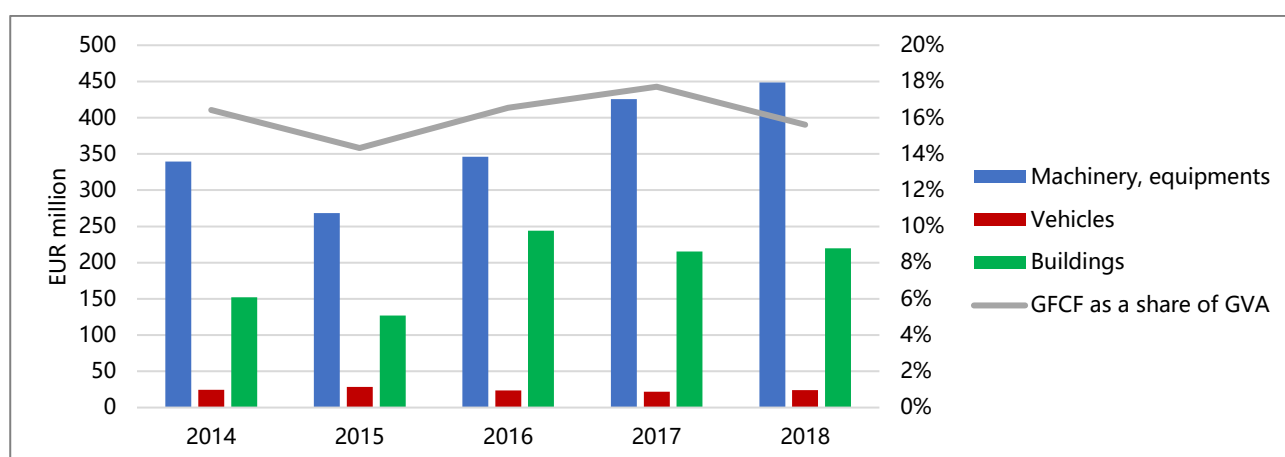
Key elements on finance demand from the Hungarian agri-food sector

- The most significant problems of the Hungarian agri-food sector are the lack of qualified labour and high production costs (reduced economic margins).
- Investments in tangible assets show an increasing trend, and approximately two thirds of investments are in machinery.
- The investments undertaken are mostly concentrated in larger companies. The main driver of the demand for finance are investments to increase production capacity (mostly in machinery and buildings).
- Micro and small-sized enterprises mainly request short-term financial products to finance their running costs. Investments by these enterprises are limited.
- The unmet demand for Hungary has been estimated at EUR 3.4 million.
- Rejections of loan applications are largely due to low economic performance, particularly for the micro and small-sized enterprises. Inadequate business plans (with an insufficient level of detail on market access) and insufficient levels of collateral are other reasons for rejection. A lack of credit and business history is a problem for start-ups that wish to obtain financing.
- In order to modernise enterprises and to increase the efficiency of production, the sector requires significantly more investment in tangible assets (modern machinery, efficient production chains, etc.). In this regard, the demand for finance of the sector is expected to increase over the next few years.

3.2.1. Drivers of total demand for finance

The level of investment in fixed assets in the agri-food sector in Hungary is relatively low. Gross Fixed Capital Formation (GFCF) as a share of GVA fluctuated between 14-18% between 2014 and 2018 (Figure 29). This is relatively low, given that the EU 28 average for the same period was almost double (between 22-35%).⁶² This potentially points to limited business confidence among Hungarian agri-food enterprises.

⁶² Eurostat, 2019.

**Figure 29:** Development of Gross Fixed Capital Formation, 2014-2018

Source: Elaboration based on HG (2019). Source for the 2018 shares approximation: KSH (2019b): *A mezőgazdaság szerepe a nemzetgazdaságban, 2018. The role of agriculture in the Hungarian economy*. Hungarian Central Statistical Office, Budapest, Hungary.

While investments in tangible assets have increased over the last few years, they remain concentrated amongst large agri-food companies. In 2018, the food industry accounted for approximately 2.6% of the total gross investments in tangible assets. These investments increased from EUR 521 million in 2014 to EUR 702 million in 2018, more or less following the investment trends of the overall economy over the same period (Table 5).⁶³ The only significant deviation from the trend occurred in 2015, when investments dropped significantly to EUR 428 million (see discussion related to the availability of national and EU support, covered in a further section). Investments then accelerated again over the 2016-2018 period. The Top 10 companies with the largest levels of investment accounted for 20-25% of the total investments in the sector.⁶⁴ Most of these companies are foreign owned, with access to non-domestic financial sources. This means their loans may not show up in national statistics on the total outstanding loan volume to the sector. These companies invest every year, independently of the available national support.

Table 5: Gross investments undertaken in Hungary between 2014-2018 in tangible assets, EUR million

	2014	2015	2016	2017	2018
Total economy	17 923	19 577	17 221	22 244	26 641
Food industry	521	428	621	667	702
Share of food industry	2.9%	2.2%	3.6%	3.0%	2.6%

Source: Elaborated based on AKI data, 2020.

Large companies are the driving force of investments in the agri-food sector. This is because they have sufficient levels of own financial sources and/or access to bank loans. Small and micro-sized companies, on the other hand, often have poorer economic performance and lack the assets necessary to meet the collateral requirements of banks (Table 6). As a consequence, in order to accurately understand the dynamics of the agri-food sector, including what drives investment and financing needs, the sector must be broken down into three segments: large, medium and small-sized (including micro) enterprises.

⁶³ Calculation based on HG, 2019.

⁶⁴ AKI NAIK, 2018, These companies include Hungrana, Hell Energy, Unilever, Bunge, Nestlé, BAT Pécsi Dohánygyár (tobacco company), Mars Hungary, Mogyi, Master Good, Magyar Cukor (Hungarian Sugar) and Haribo Hungary.

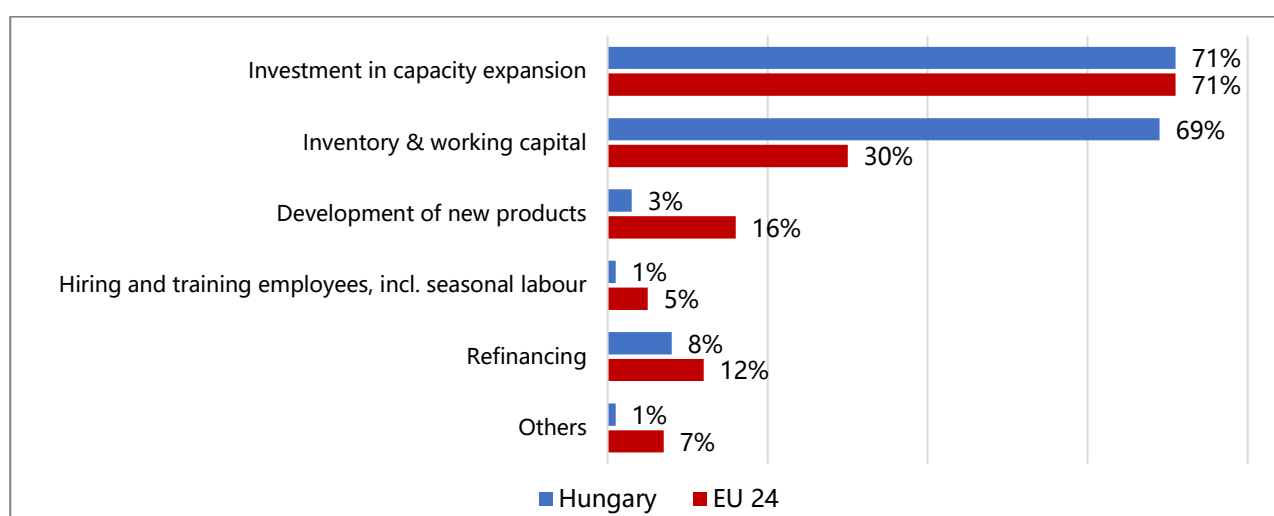
**Table 6:** Characteristic of the food processors, 2017, EUR million and %

Company size	No. of companies	Turnover	Share of turnover	EBITDA ⁶⁵	Share of EBITDA
Micro	3 605	393	3%	3	1%
Small	840	1 437	12%	56	12%
Medium	279	3 134	27%	129	28%
Large	60	6 771	58%	272	59%
Other*	45	19	0%	-3	-1%
Total	4 829	11 754	100%	457	100%

Source: Illés – Keményiné Horváth, 2019 * Note: 'Other' relates to companies that are partly publicly owned (either national or local ownership amounting to 25%).

Large, foreign-owned firms have access to internal financial sources from the parent company or the bank of parent company.⁶⁶ These firms use advanced technology and their financial needs are driven by cost saving investments or expansions in production. Most of their output is exported. Regarding **small-sized enterprises**, their main financial needs relate to their daily activities (working capital). Because small-sized companies are considered risky by banks, their investment levels is generally quite low. **Medium-sized companies** are somewhere in between the other two segments. However, the current low interest rate environment may encourage them to invest more in new machinery in order to increase their competitiveness.

The following sub-sectors have the highest levels of investments: poultry meat processing and preserving (13.9% of total investments), pet food production (10.8%), beverages and mineral water production (9.0%) and other processing and preserving of fruits and vegetables (6.4%) in 2017.⁶⁷

Figure 30: Purpose of bank loans in the agri-food sector in 2018

Source: Agri-food survey.

According to the Agri-food survey, the main purpose of the loans is to invest in capacity expansion, including equipment, machines, buildings and vehicles (Figure 30). This purpose is equally as important in Hungary as in the EU 24 (71% of Agri-food survey respondents). Inventory and working capital needs are one of the main reasons Hungarian agri-food enterprises apply for finance (69%), and it is much higher than for the EU 24 (30%). This reflects the reduced profit margins in the sector in recent years, and particularly effects

⁶⁵ A company's earnings before interest, taxes, depreciation, and amortisation.

⁶⁶ Interview with Processor's Associations.

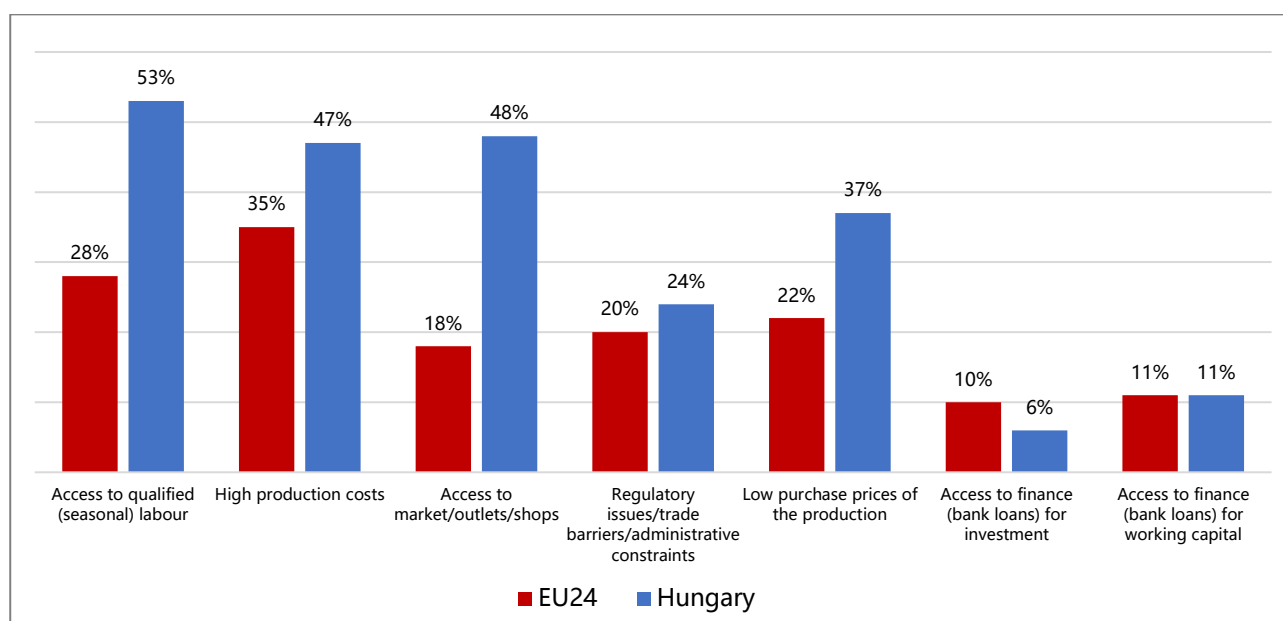
⁶⁷ Hungarian Government, 2019, Report on the Hungarian agriculture, 2017, Budapest, Hungary.



small-sized enterprises that need to seek working capital financing from external sources. The refinancing of existing loans (8%), the development of new products (3%) and the hiring and training employees (1%) are not significant drivers of banks loans.

Access to qualified workers, access to markets and high production costs are the major difficulties faced by the Hungarian agri-food sector. The most significant problem is the lack of qualified workers. According to the stakeholders interviewed, this is also a problem for the entire economy. More than half (53 %) of respondents' to the Agri-food survey experienced this difficulty in 2018, compared to only 28% for the EU 24 (Figure 31). Access to markets were a problem for 48% of survey respondents, while high production costs were a problem for 47%. These values were also much higher than the EU 24 average, especially market access (18% for the EU 24).

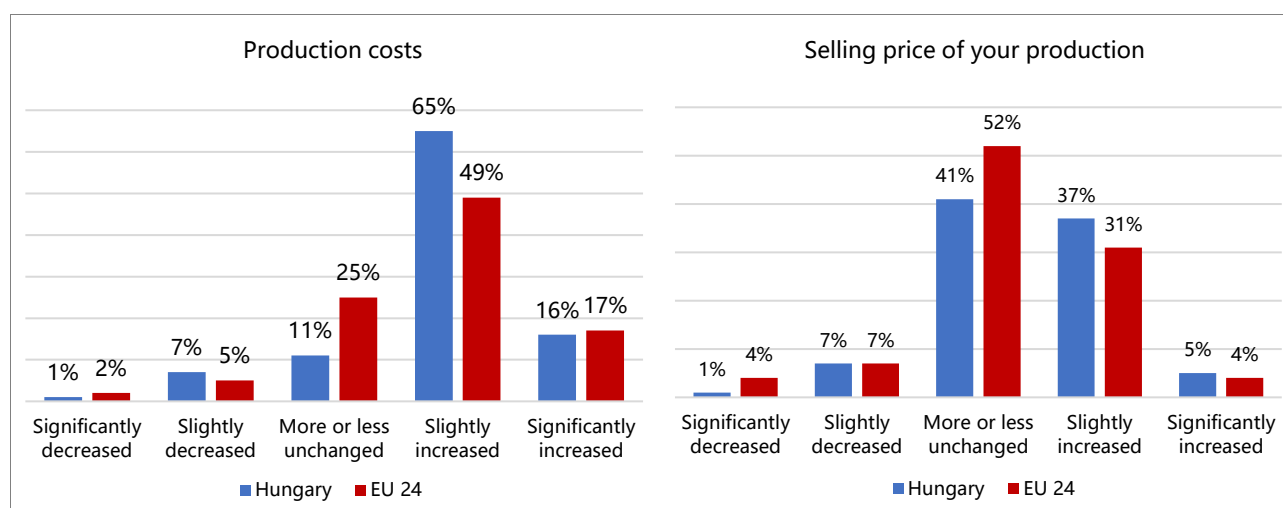
Figure 31: Difficulties experienced by agri-food enterprises in 2018



Source: Agri-food survey.

Only 6% of Hungarian agri-food enterprises reported difficulties in accessing long-term investment loans, compared to 10% for the EU 24 (Figure 31). This value increased to 11% for working capital loans.

According to the Agri-food survey, only 42% of Hungarian agri-food enterprises reported that their selling prices had increased over the past year (Figure 32). This compares to the 81% who reported increases in their production costs. An increase in production costs, combined with stable selling prices, has resulted in lower profitability for the sector and worsened financial indicators. This has likely also led to more constrained access to finance. Interviews with relevant stakeholders suggest that the increase in production costs was mainly due to outdated and depreciated machinery.

**Figure 32:** Changes in key economic indicators of agri-food enterprises in 2018

Source: Agri-food survey.

The overall level of investment in the sector is partly driven by the availability of Government support, particularly for smaller enterprises. Food processing is a strategically important industry for the Hungarian Government. Over the 2014-2020 period, EUR 2 billion of support was allocated to the sector from National and EU sources. The support mostly comes from the Economic Development and Innovation Operational Programme, funded from the European Regional Development Fund and the European Social Fund, and the EAFRD (mostly from the measures related to the value enhancement of agricultural products and promoting resource efficiency in processing). On top of that, the agri-food sector also has access to funds from the Investment Support for Large Enterprises (Nagyvállalati Beruházási Támogatás), the Hungarian investment incentive earmarked scheme (Beruházási Ösztönzési Célelőirányzat), and other financial sources like social cooperatives or the Irinyi incentive scheme.⁶⁸

Substantial processing and marketing support was provided by the EAFRD to micro and small-sized enterprises in the sector, and this strongly contributed to their positive investment behaviour. Sub-measure 4.2 under the RDP ('Support for investments in processing/marketing and/or development of agricultural products') is particularly relevant to the agri-food sector. Active farmers and micro and small-sized agri-food enterprises were eligible to apply for this support. Over the 2015-2019 period, 3 255 applications were submitted for support (before administrative checks) under the sub-measure, amounting to a total of almost EUR 1.5 billion. However, only a third of them (1 570) were approved under the grant calls and the whole budget made available, EUR 636 million, has been taken up.⁶⁹ The resulting figure - EUR 853 million - shows the non-satisfied demand, although many of the applications behind it would have not been deemed admissible, eligible or ranked sufficiently high to be selected. The figure itself points to a large unmet demand for (grant) finance from the sector.

⁶⁸ There is a state funded programme, called Irinyi plan, through which economic sectors can be financed in order to establish innovation partnerships. The food industry is one of the sub-sectors included, along with machinery production, the health industry and the green industry. The programme started in 2016 with a budget of HUF 2 billion. The available budget in 2017 was HUF 3 billion. It provides non-refundable support of up to 50% of the project value. The support ceilings are HUF 400 million (maximum) and HUF 50 million (minimum). It is dedicated to SMEs and distributed by the Ministry for National Economy.

⁶⁹ Hungarian Ministry of Agriculture.

**Table:** Hungary: 2014-2020 RDP implementation data for sub-measure 4.2, total public finance, by the end of 2019

Sub-measures	Number of all submitted applications under the grant calls	Total support requested by all submitted applications (EUR million)	Number of approved and supported applications under the grant calls	Budget made available under the grant calls (EUR million)	Amount requested not being supported (EUR million)
4.2 Support for investments in processing, marketing and/or development of agriculture products	3 255	1 489	1 570	636	853

Source: Hungarian EAFRD Managing authority, 2019.

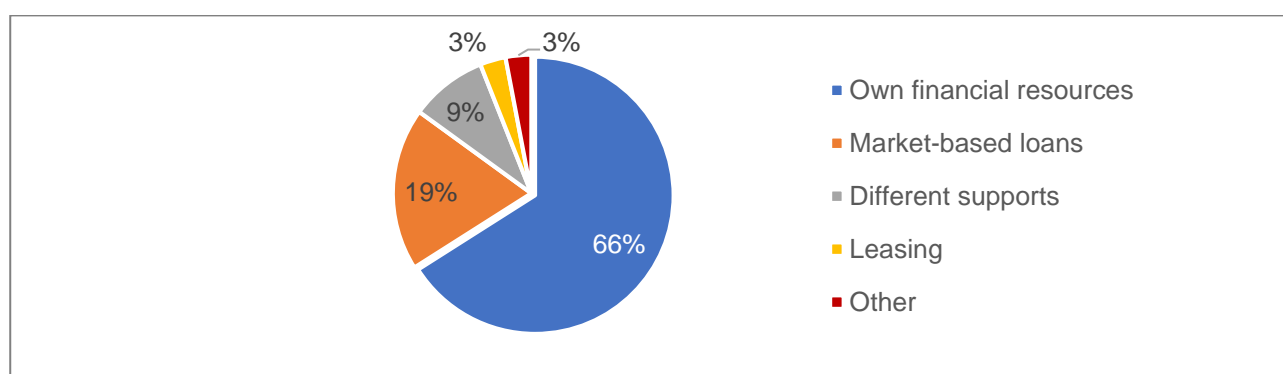
Note: The 'Total support requested' and the 'Amount requested not being supported' are calculated based on all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not allowing their evaluation, and/or with insufficient value-added, and/or ranked at a place for which the budget under the call has not been anymore available.

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 firms, alongside cases where firms are discouraged from applying for credit due to an expectation of rejection or refusal.

The unmet demand for finance in the Hungarian agri-food sector is estimated at EUR 3.4 million.

Agri-food enterprises relied mostly on own resources (66%) to finance their investments in 2018 (Figure 33). This was followed by bank loans (19%), other different support measures⁷⁰ (9%), leasing (3%), and other sources (3%), which consisted of different financial contributions and other loans (Figure 33).

Figure 33: Sources of finance in the Hungarian agri-food sector, 2018

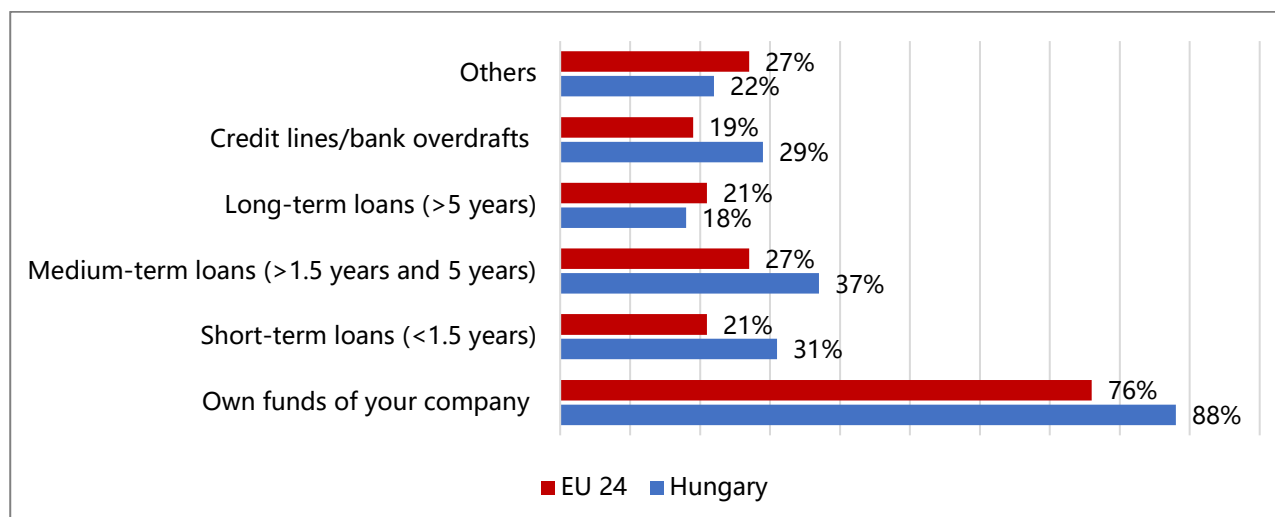
Source: Elaborated based on Csoltai data, 2019.

⁷⁰ Financial support from affiliates, local Governments or other loans.



The reliance of enterprises' on their own funds is also supported by the results of the Agri-food survey. According to the survey, about 88% of Hungarian agri-food firms considered their own funds to be their most important source of finance in 2018.

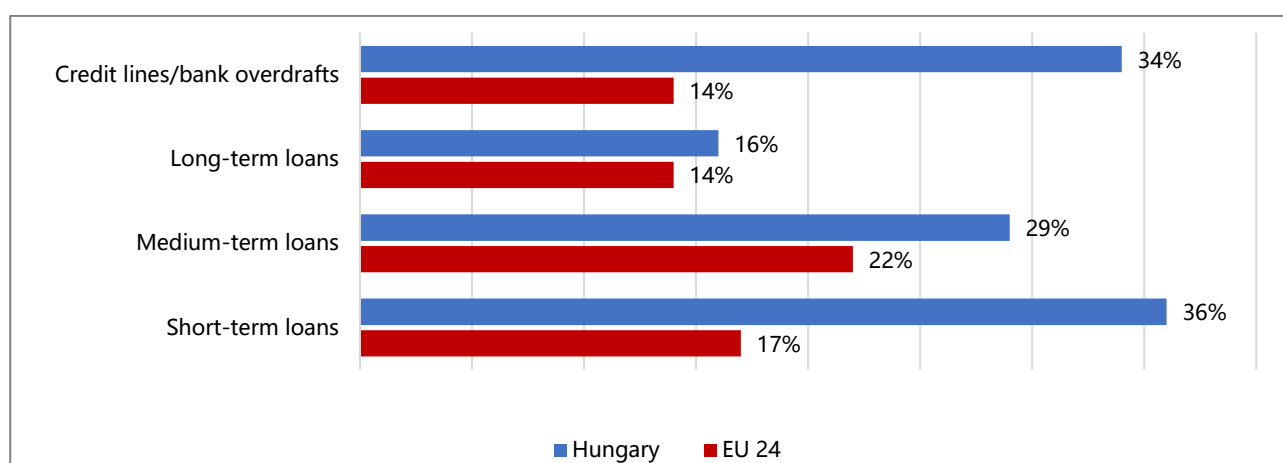
Figure 34: Most important sources of finance within the last three years, 2018



Source: Agri-food survey.

Despite their reliance on own funds, the Hungarian agri-food sector is more active in applying for finance than the EU average. According to the Agri-food survey, 59% of agri-food enterprises applied for external financial sources in 2018, compared to only 46% for the EU average. This is also significantly higher than for the rest of the Hungarian economy. The SAFE survey results indicate that only 14% of Hungarian enterprises applied for bank loans, compared to 25% for the EU. The interviews conducted suggest that although internal financial resources are a key source of funding, they are generally insufficient to satisfy companies' modernisation or product development needs. Consequently, companies must also rely on external credit sources.

Figure 35: Agri-food enterprises applying for finance, by financing product, 2018



Source: Agri-food survey.

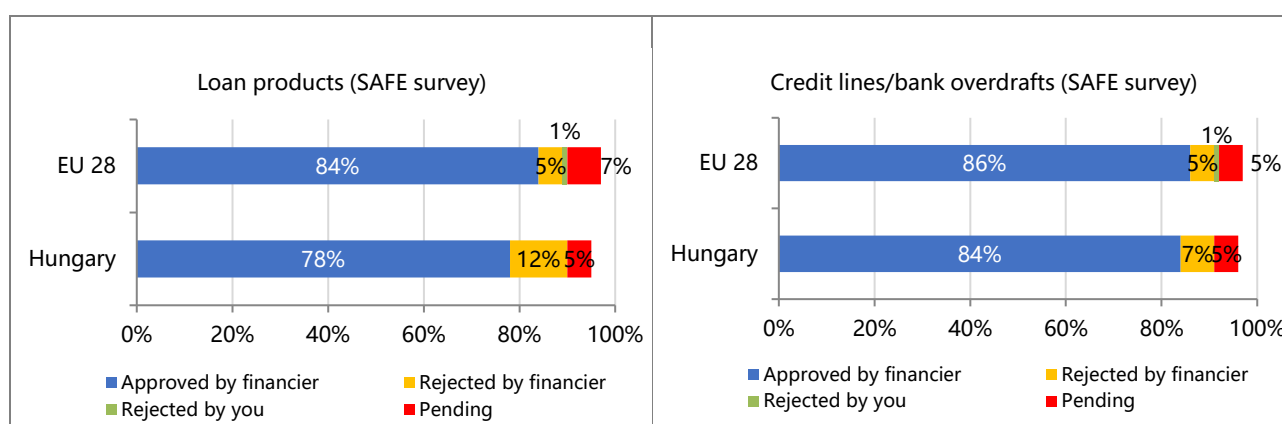
The demand for credit lines and short and medium-term finance is particularly high in Hungary. With regard to the maturity, the demand for finance is highest for short-term loans and credit lines/overdraft, according to the Agri-food survey (preferred by 36 and 34% of the enterprises, respectively). This is followed



by medium and long-term loans (Figure 35). This result was supported by interviews, with stakeholders reporting that food processors in Hungary mostly require working capital loans. According to 2018 data on the total outstanding loan volume, bank overdrafts and other short-term loans accounted for 35% of the total volume. If long-term working capital loans are included, the total share rises to 64%.

The rejection rate for finance applications is higher in Hungary than for the EU 28 (Figure 36). According to the 2018 SAFE survey, the rejection rate for bank loan applications by Hungarian enterprises is 12%, while the rejection rate for credit lines and bank overdrafts is 7%. This compares to rates of only 5% for the average EU 28 enterprise. There are no reasons why the rejection rate would be lower in the Hungarian agri-food sector than for the economy as a whole. In fact, the contrary could be assumed given the positive financial indicators for large parts of the sector, which is a view that was confirmed by the stakeholders interviewed. For these reasons, the loan rejection rates and the rate of discouraged enterprises presented in this report, as well as the gap calculations in Section 3.4, are based on the SAFE survey results.⁷¹

Figure 36: Results from loan applications by Hungarian enterprises in 2018



Source: SAFE survey.

Rejections are often motivated by poor financial indicators. Enterprises in the agri-food sector find it difficult to successfully pass bank loan assessments. According to interviews, this is especially the case for small and medium-sized enterprises (as well as ‘forced’⁷² enterprises). Enterprises in certain segments of the sector have low levels of equity and high levels of debt, and this makes banks hesitant to provide financing to the sector as a whole, according to the stakeholders’ interviews. Overall, the agri-food sector has a debt level of approximately 50%, but for some years the level of short-term liabilities was even higher than the level of

71 The SAFE survey is a systematic analysis, conducted quarterly on large samples of enterprises at the EU level. The survey is representative of almost all economic sectors (excluding agricultural primary production), rather than just the agri-food sector. However, it is reasonable to assume that the differences in access to finance between Hungarian agri-food enterprises and enterprises from other sectors are small. The results from the SAFE survey have been used instead of those from the Agri-food survey (the methodology of which can be found in Annex A.5) as they seem more representative and reliable for the Hungarian agri-food sector, based on the methodology of the survey and the feedback received from the stakeholders interviewed.

72 Some of the large-sized enterprises are called ‘forced’, meaning that they surpass the work force limit required for SMEs, but are far below the turnover or balance sheet limits. Hence, at the EU level, they can be considered as medium or even small-sized enterprises based on their balance sheet, but not on their number of employees. This specificity excludes them from (EU) size-limited support programmes.



equity.⁷³ Furthermore, the bankruptcy rate of agri-food enterprises is twice as high as those in the agriculture sector, which is an additional obstacle.

Collateral requirements may constrain companies' access to finance. While the level of collateral required by banks in the agri-food sector is higher than in the agriculture sector, with agri-food enterprises use buildings more often than land for collateral. However, according to interviews, smaller agri-food enterprises have limited assets that can be used as collateral, due to their relatively small size and the old age of their machinery. According to the Agri-food survey, 37% of the companies said that it would be useful to access subsidised guarantees in order to reduce the collateral requirements of banks.⁷⁴

A well-developed business plan, with special attention paid to the market review, is a prerequisite for the approval of loan applications. The agri-food enterprises that apply for loans need to be able to provide details on their market segment, unit price, quality, and marketing information, which is not always an easy task for small-sized enterprises. Proving their marketability is crucial for accessing bank finance.

During the interviews, some banks shared their lack of interest in financing micro and small-sized enterprises, due to the high fixed cost of the assessment relative to the small loan amount, which results in lower profits.

Additionally, start-ups face issues related to a lack of credit and business history, which makes banks more hesitant in providing finance to them. In addition, start-ups are often micro or small-sized enterprises, and so they face further difficulties.

According to the Agri-food survey, Hungarian agri-food enterprises are discouraged from applying for finance due to a lack of repayment capacity. According to our interviews, many agri-food enterprises believe that their loan application would be rejected by a bank because they lack suitable business data that supports their repayment capacity. Furthermore, the high level of uncertainty and competition in the market means that enterprises are wary of applying for loans as they doubt their own capacity to meet repayments, and so they refrain from submitting a loan application. According to interviews, Hungarian agri-food enterprises also lack ambition in expanding their businesses. This behaviour is mainly typical of enterprises that target the domestic Hungarian market, and which do not compete internationally.

According to the stakeholders interviewed, the Hungarian agri-food sector needs to modernise and innovate further.⁷⁵ While modernisation and innovation are key issues, they require large investments. As the sector is characterised by low levels of capital, enterprises' own funding is generally insufficient to cover the investments required to modernise their production. As a result, these companies either use their own resources (for smaller investments) or choose to postpone investing.

More affordable loans and credit lines may reduce the difficulties faced by companies in accessing finance. Despite the generally low interest rate environment, 70% of Hungarian agri-food companies indicated in the Agri-food survey that loans with lower interest rates would reduce their difficulties in accessing finance. This compares to only 43% for the EU 24. Additionally, more flexible repayment conditions (33%), additional Government guarantees that reduce banks' collateral requirements (32%), and longer tenor (25%) could also contribute to a significantly higher uptake of financial products (Figure 37).

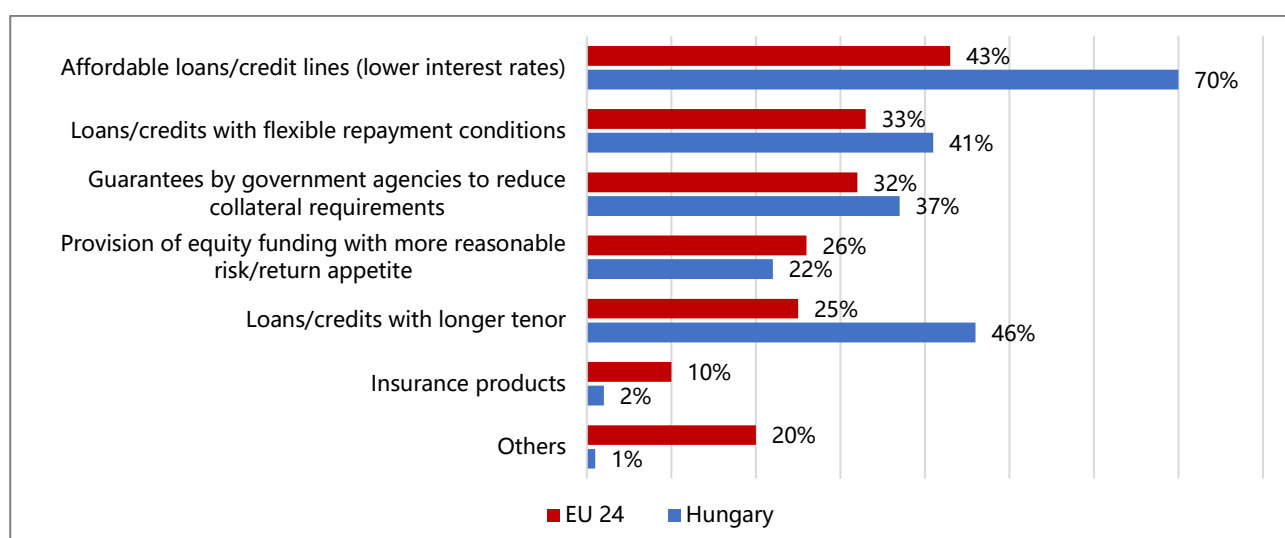
73 Interviews, 2019.

74 Banks have financial resources and are willing to finance, but major problems are the lack of collateral, insufficient business plan and small loans (Garantiqa Annual Report, 2018).

75 Interview with Producer Associations, 2019.



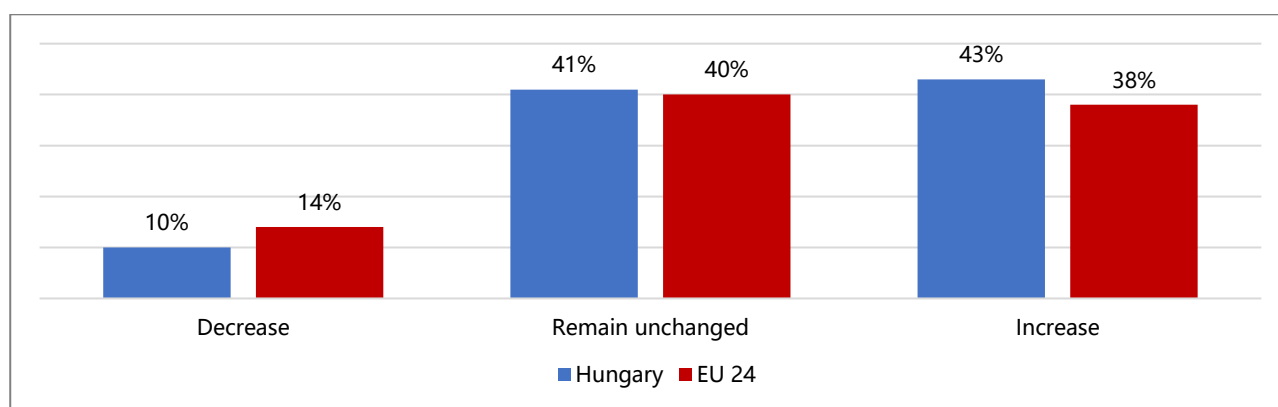
Figure 37: Solutions which would help reducing the difficulty for companies to access finance, 2018



Source: Agri-food survey.

The agri-food sector expects the demand for finance to increase in the near future. According to the Agri-food survey, approximately 43% of the firms expect their financial needs to increase within the next two to three years, in line with the EU 24 average (Figure 38). The low interest rate environment is likely to continue to encourage this trend. This period of low interest rates has been long enough to make the refinancing of existing loans possible, which improves the financial performance of enterprises. As discussed above, according to interviewees, the Hungarian agri-food sector is in great need of modernisation (in particular the replacement of old machinery) and innovation, which would require large investment undertakings. This further confirms the expected increase pointed out by the survey participants and is a positive signal that the sector does foresee being able to carry out investments in a near future, rather than postponing them.

Figure 38: Agri-food enterprises' expectations on future financing needs, 2018



Source: Agri-food survey.



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 Hungary operates. It describes the main available financial products including any currently operating financial instrument targeting the agri-food sector, with national and/or EAFRD resources. This section draws its information from interviews with financial institutions, as well as from national statistics.

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

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

- The volumes loaned to the sector show an increasing trend over the last years.
- The total outstanding loan volume amounted to EUR 1.6 billion in 2018.
- The share of long-term loans is relatively low compared to *short-term* working capital loans.
- Contrary to agriculture, the agri-food sector has more market-based loans than subsidised loans. Still, a record 40% of the loans to the sector were subsidised in 2018.
- EXIM loans, dedicated mostly to export activities, are the most important subsidised loans in the agri-food sector. These are tied to a 100% guarantee from the Hungarian Export Credit Insurance Plc. (MEHIB).
- Despite an increase in the supply of credit to micro and small-sized enterprises in 2018, banks have signalled less interest in working with this segment. This is due to their generally low economic performance and the small loan amounts requested relative to the cost of assessing an application.

3.3.1. Description of finance environment and funding availability

3.3.1.1. Finance Providers

The Hungarian agri-food sector is served by the same banks as the agriculture sector, as described previously in section 3.3.1.1. The only difference is the higher relevance of the state-owned Hungarian Export-Import Bank Plc. (Eximbank) and the Hungarian Export Credit Insurance Plc. (MEHIB). Due to the significant increase in its portfolio, Eximbank is becoming an important partner of agri-food enterprises. An explanation on the products provided by Eximbank is presented in section 3.3.1.2. Garantiqa (Garantiqa Credit Guarantee), which is part of the MFB Group, is also essential in assisting SMEs and micro-sized enterprises in the process of financing, through guarantees. The main finance providers to agri-food enterprises is K&H Bank, with a market share of approximately 20%, followed by OTP (approximately 10%), Takarékszövetkezet Group, Erste Bank and Budapest Bank (approximately 4-5%, each). As can be seen from the market shares, the provision of finance to the agri-food sector is less concentrated than the agriculture sector.⁷⁶

3.3.1.2. Finance Products

The type of financial products available to the agri-food sector are very similar to that of the agriculture sector. The main differences in access often only relate to the size of the business (section 3.3.1.2 for a description of products available). However, the loans financed by Eximbank have a much higher relevance in the agri-food sector's financial portfolio (Table 7).

⁷⁶ Interviews, 2019.

**Table 7:** Overview of the financial products offered to firms

Type of Product		Purpose	Maturity	Interest Rate	Average Loan (EUR)
Interest Rate-Subsidised Loans					
	EXIM	Capital investment	Medium and long-term loans	1.5-2%	500 000-1 000 000
	ASZK	Working capital	Short and medium-term loans	1-3%	30 000-40 000
	NHP	Capital investment	Medium and long-term loans	Maximum 2.5%	50 000-70 000
	MFB	Working capital	Medium and long-term loans	2-4%	16-1.6 million
Investment Loans		Capital investment	Mostly medium and long-term	1.5-4%	300 000-500 000
Working Capital Loans		Working capital	Short-term loans	1.5-3%	200 000-250 000

Source: Elaboration based Hungarian National Banks' data, data mining and interviews.

Generally, the medium-sized and large agri-food enterprises are larger than agricultural enterprises, both in terms of assets and equity, and particularly in relation to the labour force. They also export a higher share of their production. These characteristics are reflected in the composition of loans to the sector (Figure 39):

- Market loans play a more important role and had a share of 60% in 2018. However, subsidised loans still made up 40% of the loan portfolio, which is higher than for other sectors of the economy (except agriculture).
- The major type of interest rate-subsidised loan available to the agri-food sector is provided by Eximbank. It is used to help fund export activities. It is available for agri-food companies with a net turnover of below approximately EUR 47 million (HUF 15 billion). Nearly all EXIM loans are used for pre-financing exports (98.3%) and more than half are (53.4%) working capital loans.⁷⁷
- Amongst the enterprises eligible for state support schemes (small and micro-sized), the uptake of these financial products is still low. Only 3% of enterprises in the agri-food sector have an ASZK loans.

As described in section 2.3.1.2, food processors have access to the **MFB loan programme**, through the 'Food Processing Working Capital Loan Programme', whereby they can borrow between EUR 16 100 and EUR 1.6 million. The total budget available for the programme is EUR 20 million and the duration of the loans is between two to six years. The programme is run by the Hungarian Development Bank (MFB) and is available through the MFB branches of the partner commercial banks. An important part of the funding is provided by the EIB (Global loan). The loan programmes have more or less the same subsidised interest rate of approximately 2%. These programmes started in 2018 and are still available subject to budget availability.

EXIM loans, provided by the Eximbank, are available to both agricultural and agri-food enterprises, as described in section 3.3.1.2. Eximbank offers both a loan guarantee and trade guarantee product. The loan guarantee provides partial security for the repayment of loans granted by commercial banks. Its purpose is to finance domestic investments and working capital, in order to improve the international competitiveness of companies domiciled in Hungary. The beneficiaries are the commercial banks granting credit to customers, and this is the party that requests the guarantee from Eximbank. The commercial banks' customers are Hungarian-domiciled companies, typically in the medium to large-sized corporation category, that are financed by the commercial bank and are (i) implementing an investment or capital project and/or (ii) require extra

⁷⁷ Domán Péter, NAIK Agricultural Research Institute, Budapest, Hungary, 2019, Pénzügyi hírlevél /Financial newsletter/. 12(1).

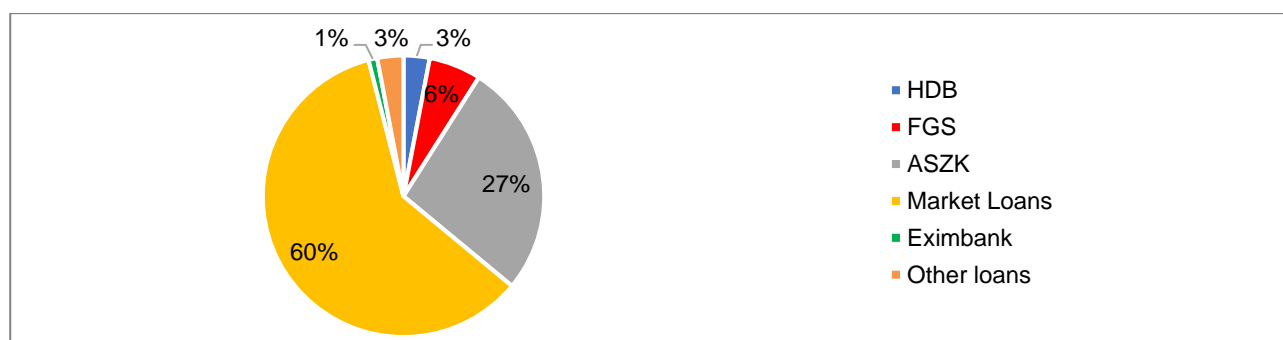


working capital in the interest of boosting international competitiveness, and which feature as the applicant in the contract for issuance of the guarantee. The range of the guarantee varies from 50% to 80% of the principal amount of the guaranteed loan. The trade guarantees, also offered to medium and large-sized domestic corporations, are related to the performance of the export transaction. They are used as security for the bid, advance-repayment, or for the performance and warranty obligations determined in the export contract.

EXIM loans are also tied to a 100% guarantee from the state-owned Hungarian Export Credit Insurance Plc (MEHIB). The MEHIB provides a range of insurances, depending on maturity required. Short-term products include export receivables insurance and factoring insurance, while medium and long-term products include buyer credit insurance, supplier credit discounting insurance, manufacturing risk insurance, supplier credit insurance, investment insurance and interbank buyer credit line agreement insurance.

NHP loans are available for agri-food enterprises, with preferential access to loans for capital investments. For the NHP and NHP+ loans, EUR 9 billion (HUF 2 800 billion) was provided to the whole Hungarian economy. The processing industry received EUR 1.45 billion (HUF 452 billion) of the total budget, of which the share to agri-food companies was around one third (i.e. approximately 5% of the overall budget).⁷⁸

Figure 39: Composition of the Hungarian agri-food loans, 2018



Source: Lámfalusi – Domán – Péter, 2019.

Garantiqa (Garantiqa Credit Guarantee) is part of the MFB Group and its role is essential in assisting SMEs in the process of financing. Micro-sized enterprises are also part of their focus, with a majority of the contracts and almost half of the overall guarantees dedicated to them. Garantiqa's guarantees may help enterprises that suffer from a lack of collateral or low creditworthiness to access loans. It operates non-state counter guarantee programmes as well, like the EU-funded COSME, or at the company's own risk. The first was introduced in 2017, and amounted to 87 million EUR at the end of 2018, while the latter has been in use since 2015, and amounted to 71 million in 2018. The company also launched a pilot programme called 'reverse-charge guarantee assumption procedure', where SME's get a letter of intent from Garantiqa before the start of the credit process, which may increase their chances of having their application accepted by commercial banks. Those enterprises are pre-assessed by Garantiqa and they receive a letter of intent stating that they can get a guarantee. Tens of thousands of enterprises were approached directly in 2018. Normally the application of surety guarantee is initiated by the financial institutions, so there is no direct contact between the applicant and Garantiqa.

While some general support is available for the whole economy, most of the subsidy programmes available are dedicated to SMEs in general. With regard to access to general support measures, medium and larger-sized food processors are in an unfavourable position compared to other economic sectors. This is because

⁷⁸ Interviews, 2019.



their generally lower profitability gives them less points in the evaluation process, which means they are less likely to obtain the subsidised loans available to non-SMEs.

The average size of the loan that an agri-food company receives is twice higher than what a farm would get, on average. Although the available products (both interest rate-subsidised and market-based loans) are the same for both sectors, the average loaned amount is significantly higher for the agri-food sector (Table 7). This is driven by the fact that loans are largely provided to large food companies. Another significant difference is the availability of the EXIM loan, whereby the relatively high net turnover ceiling (maximum of approximately EUR 47 million) makes it possible for even large agri-food holdings to use the product.

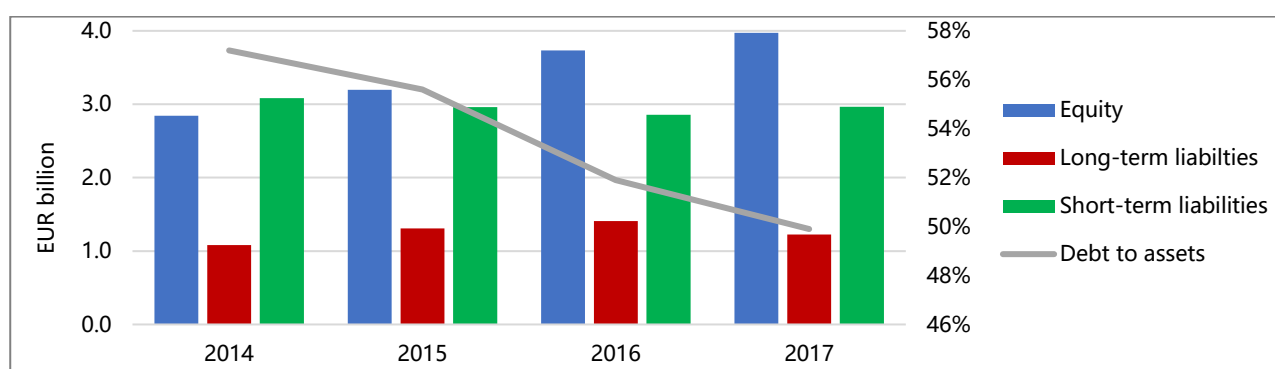
The new interest rate subsidy scheme for investment loans, which was being implemented by the Hungarian Government at the end of 2019, will also benefit the agri-food sector. As described in section 3.3.1.3, a new scheme was recently introduced with the purpose of providing interest rate subsidies to commercial loans for the agricultural, forestry and agri-food sectors.⁷⁹ The loans will be available for every type of enterprise, from micro to large-sized. The duration of the loans can be from three to ten years and the loan size for the food processing sector will be up to EUR 2 billion. The interest rate subsidy could represent a maximum of 80% of the interest rate, up to a maximum of 2% per year. This product thus corresponds to the needs identified and expressed by the agri-food sector. Namely, the need to increase the uptake of long-term investment loans in order to modernise the sector, to make loans available to all enterprises, regardless of size, and to reduce the interest rates on loans and thereby the cost of taking up the loan. The aim of the scheme is to bridge the gap until the pay-outs of support for the next EAFRD programming period 2021-2027, in order to prevent the investment trend of the sector from slowing down.

3.3.1.3. Description of the financing market

Various economic indicators for the agri-food sector, including revenues, export shares, equities and investments, show a positive trend and indicate that the sector is on a favourable development path. This can partly be seen on the balance sheet of agri-food enterprises. Figure 40 gives an overview of the level of short and long-term liabilities, as well as equity, over the 2014 to 2017 period. As the level of equity was continuously growing during this period, while the volume of liabilities was almost unchanged, the debt to assets ratio in the sector decreased. This positive trend should be interpreted with care, however, as it is likely to reflect the larger companies' development rather than the small-sized enterprises.

However, the liability of the sector is larger than its equity, which is often a bad indicator for the bank sector. Although it has been declining between 2014 and 2017, the debt to assets ratio is still above 50%. This can be a reason for banks to reject loan applications, as discussed in section 3.2.2.

Figure 40: Level of liabilities and equity in the agri-food sector, 2014-2017



Source: Elaboration based on data from Illés – Keményné Horváth, 2017 and 2019.

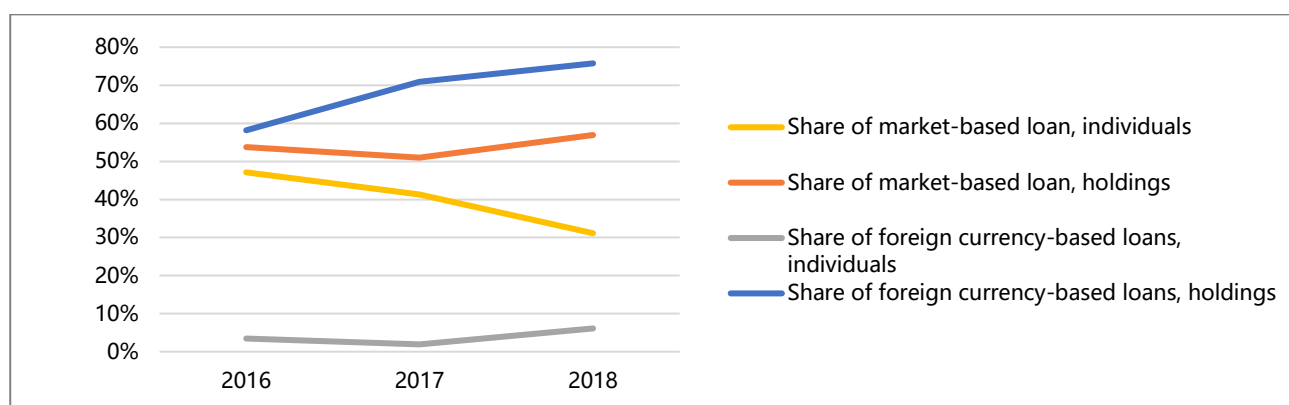
⁷⁹ Agriculture ministerial decree No. 42/2019. (IX. 20.).



The low interest rate environment has facilitated the refinancing of existing loans, with a positive impact on agri-food enterprises' financial performance. In addition, repayments of investment loans remained unimpeded, even for firms with low margins, and especially for investments intended for productivity enhancements or modernisation (loans for which the interest rates are particularly low).

Agri-food producers use a higher share of market-based loans, as well as more foreign currency-based financial sources, than the agriculture sector (Figure 41). Due to the increasing export revenues of the sector, the foreign currency based loans may increase in the forthcoming years (Figure 41). However, it can be seen that the characteristics of the individual agri-food producers (enterprises without legal entity, accounting for approximately 1.5% of the total loans to the agri-food sector in 2018) are relatively close to those of agricultural producers (lower share of market and foreign currency-based loans).

Figure 41: Share of market and foreign-currency based loans by the type of producers, 2016-2018



Source: Elaboration based on the information from Managing authority' statistical reports on agricultural loans.

3.3.2 Analysis of the supply of finance

The total outstanding loan volume to the agri-food sector in Hungary is on the rise, with lending to SMEs and micro-sized enterprises increasing significantly in 2018. Between 2015 and 2018, the total outstanding loan volume increased by 23%, from EUR 1.3 billion to EUR 1.6 billion (Table 8). According to the Bank Lending Survey,⁸⁰ loans to SMEs grew by nearly 12% in 2018, while the micro segment recorded its largest annual expansion, of around 21%. This can be partly explained by the fact that credit conditions were eased for all corporate sized categories, as a consequence of the increasing competition amongst banks. However, the growth in the agri-food sector is likely to also have been driven by the pay-outs of the support from the RDP 2014-2020. In this context, beneficiaries under the investment measures of the EAFRD have to complement the grant with their own (co-financing) contribution, which processors often find on the market through bank loans.

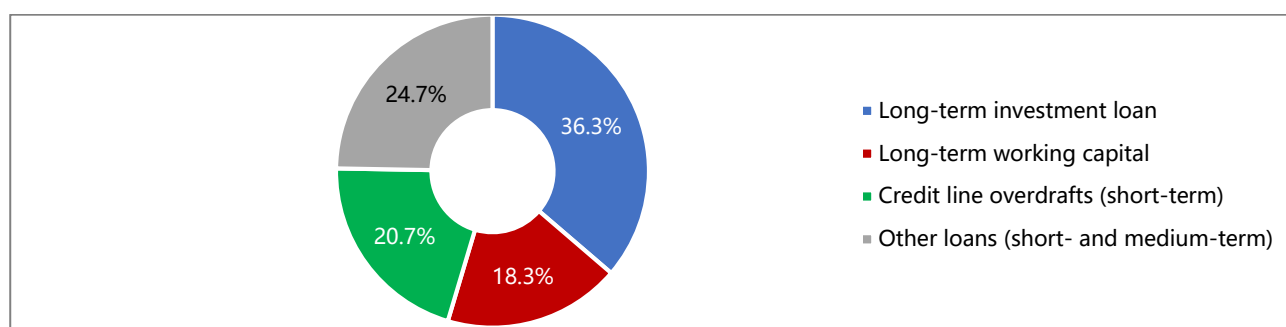
80 European Central Bank, 2018, Bank Lending Survey, https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey.

**Table 8:** Total outstanding loan volumes in Hungarian agri-food sector, 2015-2018, EUR million

	2015*	2016	2017	2018
Investment loans		433	555.8	564.5
Long-term working capital loans		268.7	235.9	285.4
Bank overdraft		156	179.5	222.2
Other short-term loans		321.7	350.3	331.1
Other loans		176.1	166.8	170
Total outstanding loan volume	1 281	1 356	1 488	1 573

Source: Hungarian Ministry of Agriculture (* no breakdown between products is available for 2015).

Loans for capital investments account for the largest share of the total outstanding loan volume. In order to analyse the supply of finance to the agri-food sector, financial products are classified into four categories: long-term investment loans, long-term working capital loans, credit line overdrafts (short-term) and other loans (short and medium-term). Investment loans represent the largest share of the total outstanding loan volume (36% in 2018) (Figure 42). It is also the loan product that has increased the most in volume, showing an increase of 30% between 2016 and 2018 (Figure 42). Over the same period, the outstanding short-term loans, including bank overdrafts, increased by 11%.

Figure 42: Breakdown of the volume of loans to agri-food sector by financial products and maturity in 2018 (%)

Source: Elaboration based on the MA statistical reports on agricultural loans.

Long-term working capital loans represent an important share of the total outstanding loan volume, accounting for 18% in 2018. As discussed in section 3.3.1.2, these loans have maturities of over one year (18 months), hence the term 'long-term' used in Hungary for this product is slightly misleading in a European context, where long-term loans usually have substantially longer maturities.

Overall, the increasing supply of credit to the agri-food sector shows that the sector is on a positive path. However, access to credit for small-sized companies is still constrained. In Hungary, there are several competing banks on the market, and many have agri-food expertise. However, this development is driven by the larger companies, as many of the smaller size agri-food companies have difficulties in accessing finance, despite the positive trend identified in 2018.

During interviews, it was mentioned that banks are not interested in financing small-sized agri-food companies due to the cost of the assessment, which does not compensate for the small loan amount requested. Furthermore, low margins and a lack of collateral for some small-sized companies means they do not attract bank financing. A general situation of low economic performance and a weak liability-to-asset ratio makes banks hesitant in financing small-sized agri-food enterprises. The fact that 40% of the loans provided to the sector are publicly subsidised loans is an indicator of the difficulties faced by large segments of the sector in accessing credit on regular conditions.



As discussed previously, the role of Garantiqa is essential in assisting SMEs and micro-sized enterprises in the process of financing, through guarantees. In 2018, the total guarantee portfolio stood at EUR 2 218 million, having risen by EUR 430 million on an annual basis. The share to the food industry was 12.4%, while the share to agriculture was 5.1% (see Table 9).

Table 9: Garantiqa Guarantees, 2016-2018, EUR million

	2016	2017	2018
Agriculture	13	17	22
Food industry	30	42	53
Together	43	59	77

Source: Garantiqa, 2019, Annual report 2018. Garantiqa Credit Guarantee CO. Ltd, Budapest.

The majority of the guarantees are short-term (one year) and are mainly connected to the Széchenyi Card and other card programmes. The level of redemptions is low, reaching only EUR 27 million in 2018. Approximately 20% of SME's had their loans covered by Garantiqa's guarantees in 2018, and the total loan amount was just under EUR 3 billion.

Table 10: Garantiqa, Guarantee assumptions by product type, 2018, EUR million

Product Type	Amounts, EUR million
Széchenyi Card – surety guarantee	429
Other overdraft package – surety guarantee	626
Working capital loan package – surety guarantee	60
Investment – surety guarantee	0
Guarantee (limit) – surety guarantee	1
Other package – tangible collateral	140
Individually appraised guarantee	447
Prolongation	250
Total	1 953

Source: Garantiqa, 2019, Annual report 2018. Garantiqa Credit Guarantee CO. Ltd, Budapest.



3.4. Financing gap in the agri-food sector

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

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

- The financing gap for the Hungarian agri-food sector is estimated at EUR 80 million.
- The existing financing gap is largely attributable to small-sized firms.
- Access to long-term loans is the most constrained.
- The financing gap is driven by enterprises' lack of collateral and banks' limited interest in lending to small-sized companies. Additionally, banks' requirements for detailed business plans with special emphasis on market access can limit some companies' access to finance. Also, banks consider the food processing industry as risky, due to the sector's high levels of debt compared to equity.
- Start-ups in the agri-food sector have more difficulties in accessing initial funding.

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

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

All the calculations are based on the results of the Agri-food survey for Hungarian 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 firms⁸¹. As explained in section 3.2, the unmet demand for finance includes

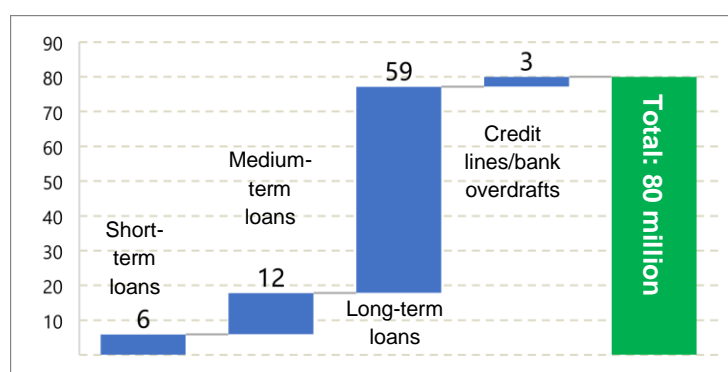
- lending applied for but not obtained; or
- a lending offer refused by the potential borrower; as well as
- lending not applied for due to expected rejection.

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

⁸¹ The financing gap presented in this section is different from the total unmet demand presented in section 3.2.2. In the quantification of the total unmet demand, all the enterprises in the population applying for finance are considered independent from their economic viability.



Figure 43: Financing gap by product in the agri-food sector, 2018, EUR million



Source: Calculations based on results from the Agri-food survey and SAFE survey.

The financing gap for the Hungarian agri-food sector in 2018 was estimated at EUR 80 million (Table 11). According to the SAFE survey and interviews, the financing gap can mainly be attributed to small-sized firms (94%) and it is largest for long-term loans.

Table 11: Financing gap by firm size and product in the agri-food sector

	Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Small-sized firms	75.6	5.6	11.2	56.0	2.7
Medium-sized firms	3.8	0.3	0.5	2.8	0.1
Large-sized firms	0.6	0.05	0.1	0.5	0.02
Total	80.0	5.94	11.8	59.3	2.82

Source: Calculations based on Agri-food survey and SAFE survey.

Based on the interviews conducted, some general conclusions can be drawn relating to access to finance by the agri-food sector:

- **Lack of collateral:** due to their relatively small size, old machinery and low performance indicators, the possibility for the agri-food sector to use assets as collateral is limited. This is particularly the case for micro and small-sized enterprises.
- **Insufficient information in loan applications:** Sometimes, and especially for micro- and small-scale agri-food companies, or new start-ups, it is difficult to provide all required by banks information regarding the specific market segment where products will be sold, their unit price, quality and marketing strategies involved. The lack of this information prevents banks from taking positive decisions.
- **Limited interest from banks for lending to small-sized enterprises:** Because of the low loan amounts requested compared to the cost of the assessment, banks have indicated a limited interest in lending to the sector.

The food processing industry is considered risky by the banking sector due to its high debt-to-equity ratio. Financial institutions view the food processing industry as particularly risky because of an aggregated amount of equity that is lower than its total outstanding debts. In some years, the amount of short-term liabilities was even higher than total equities (e.g. in 2014). Hence, this reduces the propensity of banks to lend to the sector. Although 40% of the loans to the sector are subsidised, the fact that an important unmet demand is identified signals difficulties for agri-food enterprises in passing bank assessments.



Medium and large-sized enterprises facing financing constraints are likely to be ‘forced’ enterprises. . Large firms generally have a sound financial basis and are deemed creditworthy by the bank sector. Those being branches of different foreign companies have also access to internal financial resources from the parent companies and/or the banks that serve them.

Start-ups face specific problems in accessing finance due to their particularly high costs and their lack of credit and business history. Start-ups are challenged by the same problems as young farmers and new entrants in the agriculture sector. They lack credit and business history and have higher costs associated with the start-up process. This makes banks hesitant in providing finance to them.

Interviews have confirmed some needs for long-term financing in order to modernise and improve the capacity of the sector. The agri-food sector’s high demand for working capital finance can be explained by the reduction in the profits of the sector in recent years and by the limited processing capacity of many enterprises. While the share of long-term financing has increased, the breakdown of loans by maturity clearly shows that the share of capital stock is low for the agri-food sector. Due to insufficient own financial resources, many companies make limited investments that are based on their available resources, rather than the actual needs of the business (as discussed in section 3.2). Hence, the low level of long-term investment loans undertaken by the sector should increase in order for the industry to be able to increase its capacity and modernise.



3.5. Conclusions

Overall, the agri-food sector in Hungary shows prospects of growth, with increasing revenues, exports and investments. The uptake of loans is also increasing, including long-term investment loans. However, this may only capture the reality of part of the sector. The agri-food sector in Hungary is dominated by a few large, often foreign-owned companies, who represent a very high share of turnover, sales and investment. Micro, small and medium-sized companies, on the other hand, often struggle with low profitability and economic performance. These are the firms that often have outdated machinery, and for which large investments would significantly improve the performance of their businesses.

The financing gap identified for Hungarian agri-food sector was estimated at EUR 80 million for 2018. The gap is mostly derived from micro and small-sized enterprises, and it is largest for long-term loans. It remains a conservative estimate, given the numerous obstacles identified for accessing finance, particularly for small-sized enterprises. In addition, start-ups are constrained by their lack of credit and business history, and the initial resources they have to invest.

The main obstacles in obtaining finance, apart from the low economic performance of a large segment of the sector, relate to banks' disinterest in assessing loan applications for small loan amounts, due to the high costs related to carrying out the assessment, the unsatisfactory details provided in business plans, and the lack of collateral of smaller agri-food enterprises. The key point in accessing finance is the application assessment procedure, whereby banks cannot offer finance to clients with high levels of indebtedness or very low profitability.

The high demand for processing and marketing support from the EAFRD from micro and small-sized agri-food enterprises seems to indicate that there is an important unsatisfied demand for (grant) finance, and that public support through financial instruments might unleash investment potential in the sector.

Some financial instruments already serve the sector and support access to finance. The recently implemented interest rate subsidy scheme (which was being implemented by the Hungarian Government at the end of 2019, and whose first loans are expected to be approved in December 2019) is expected to further facilitate the access to finance for agri-food enterprises. However, the sector is still characterised by a significant unmet demand, which suggests that further policy actions, including in the field of financial instruments, could be considered. As already pointed out for the agriculture sector, given the diversified offering of support measures already available, any new action should start from a detailed analysis of the available instruments (which is not in the scope of this report in order to be created synergies).

Based on the analysis from this study, the following key areas could be addressed:

- The lack of collateral and business history, particularly for small-sized enterprises and new entrants / start-ups, which is not fully addressed by the currently available guarantee instruments.
- There is a need to create innovative financing approaches to allow agri-food companies to modernise their technologies, equipment and buildings, catering at the same time for their current indebtedness and rather low level of profits. In this context, the setting up of a fully-funded loan fund, where collateral requirements are replaced by re-payments based on the submitted business plan and forecasted cash flows, could be considered as an avenue for public and potentially EAFRD intervention in the coming years. A combination of grants, interest rate subsidies or technical support may be used to offset higher transaction costs.
- Targeted and appropriate training programmes and advisory services could be used to improve the financial literacy of entrepreneurs of small-sized enterprises, thereby addressing the lack of adequate business plans.



ANNEX

A.1 References

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A.2 Stakeholders interviewed

Type of Organisation	Name of Institution	Address and Website
Bank	K&H Bank	https://www.kh.hu/web/eng
Bank	Takarék Group	https://www.takarekcsoport.hu
Bank	OTP Bank, Agricultural Division	https://www.otpbank.hu/portal/en/Retail
Guarantee institution	Rural Credit Guarantee Foundation (AVHGA)	https://avhga.hu/en/
Farmers association	Hangya Co-operation of Cooperatives and Producer Organisations	http://hangyaszov.hu/
Farmers association	National Federation of Agricultural Cooperators and Producers (MOSZ)	http://www.mosz.agrar.hu/
Farmers association	National Association of Hungarian Farmers Societies (MAGOSZ)	http://gazdakorok.hu/
Young farmers association	AGRYA	https://agrya.hu/
Processors' association	Federation of Hungarian Food Industries (EFOSZ)	https://www.efosz.hu/
Processors' association	Hungarian Grain and Feed Association (MGTSZ)	http://www.gabonaszovetseg.hu/
Interbranch organisation	FruitVeB Hungary– Interprofessional Organisation and Product Board	https://fruitveb.hu
Interbranch organisation	Milk Interprofessional Organisation and Product Board	https://tejtermek.hu/
Managing authority	Ministry of Agriculture, Financial and Credit Department	https://www.kormany.hu/en/ministry-of-agriculture
Agri-food association	Hungarian Chamber of Agriculture	https://www.nak.hu/
Other	National Agricultural Research and Innovation Centre, Research Institute of Agricultural Economics, Financial Research Department	https://www.naik.hu/en/organizations/national-agricultural-research-and-innovation-centre
Other	University of Óbuda, Keleti Faculty of Business and Management, Organisational and Management Institute	http://uni-obuda.hu/en/faculties-and-schools/karoly-keleti



A.3 Methodology for financing gap calculation

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

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

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

1. **Rejected credit applications** include applications that are rejected by banks (or other credit organisations) and offered from banks but turned down by the farmers/firms.
2. **The share of Viable firms is measured by** the share of total firms that have a non-negative turnover growth⁸² or a non-negative turnover and that are not in a situation of cost increase (these two criteria might be used to obtain an upper and lower boundary for the calculations).
3. **Discouraged application is proxied by the average size** (financial value) of loan applications made by firms that applied for a similar type of financial product. This allows for grouping firms which did not apply for fear of rejection with rejected firms (see step 2 and 4 below).
4. To calculate the financial gap, we define the following four steps. Each step refers to the latest surveyed year for both the surveys.

Step1: Ratio of viable farms with unmet demand for finance

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

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

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

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

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

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

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

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



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

Step 2: Number of farms rejected or discouraged

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

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

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

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

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

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

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

Step 3: Standard Loan Application Size

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

Step 4: Financial gap across farm size and product type

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

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

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

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

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



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

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

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

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

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

Rejected: What was the result of your application?

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

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

For Hungary, Table 12 and Table 13 report the elements used in the calculation of the financing gap for the agricultural and agri-food sector, respectively.

**Table 12:** Elements for the calculation of the financing gap in the agriculture sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Lower bound: farms with a non-negative turnover growth and no cost increase	Share of respondents' rejected by creditor or farmer	0.00%	0.00%	0.00%	0.00%
	Share of respondents' that have not applied because of possible rejection	1.05%	1.15%	1.15%	1.05%
	Total (sum of rejected and discouraged)	1.05%	1.15%	1.15%	1.05%
Upper bound: farms with a non-negative turnover growth	Share of respondents' rejected by creditor or farmer	2.08%	3.12%	2.08%	1.04%
	Share of respondents' that have not applied because of possible rejection	2.25%	2.33%	2.34%	2.14%
	Total (sum of rejected and discouraged)	4.32%	5.45%	4.42%	3.18%
Total unmet demand: all farms	Share of respondents' rejected by creditor or farmer	3.31%	3.12%	2.08%	1.13%
	Share of respondents' that have not applied because of possible rejection	4.32%	4.41%	4.42%	4.22%
	Total (sum of rejected and discouraged)	7.63%	7.52%	6.50%	5.35%
Farms with constrained access to finance, lower bound	Small-sized farms	1 408	1 534	1 534	1 408
	Medium-sized farms	243	265	265	243
	Large-sized farms	92	100	100	92
Farms with constrained access to finance, upper bound	Small-sized farms	5 791	7 293	5 918	4 257
	Medium-sized farms	1000	1259	1022	735
	Large-sized farms	378	476	386	278
Standard loan application size	Small-sized farms	EUR 10 519	EUR 25 517	EUR 70 373	EUR 9 497
	Medium-sized farms	EUR 13 328	EUR 24 253	EUR 76 414	EUR 10 534
	Large-sized farms	EUR 39 309	EUR 61 719	EUR 137 591	EUR 56 104

Source: fi-compass survey.

**Table 13:** Elements for the calculation of the financing gap in the agri-food sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Firms with a non-negative turnover growth	Share of respondents rejected by creditor or firm	0.70%	0.00%	0.00%	0.00%
	<i>Share of respondents that have not applied because of possible rejection</i>	0.00%	0.00%	0.00%	0.00%
	Total (sum of rejected and discouraged)	0.70%	0.00%	0.00%	0.00%
Total unmet demand: all firms	Share of respondents rejected by creditor or firm	0.70%	0.00%	0.00%	0.00%
	<i>Share of respondents that have not applied because of possible rejection</i>	0.00%	0.00%	0.00%	0.00%
	Total (sum of rejected and discouraged)	0.70%	0.00%	0.00%	0.00%
Firms with constrained access to finance	Small-sized firms	45	-	-	-
	Medium-sized firms	2	-	-	-
	Large-sized firms	0	-	-	-
Standard loan application size	Small-sized firms	EUR 51 246	EUR 70 154	EUR 198 982	EUR 57 863
	Medium-sized firms	EUR 407 133	EUR 383 376	EUR 1 066 482	EUR 309 769
	Large-sized firms	EUR 401 472	EUR 671 462	EUR 1 884 894	EUR 630 000

Source: Agri-food survey.

Table 14: Exchange rates used in this report

	2013	2014	2015	2016	2017	2018
HUF/EUR	296.9	308.7	309.9	311.5	309.2	318.87

Source: Hungarian National Bank, 2019.



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 15 reports the number of respondents by Member State.

Table 15: *fi-compass* survey sample size per Member State

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

Source: *fi-compass* survey.

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

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

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



A.5 TG II: Agri-food survey

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

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

The survey was conducted targeting the completion of a minimum of 45 questionnaire for each Member State. The minimum sample size obtained varied per country mirroring the differences in the size of the sector. Table 16 reports the sample size per country

Table 16: Agri-food survey sample size per Member State

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

Source: Agri-food survey.

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

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