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

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DISCLAIMER

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Glossary and definitions

Expression	Explanation
Agri-food survey	Survey of the financial needs of EU agri-food processing enterprises carried out in mid-2019 in the framework of study ‘EU and Country level market analysis for Agriculture’ and based on respondents’ financial data from 2018.
BGN	Bulgarian Lev
BNB	Bulgarian National Bank
CAP	Common Agricultural Policy
COSME	Competitiveness of Small and Medium-Sized Enterprises
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 24	The 24 EU Member States covered by the fi-compass ‘EU and Country level market analysis for Agriculture’: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.
EU 28	All EU Member States: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, The United Kingdom.
EUR	Euro
FADN	Farm Accountancy Data Network
FDI	Foreign Direct Investment
fi-compass survey[1]	Survey on financial needs and access to finance of 7600 EU agricultural enterprises carried out by *fi-compass* in the period April-June 2018 and based on respondents’ financial data from 2017.
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
ha	Hectare

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

MIS	Management Information System
NBFI	Non-Bank Financial Institution
NAAS	National Agricultural Advisory Service
NGF	National Guarantee Fund
NPLs	Non-Performing Loans
PA	Priority Axis
RDP	Rural Development Programme
SAFE	Survey on Access to Finance of Enterprises
SME[2]	Small and medium-sized enterprise
SO	Standard Output
UAA	Utilised Agricultural Area

2 Small and medium-sized enterprises (SMEs) are defined in the EU recommendation 2003/361. Micro enterprises have less than 10 employees, small enterprises have less than 50 employees and medium-sized enterprises less than 250 employees. https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en.

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EXECUTIVE SUMMARY

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

The analysis draws on the results from two comprehensive and representative EU-level surveys carried out in 2018 and 2019, namely the *fi-compass* survey on financial needs and access to finance of EU agricultural enterprises and a survey of the financial needs of EU agri-food processing enterprises. The report does not take into account the impact of the ongoing COVID-19 health crisis and/or the effect of any new support scheme being set-up by the Member State and/or changes in the legal basis and/or policies at the European level to mitigate the crisis, since 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 Bulgaria

Following accession to the EU in 2007, the Bulgarian agriculture sector underwent a structural transformation, characterised by steady growth in gross value added (GVA) and a polarisation of farm structures. Despite more than 80% of the farms in Bulgaria being categorised as smallholders (below 2 ha), most of the output and exports of the sector are produced by a small number of large-sized farms (2% manage more than 100 ha). These firms are particularly prevalent in the less-labour intensive sub-sectors such as cereals and oilseeds. The workforce is ageing, with more than 35% of workers being over the retirement age. The availability of labour remains challenging and this creates further difficulties, especially during seasonal peaks. The lack of qualified workforce also limits the potential of some farms to grow.

While Bulgarian farmers have been increasingly recognising the need to strengthen their competitiveness on the single market, this does not always translate into increased investment. The Gross fixed capital formation[3] (GFCF) as a share of the GVA in the agriculture sector is one of the lowest in the EU 28. This is despite the favourable macroeconomic environment and low interest rates. While Bulgarian farmers appear to be more active in applying for finance than their peers in the EU 24, the *fi-compass* survey reveals that a substantial share of this finance demand is for working capital needs rather than for investments, with Bulgarian farmers requesting credit lines and overdrafts more often than in the EU 24. In recent years, the liabilities of Bulgarian farms have been growing faster than their assets, which is a sign that while the financial inclusion of farmers is increasing, so is their level of indebtedness.

The analysis highlights **the three main investment drivers in the Bulgarian agriculture sector**:

(i) **Working capital needs**, such as the inputs for agriculture production and the rental of farmland.

(ii) **Modernisation of agriculture enterprises,** particularly for small and medium-sized farms, who seek finance for machinery and equipment, and with investment choices depending on the sub-sector they operate in.

(iii) **The purchase of arable land** for large-sized farms in the cereal and oilseeds sub-sectors, with available parcels for sale being scarce and expensive in the Northern regions where most of these farms are located.

Investment drivers for young farmers (aged under 40) and new entrants include the need for infrastructure, such as facilities and buildings, and land, to establish their business. To succeed in their business, they largely rely on the European Agricultural Fund for Rural Development (EAFRD) support measures.

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

Access to investment support from the Rural Development Programme (RDP) plays an important role in bolstering the demand for investment. By the end of 2019 the investment support provided under the farm modernisation sub-measure was over-subscribed. Total public support of EUR 378 million was already contracted resulting in significant increases in the total investment amounts for various assets (machines and equipment, transport, buildings, etc.).

Several underlining factors of the financing gap have been identified for both the demand and the supply side of the market for agriculture finance.

On the demand side, the main constraints that hinder farmers' access to finance are related to a lack of suitable collateral, credit history and accounting records. The lack of sufficient collateral also needs to be understood in a context of farmers having to provide a collateral of up to 150% of the loan amount or even more (according to the findings of the *fi-compass* survey). In addition, many farmers are not financially literate and they do not have experience in submitting business plans. Distrust in the transparency of the banking system also contributes to the gap. Young farmers and new entrants are particularly affected by the lack of assets that can be used as collateral for medium and long-term loans.

On the supply side, the main constraints relate to the fact that three banks control around 65% of the market, while other operators lack interest and expertise in the sector. The high level of non-performing loans increases banks' perception of risk in the sector. In order to manage risk, banks tend to restrict lending to farmers, with loans predominantly being approved when RDP investment support has been received by the farmer. There is also a lack of tailor-made loan products, although certain flexible re-payment modalities are offered mostly to larger farms.

The ex-ante assessment for the potential use of financial instruments for agriculture conducted in 2018 by the EAFRD managing authority broadly confirmed these findings. It concluded that the absence of banks specialised in agriculture finance, high interest rates and high collateral requirements pose difficulties in accessing finance. Young farmers are particularly affected by these conditions and the financing gap.

The total outstanding loan volume to the sector was estimated at EUR 5.4 billion in 2019. Overall, the financial market for Bulgarian farmers does not yet fully support all the investment and working capital needs of the sector.

There is significant potential for new financial instruments, with a market gap estimated between EUR 289 million and EUR 863 million:

- **Almost three quarters of the estimated financing gap relates to small-sized farms (below 20 hectares[4]), which the banks regard as the least profitable segment**. The propensity to invest, especially in small-sized farms, is mostly conditional on the inheritance of the business. On the other hand, the RDP measures do find traction with young farmers who need longer term finance to obtain land and to establish farm infrastructure to start their business. Overall, most of the stakeholders interviewed, from both the bank and agriculture sector, expect the number of farms with constrained access to finance to increase in the future, especially in the small-sized segment. This makes potentially viable small farms the main target group when addressing the market failure in terms of access to finance, because these farms often contribute significantly to the social and economic vitality of regions where limited alternatives to farming exist.
- **The financing gap is the largest for long-term loans, which represent more than half of the gap estimate**. The main obstacle here is the lack of suitable collateral.

Stakeholders point to a lack of available technical support to farmers. This is partly due to the recent downsizing of the activities of the National Agriculture Advisory Service. However, overall business management and financial skills are also low among farmers.

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

RECOMMENDATIONS

Even though Bulgarian farmers can rely on a relatively well-developed financial market, a targeted use of financial instruments in the Common Agricultural Policy (CAP) 2021-2027 programming period may help to facilitate access to finance for new enterprises currently excluded or self-excluded from the market. In particular, the following suggestions should be considered:

- **The expected launch of the EAFRD risk-sharing Credit Fund must be carefully observed.** Its budget is currently fragile and highly insufficient. The impact it may have on access to finance is also unknown and so are the conditions under which banks would agree to participate. Those conditions might also affect the costs for farmers and the overall performance of the instrument. These issues need a proper and detailed evaluation once the financial instrument has become operational, to ensure that an improved product is deployed in the 2021-2027 programming period.
- **The use of financial instruments could support the development of specialised financial products** (short, medium and long-term loans, as well as overdrafts) tailored to the needs of small-sized farms and increase the interest of banks that are currently not operating in the sector (this would reduce market concentration). New loans should be developed based on the seasonality of farm cash flows and/or account for price variability.
- **A guarantee fund** based on CAP's Strategic Plan's (EAFRD) resources could be designed to overcome collateral issues, particularly for small farms aiming at commercialization and growth. This instrument should focus on the repayment capacity of farmers, rather than simply prioritising farmers that benefit from RDP grant support. It shall also contribute to significantly reducing the collateral requirements by banks and opening the door for innovative and riskier projects. A remuneration stimuli or a performance fee could also be created for attracting more financial institutions to participate and increase the overall bank offer to the sector.
- **Stand-alone working capital finance under the EAFRD** is an excellent possibility for solving liquidity issues and for detaching banks and NFBIs from CAP/EAFRD payments.
- Whatever product is defined as a financial instrument, **attention must be paid to young farmers and new entrants.** Whether this target group would benefit from longer grace periods, a higher priority and higher guarantee rates, and better financing conditions would depend on the type of scheme, its details and targets, as well as its total budget. In this context, the **full flexibility of the EAFRD financial instruments for young farmers** must be considered.
- With regards to small-sized farms, a **specific micro-finance scheme** could also be planned, adapted to the Bulgarian situation, with levels and conditions of financing, attractive for small farms.
- **Technical support for banks, as well as farmers** might also be considered to strengthen the capacity of both sides to address market failures. Based on the above, there is potential for new financial instruments and the following options should be explored in more detail:
  - **Technical support to financial intermediaries** that are not very active in agriculture finance is needed to provide these financial institutions with policy frameworks, tools, and a hands-on understanding to help them efficiently service small-sized Bulgarian farms. Agriculture scoring tools should be utilised to quickly assess the repayment capacity of a farmer, which would reduce the credit risk of loans granted and minimise transaction costs. Financial institutions already in the sector could benefit from assistance in sustainably growing their portfolio and in designing new, innovative loan products.
  - **Business development support schemes are essential for farmers** as investors. Technical support should be provided in alignment with future schemes. The focus should be on financial literacy, business planning, farm improvement plans, lean processes, running the farm as a business, understanding the cost of repaying loans early, and so on. In particular, most farmers, and not only the older ones, lack expertise in developing sound business plans.

Financing gap for the agri-food sector in Bulgaria

The agri-food sector is the second largest employer in the area of manufacturing, with 95 300 people working in it. The sector accounts for about 20% of the country's total industrial production. The main sub-sectors are dairy, meat processing, and fruit and vegetable processing.

In recent years, investment levels in the Bulgarian agri-food sector have increased slightly. Most of the investments take place in the manufacturing of food products. In 2018, investment represented 30.6% of the GVA in agri-food and the factors behind the recent changes are driven by:

(i) **Capacity expansion and the upgrading of equipment**. Investments in additional machinery, vehicles, facilities and buildings have been made to increase competitiveness, particularly in the dairy, meat processing, and fruit and vegetable processing sub-sectors.

(ii) **Working capital** for meeting day-to-day business costs.

The four main difficulties faced by Bulgarian food and beverage manufacturers in 2018 were production costs, the hiring of qualified labour, the selling price of their production and regulatory issues. In terms of access to labour, finding and hiring qualified seasonal labour was difficult. Labour shortages in rural areas remain a challenge in Bulgaria. Regulatory issues related mainly to the implementation of regulations, standards and/or administrative requirements.

The demand for investment finance is stable among agri-food firms with low levels of turnover (below EUR 25 000), many of which are on-farm processors. This reflects the few opportunities they have to expand their market share and their possibly lower risk appetite. However, it does not eliminate the need for sustained working capital injections. Agri-food enterprises with an annual turnover between EUR 25 000 and EUR 100 000 have a need for medium and long-term loans for the purchase of machinery and equipment. Large-sized agri-food firms (with a turnover of more than EUR 100 000) need financing to adopt new technologies and systems, the purchase of corresponding machinery and equipment, improved processing and storage facilities, and safe and healthy packaging systems. Technological advances are a necessity in the agri-food sector to handle a specific Bulgarian challenge: the difficulty to secure well-trained and skilled workers, including a seasonal labour force. In interviews agri-food enterprises mentioned that the main reason why they rely on their own funds is to ensure full control over their business risk.

The outstanding bank loan portfolio has grown in recent years. Lending to the manufacturing sector was about EUR 3.88 billion in 2018. Within the manufacturing sector, it is estimated that the aggregate portfolio for food, beverage and tobacco[5] amounts to EUR 886.9 million.

EAFRD is one of the most important financial vehicles to promote investment activity in the agri-food sector. In turn, due to risk-aversion and the perceived risks, banks provide investment loans mostly to agri-food enterprises that have contracts for financial support under the national RDP.

The financing gap for the Bulgarian agri-food sector is estimated to be up to EUR 179 million. The gap is mainly driven by small and medium-sized enterprises and is mostly for long-term loans. Agri-food start-ups and new entrants are particularly constrained, as they often lack sufficient credit history.

The gap is explained by a number of constraints, which have been identified on both the demand and supply side of the market for agri-food finance. These constraints cause viable loan applications by agri-food enterprises to be rejected, refused or discouraged. **On the demand side**, they relate to the lack of sufficient collateral, which is a particular issue in a sector that is perceived by banks as being riskier than other segments of the market; and the lack of financial literacy and business planning among agri-food entrepreneurs. **On the supply side**, the lack of adequate knowledge of the sector by banks and the lack of specific products and policies to finance agri-food enterprises contributes to the gap. In addition, banks prefer to lend to medium to large-sized agri-food enterprises with a more stable market position and they tend to

5 It is noted that tobacco is not subject of this study.

neglect early-stage businesses, even if these businesses offer better growth prospects. This is despite small-sized enterprises showing a willingness to repay their loan earlier in years when they generate high and stable revenues.

RECOMMENDATIONS

The following recommendations for public interventions should be considered:

- **The expected launch of the EAFRD risk-sharing Credit Fund must be carefully observed.** Its budget is currently fragile and insufficient compared to the expressed demand by the sector. The impact it may have on access to finance is also unknown and so are the conditions under which banks would agree to participate. Those conditions might also affect the lending costs for agri-food processors and the performance of the instrument. These issues need a proper and detailed evaluation after the financial instrument becomes operational, to ensure that a sound and financially strong product is deployed in the 2021-2027 programming period.
- **Stand-alone working capital finance through financial instruments under the EAFRD** is an excellent possibility for solving liquidity issues and for detaching banks from EAFRD grant payments.
- Whatever product is defined as a financial instrument, **attention must be paid to new entrants.** Whether these would be grace periods, higher priorities and guarantee rates, better financial conditions, etc., may depend on the type of scheme.
- **A guarantee instrument based on EAFRD resources,** could be better designed compared to current market offers to overcome collateral issues, particularly for agri-food start-ups who lack sufficient assets. Guarantees are needed especially for medium and long-term investment loans. They shall contribute to significantly reducing the collateral requirements of banks and opening the door for the financing of innovative and riskier projects. A remuneration stimuli or a performance fee could also be created for attracting more financial bodies for the implementation of the instrument. Support from the RDP shall not be a condition under such instrument. These guarantees should be well designed and should be different from similar instruments existing in the market to achieve synergies and add value.
- **The use of financial instruments could support the development of specialised financial products** by banks (short, medium and long-term loans, as well as overdrafts) tailored to the needs of small and medium-sized agri-food enterprises and to increase the interest of banks that are currently not financing the sector. Those products could also be offered using innovative outreach channels (e.g. internet and smartphones or by working with lower value chain actors).
- **Technical support is required on both the demand and supply side**. Bank's understanding of clients' needs, and operations should be strengthened, including the agri-food chain as a whole. A better understanding of potential borrowers could translate into enhanced marketing efforts, given that many borrowers are unaware of the full range of products available. On the demand side, technical support should be provided to improve financial literacy and business planning, especially for start-ups, new entrants and small-sized firms.

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 Bulgaria. The assessment is based on the identification and evaluation of the supply of and demand for financing, on the one hand, and on the quantification of the currently unmet demand for financing for the two sectors, on the other hand. This report aims to contribute to a better understanding of the potential need for continuing currently operating financial instruments, or the creation of new or additional ones, supported by the European Agricultural Fund for Rural Development (EAFRD).

Approach

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

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

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

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

The analysis draws on the results from two comprehensive and representative 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 the legal basis and/or policies at the European level to mitigate the crisis, since surveys and data available covered a period prior to its outbreak. This would need to be subject to further analyses by interested stakeholders, administrations and/or researchers.

Report structure

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

2. PART I: AGRICULTURE SECTOR

2.1 Market analysis

Key elements on the agriculture sector in Bulgaria
• GVA in agriculture has been steadily growing since EU accession in 2007 and reached EUR 1 913 million in 2019.   • Foreign direct investment (FDI) in Bulgarian agriculture increased from EUR 0.3 million in 2014 to EUR 11.6 million in 2018.   • Out of 202 720 farms, more than 82% are small-sized family farms (< 2 ha)[6]; large commercial farms with an utilised agriculture area (UAA) of over 100 ha account for less than 2% of total farms. They specialise on a limited number of less labour-intensive arable crops.   • The average farm size in Bulgaria increased from 6.2 ha in 2007 to 18 ha in 2017 due to structural transformation, the renting of land, land purchases and farmland consolidation over the years.   • The value of agriculture output was EUR 3.8 billion in 2018. Crop production was the largest sub-sector, worth EUR 2.8 billion in 2018 and accounting for 70.5% of all agriculture production.   • Livestock production has been declining, accounting for 22.8% of the agriculture production in 2018.   • The agriculture workforce is ageing, with young farmers (below the age of 40) representing just 14% of the Bulgarian farmers.   • Compared to other sectors of the economy, agriculture income has been increasing over the last 9 years, but it has also been subject to higher fluctuations.

Agriculture plays a key role in the socio-economic fabric of rural Bulgaria. The agriculture sector generates 4.4% of the country's total gross value added (GVA) and provides employment to 5.8% of the labour force, which is the second highest rate in EU 28. More generally, Bulgaria is a predominantly rural country, characterised by an increasing urban-rural divide in living standards, and well developing rural parts around cities that attract a younger and wealthier population in the last decade. While rural areas are richly endowed with natural resources, they are marked by lower incomes, limited job opportunities, an ageing population and high rates of poverty[7].

The agriculture production is well diversified within a strongly polarised farm structure. At one extreme are smallholdings that manage less than 2 ha. These farms account for 82% of total farms (or 166 000 of all farms). They only partially participate in the market, mostly at the local level, and diversify their production with high value crops, such as fruits, vegetables and tobacco. At the other extreme are large commercial farms with an Utilised Agriculture Area (UAA) of over 100 ha. These farms account for less than 2% of total farms (or 6 060 of all farms). They specialise on a few less labour-intensive arable crops, such as wheat, maize or barley.[8] The sector is characterised by an ageing workforce. Nearly half (49%) of all farm managers are aged

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

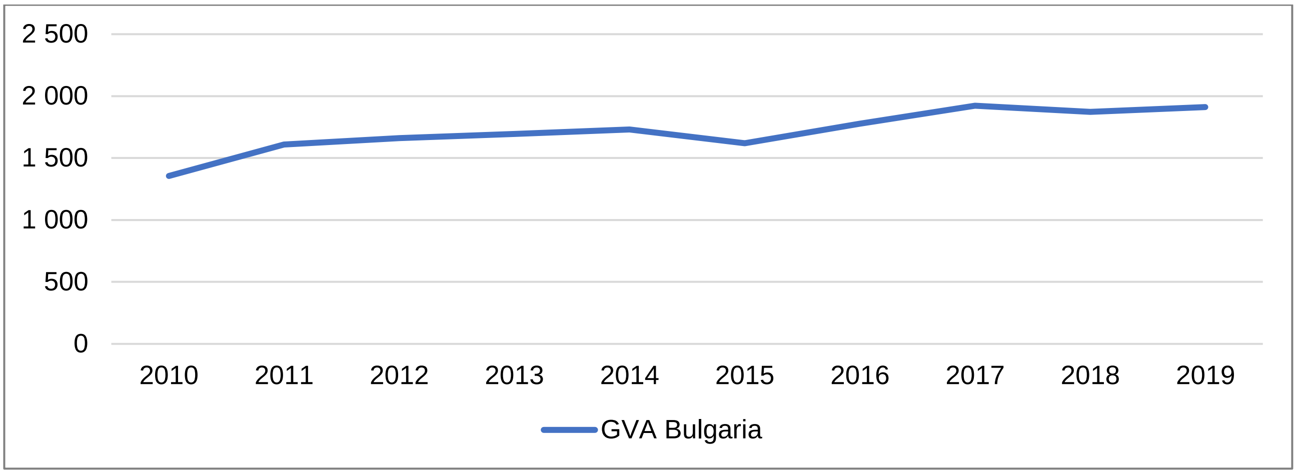
7 The majority of the rural population is at risk of poverty or social exclusion. Sources: European Parliamentary Research Service, Sirakov, Aleksandra, 2017, Rural poverty in the European Union, Top 10 Facts about Living in Bulgaria, November 2018, https://borgenproject.org/top-10-facts-about-living-conditions-in-bulgaria/.

8 The farm structure of Bulgaria is important to bear in mind for the forthcoming analysis in this report, where the *fi-compass* survey results will be analysed. The analysis of the survey divided farms into small farms (below 20 hectares), medium-sized farms (20-100 hectares), and large farms (>100 hectares). Hence, in the case of Bulgaria, 91% of the farms fall into the category of small farms as defined on a European level. However, under the national context, a small farm is considered to be smaller than 5 hectares, rather than below 20 hectares, and a large farm is a farm over 50 ha, rather than 100 ha.

between 40 and 64, while 37% are over the age of 65. Young farmers, aged under 40, represented 14% of all Bulgarian farmers as of the end of 2016.[9]

EU accession, in 2007, accelerated the structural transformation and farmland consolidation in Bulgaria. The average farm size increased from 6.2 ha in 2007 to 18 ha in 2017. There has been steady growth in the GVA of agriculture output in Bulgaria, which amounted to EUR 1 913 million in 2019 (Figure 1).[10]

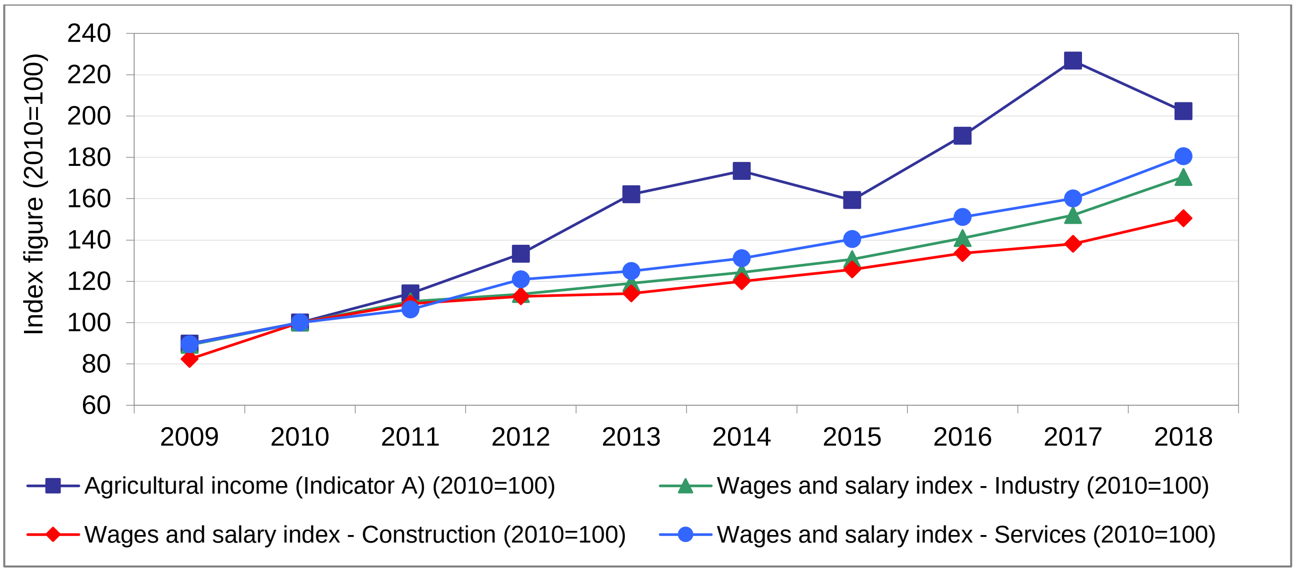
Figure 1: Development Gross value added in the Bulgarian agriculture sector, 2010-2019, EUR million



Source: Eurostat – Economic Accounts for Agriculture, 2019.

The value of agriculture output was EUR 3.8 billion in 2018, a 5% decrease on the previous year. Crop production had the largest share of final output, at 70.5%, and was worth EUR 2.8 billion. Cereals and industrial crops are the two most important crops, accounting for 58.3% of the value of all agriculture output, followed by livestock production.[11]

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



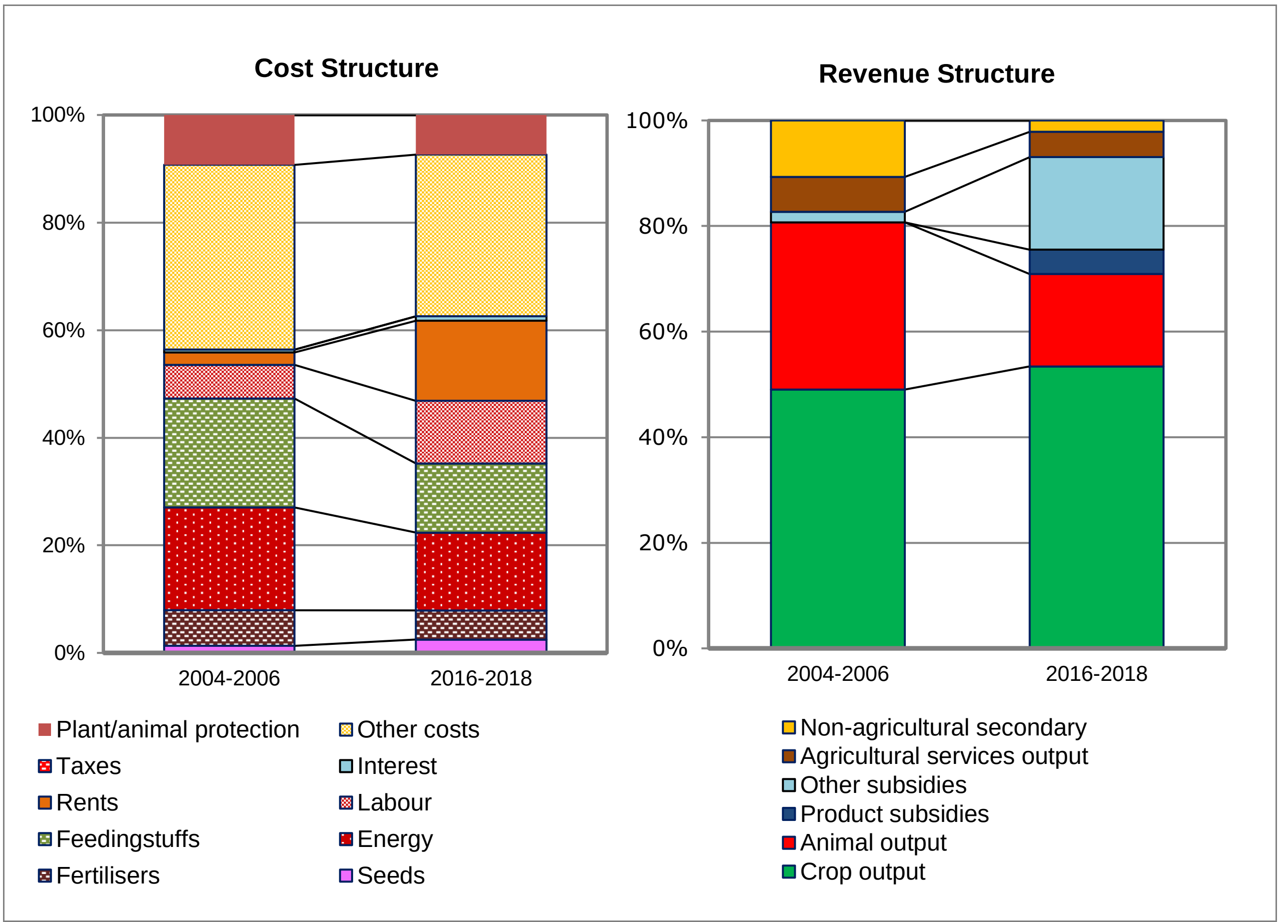
Source: European Commission, DG Agri, Statistical Factsheet for Bulgaria, June 2019.

9 Eurostat, 2016, Farm Structure Survey, https://ec.europa.eu/eurostat/documents/2995521/9028470/5-28062018-AP-EN.pdf/8d97f49b-81c0-4f87-bdde-03fe8c3b8ec2.
10 Ministry of Agriculture and Food, Agriculture Reports (2014-2018).
11 The livestock sector consists mainly of milk and dairy products (9.4% of total agriculture output) followed by poultry, pork and beef.

Compared to other sectors of the economy, **agriculture income has been increasing over the last 9 years**, but it has also been subject to higher fluctuations (Figure 2). In contrast to other economic sectors, where average income has grown steadily and consistently, agriculture income experienced two major downturns in 2015 and 2018. However, the income level in agriculture doubled between 2009 and 2018, mostly due to the rather low starting point.

As for the cost and revenue structure of the agriculture sector (Figure 3), comparing the years 2004-2006 with 2016- 2018, rent and labour costs have increased significantly while feed stuff costs have decreased. On the revenue side, the share of revenues from animal output has decreased sharply, while crop output and subsidies have increased due to the EU accession and the availability of CAP financing (direct payments and EAFRD support).

Figure 3: Agriculture income – only cost and revenue structures in Bulgaria, 2004-2018



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

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

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

This section describes the drivers of demand for finance in the agriculture sector and analyses the met and unmet demand. It seeks to elaborate the main reasons for farm enterprises to request financing and identify the agriculture sub-sectors displaying the largest need for finance. The section also provides an analysis of the type of producers that face the greatest constraints to accessing credit. The examination of the demand for agriculture finance is based on the findings from the 2018 *fi-compass* survey of 351 Bulgarian 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 Bulgarian agriculture sector

- Gross fixed capital formation (GFCF) in Bulgarian agriculture increased sharply in 2018 after a downward trend in 2015 and 2017. However, as a share of GVA it is still the lowest in the EU 28.
- The demand for finance is mainly driven by the need for working capital, investments in modernisation, and the purchase of land.
- Liabilities of Bulgarian farms have been growing faster than assets, as farmers are using more loans rather than savings to cover their financial needs.
- Small-sized farms (below 20 ha) face the most difficulties in obtaining finance. They are more likely to have their applications rejected or to be discouraged from applying.
- The unmet demand for finance of agriculture is estimated at EUR 1.2 billion.
- The unmet demand is mainly driven by the following problems:
  - banks are reluctant to lend to farmers and perceive the sector as high risk, which leads them to apply restrictive and unfavourable lending conditions;
  - low transparency of banks' lending policies, whereby banks can change terms unilaterally, which discourages farmers from applying for finance;
  - strong collateral requirements imposed by banks and the lack of appropriate assets owned by farmers, especially urban real estates that are sometimes requested;
  - farms' lack of credit history and accounting records; and
  - lack of financial literacy of farmers, and inexperience in submitting business plans to apply for finance, or in preparing project documents under the Rural Development Programme (RDP).
- Young farmers (under the age of 40) encounter a variety of obstacles, including a scale down of the advisory activities available to them.

2.2.1 Drivers of total demand for finance

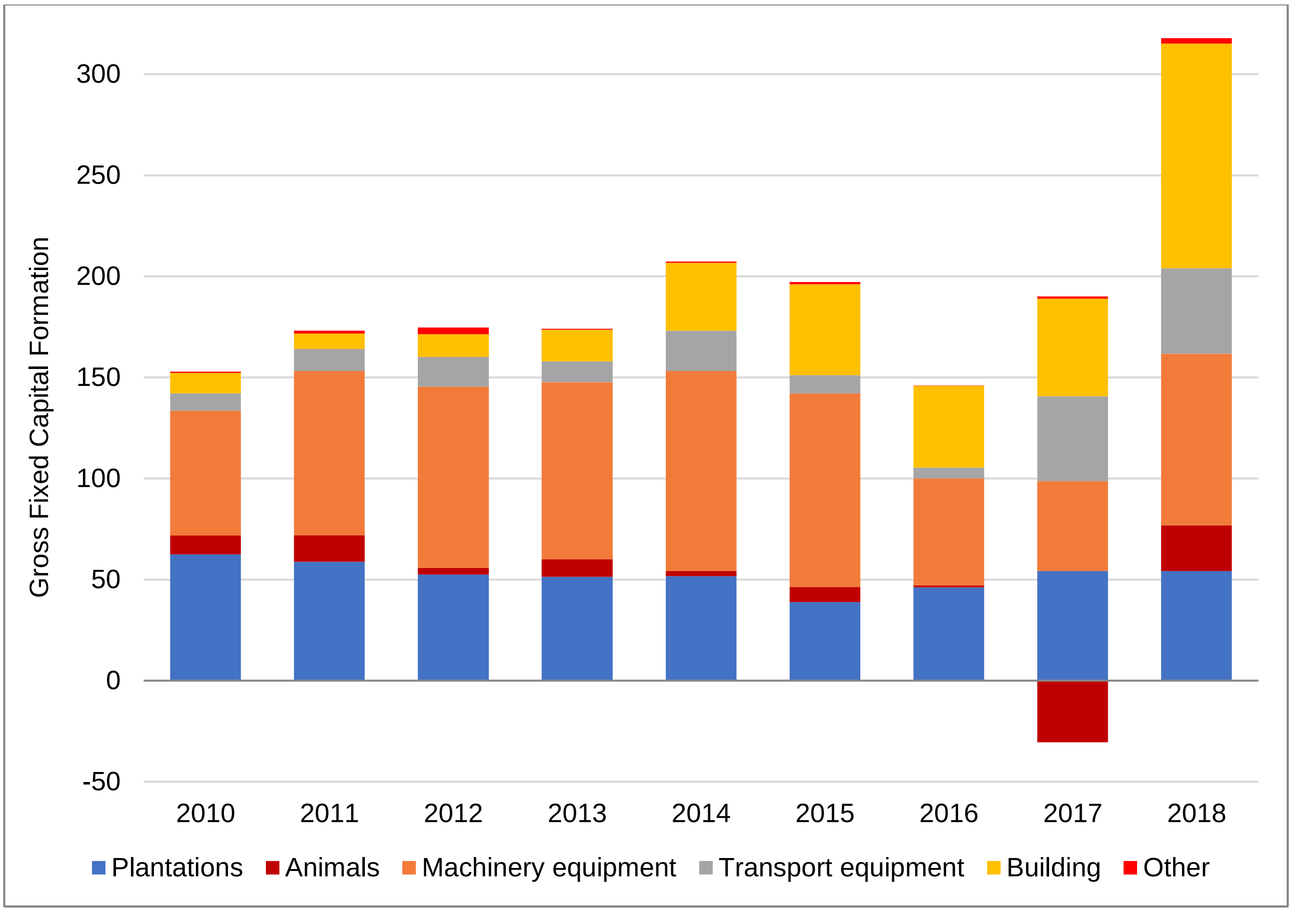
The development of gross fixed capital formation (GFCF) in Bulgarian agriculture peaked at EUR 318 million in 2018. However, with a 16.6% share of GFCF over GVA, Bulgaria has one of the lowest investment rates of all EU 28 countries. Between 2010 and 2013, GFCF grew modestly, reaching a high in 2014 before showing a negative trend for the period 2015 to 2017 (Figure 4). In 2018, investments grew significantly as farmers increased their investment in farm machinery and equipment (growth of 90% in 2018, compared to 2017) as well as transport equipment (growth of 600% in 2018, compared to 2016). Investment levels in perennials have remained stable. Investments in buildings were also stable, but in 2018 showed a record level of more than EUR 111.1 million.[12] This growth in investments and assets is strongly linked to the grant calls for investments launched under the national rural development programme (RDP). In 2015 and 2016 two calls

12 In comparison, investments in buildings were only EUR 10.15 million in 2010.

were initiated with a significant public budget of EUR 177 million and EUR 237 million, respectively (in principle, farmers are obliged to also contribute to their projects, if selected, with their own resources, which further increases the total investment amount). Farmers with signed contracts have a limit of 18 months to start their investment. Keeping in mind the administrative time necessary for evaluating and selecting projects and for concluding contracts, alongside the aforementioned requirement for the initialization of the project after the signature of the contract, the GFCF growth rates are not a surprise.

In 2018, 79% of GFCF in Bulgarian agriculture was used for indirect agriculture assets, such as machinery, technical equipment and buildings, as opposed to direct agriculture assets, such as perennials and livestock. The GFCF for livestock was actually negative in 2017. The reduced investment in animals could be the result of a continuous decrease in the number of livestock farms. Particularly many small farms stopped with animal farming. Compared to 2016, livestock farms raising cattle decreased by 15.1% and those with buffalos decreased by 6.1%. The number of sheep and goat farms decreased by 14.6% and 22.3%, respectively, and of those with pigs - by 26.4%.[13]

Figure 4: Development of Gross Fixed Capital Formation in the Bulgarian agriculture sector, 2010-2018, EUR million



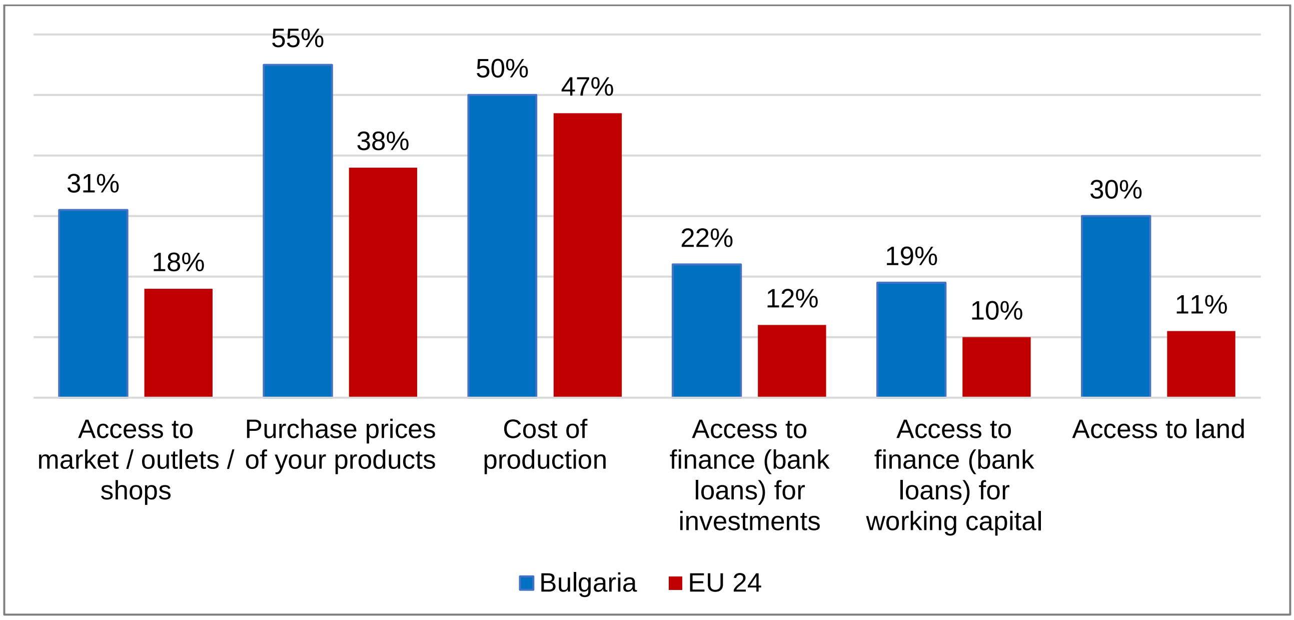
Source: Eurostat – Economic Accounts for Agriculture (value at basic prices), 2019.

According to the *fi-compass* survey, access to finance is a significant difficulty for the Bulgarian farmers. Compared to EU 24, Bulgarian farmers have experienced more problems across all the surveyed topics. More than half of them (55%) expressed concerns with regards to the (low) purchase prices of their production and another half faced difficulties with the (high) cost of production (Figure 5). Approximately one-

13 Bulgarian Ministry of Agriculture, Food and Forestry, 2018, Annual Report on the situation and development of agriculture (Agrarian Report 2018), https://www.mzh.government.bg/media/filer_public/2019/05/22/agraren_doklad_2019_bg.pdf.

third (30%) also saw access to land as a significant challenge. With regards to loans for investment or for working capital, nearly twice as many farmers in Bulgaria have problems accessing finance compared to the EU 24 average.

Figure 5: Difficulties experienced by farmers in 2017



Source: fi-compass survey.

The difficulties experienced by the Bulgarian farmers are well reflected in their demand for finance, which is determined by the following main aspects:

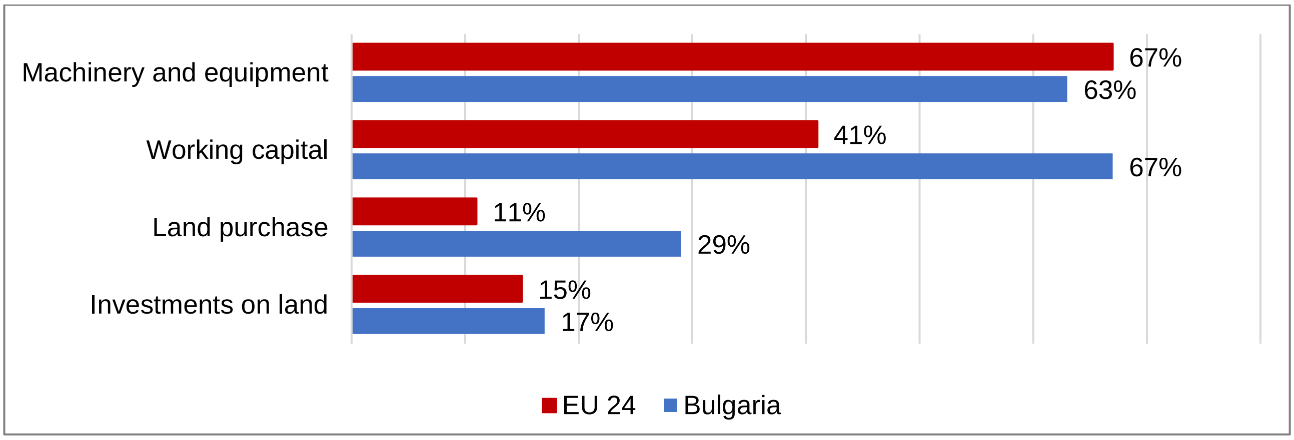
(i) working capital needs;

(ii) modernisation of agriculture enterprises (including the purchase of machinery); and

(iii) the purchase of additional (arable) land.

The *fi-compass* survey shows that the demand for finance by farms is driven by working capital (67%) and investment needs (Figure 6). With regards to investment, around 63% of the farmers request finance for the purchase of machinery and equipment, while 29% require finance for the purchase of land.

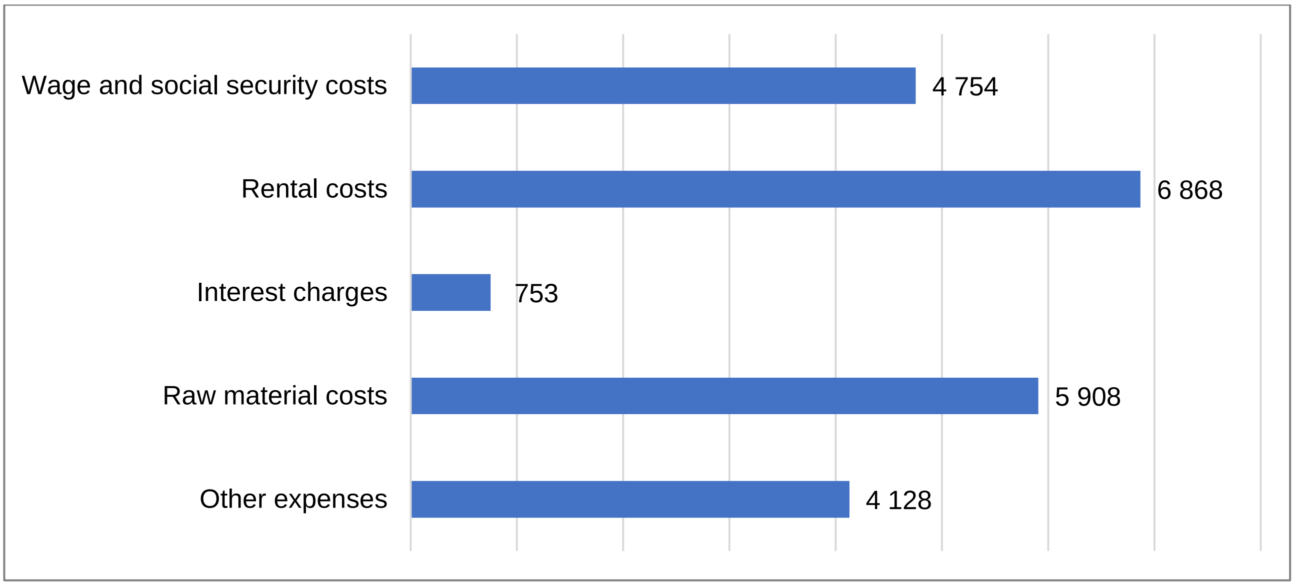
Figure 6: Purpose of bank loans in the agriculture sector in 2017



Source: fi-compass survey.

The majority of farmers require financing to satisfy their working capital needs. This need is detailed in Figure 7, which shows that most working capital needs relate to rental costs (with EUR 6 900 on average per farm), followed by material costs (with EUR 5 900 on average per farm). A large part of the working capital is also used to cover wages and social security payments (with an average of EUR 4 800 per farm annually).

Figure 7: Finance needs for working capital, EUR, average per farm in Bulgaria



Source: Calculations, based on FADN-Bulgaria, 2019.

Rental expenses for land make up the largest share of working capital expenses. In 2018 alone, the average rental price in the country increased by 4.7%. Renting a hectare of land was EUR 245 (BGN 480[14]) in 2018, compared to EUR 235 (BGN 460) a year earlier. The most expensive land was that in North East Bulgaria, with a price of EUR 353 per hectare (BGN 690), while the cheapest was that in the South West, with a price of EUR 112 per hectare (BGN 290)[15]. Increases in rental prices also depend on the land purpose. For example, both the rent for arable land as well as permanent grassland increased by around 6.8% in 2017.[16]

Among the other key components of raw material costs are energy costs (with a total of EUR 460.5 million in 2018) and feeding stuff (with a total of EUR 427.8 million in 2018). This is followed by agriculture services (with a total of EUR 215.2 million in 2018), and fertilisers and soil improvement (with a total of EUR 180.8 million)[17].

Farmers with a planning perspective and an identified successor tend to invest more. Agriculture interviewees said that investment activity in tangible assets often depends on the willingness of the farmer's children to continue managing the business. The inheritance of the farm business plays a crucial role in the investment needs and decisions of farms, especially in the last two decades.

Investments in farm modernisation, including in machinery and equipment, as well as in the construction of buildings and facilities, is the second most important driver of the demand for finance. This is strongly supported by the growing number of successful projects financed under the Rural Development Programme (RDP). The largest demand for finance, independent of sub-sector, is seen for investments used in the construction of buildings and facilities. Machinery is the second most important reason. Overall, in reviewing FADN data (the latest available from 2017) for the wine and dairy sub-sectors, farms' medium and

14 Unless otherwise indicated, the following exchange rate is being used: INFOEURO at December 2017, 1 BGN = 0.5113 EUR.
15 Republic of Bulgaria, National Statistics Institute, 2018, Agriculture Land Prices and Rents in Agriculture in the Republic of Bulgaria.
16 Novinite.com, 2018, Agriculture Land Prices in Bulgaria rise 14.6% in 2017.
17 European Commission, DG AGRI, June 2019, Statistical Factsheet for Bulgaria.

long-term liabilities are higher than short-term liabilities (Table 1). For horticulture and field crops, FADN data indicates that farms have slightly higher levels of short-term liabilities on their balance sheet.[18]

Table 1: Assets and liabilities by farm type, 2017

Type of farming	Total assets, EUR	Total liabilities, EUR	Short-term liabilities, EUR	Medium and long-term liabilities, EUR	Liabilities to assets ratio, %	Short-term to total liabilities ratio, %	Number of farms
Field crops	234 397	63 710	34 722	28 988	27.2%	54.5%	23 070
Horticulture	81 727	20 686	12 413	8 273	25.3%	60.0%	4 310
Wine	555 480	127 572	37 647	89 926	23.0%	29.5%	660
Other permanent crops	80 567	25 316	17 911	7 406	31.4%	70.7%	2 310
Milk	61 104	7 586	3 437	4 149	12.4%	45.3%	10 140
Other grazing livestock	48 228	5 406	3 733	1 673	11.2%	69.1%	12 700
Granivores	696 666	159 528	114 445	45 082	22.9%	71.7%	1 210
Mixed	48 734	7 237	2 775	4 462	14.9%	38.3%	8 580
All farms	139 832	33 384	18 504	14 881	23.9%	55.4%	62 980

Source: Calculations using FADN data, 2017.

The need for arable land to expand the farm size and the farm's production capacity is another key element. This financing need is often driven by the fact that land, back in the 1990s, was restituted to its previous owners (from before year 1945) and/or their heirs, no matter if the new owners were living in cities or villages, and or not involved in agriculture. As a result, almost all parcels became co-owned by a significant number of owners, which made their sale, and even rent, rather problematic.[19] This preserved to great extent some of the co-operatives, while private farms started developing when large pieces of land were inherited or bought by others. It took more than 20 years for the land to become partially re-distributed among the society, including farmers and investors.

Finding available land parcels of good size and location is almost impossible these days. It is not rare for farmers, willing to grow and develop, to cultivate land in several different municipalities, which significantly increases their costs and obstructs their possibilities to monitor the production process. Moreover, there are regions where new entrants, including in livestock production, are 'blocked' from starting an activity as finding appropriate land for pasture is extremely difficult.[20] This has become a particular problem following the EU accession, when abandoned land, previously covering large parts of the country, suddenly became in demand (due to CAP support) alongside the high-quality land, and in a period of just a few years, it found new owners and/or users, and was brought back into production. The CAP direct payments also stimulated investors and a significant share of the agricultural land was actually bought by investment companies, especially created for that purpose, in the years prior the EU accession. Exchanges of large, consolidated parcels of municipality and/or state land with private, fragmented parcels, also occurred. This allowed certain private individuals and/or farm companies access to better land and easier possibilities for growth and development.

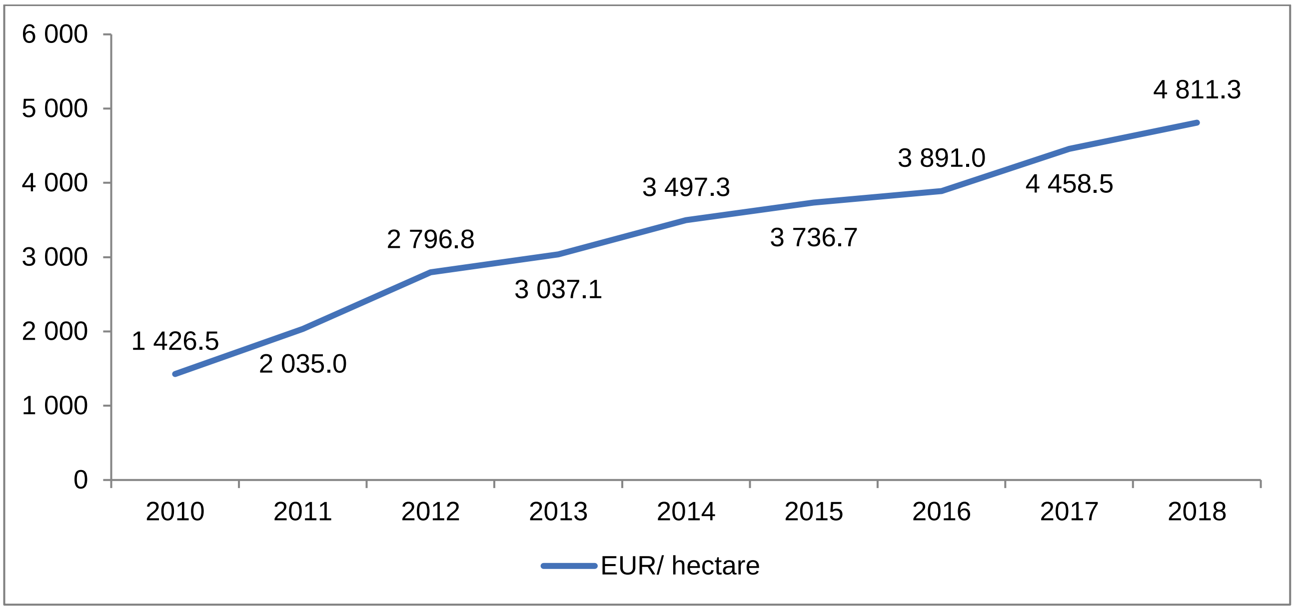
18 These differences could be caused by the different years the data sources refer to: FADN data is from 2017; the interviews with banks were conducted in 2019.

19 For more details on the land reform in Bulgaria and the rental relationships, see Noev, N., 2008, Contracts and Rental Behaviour in the Bulgarian Land Market: An Empirical Analysis, Eastern European Economics, 46:4, 43-74.

20 Another problem faced, for example, by dairy and sheep & goat sector is the lack of sufficient labour, including shepherds.

Over the eleven-year period from 2007 to 2017, the average land price in Bulgaria increased more than threefold (Figure 8).[21,22] Over the last couple of years, however, the rise in prices has been less dramatic as available parcels declined significantly. Arable lands have seen the highest increase (351% between 2010 and 2018), followed by orchards (221% between 2010 and 2016) and vineyards (180% between 2010 and 2016). The price for permanent grassland has largely remained constant. In 2018, the highest price of agriculture land was in Bulgaria's Northeast region, at EUR 6 877 (BGN 13 450) per hectare and there, sales are rarely happening.[23]

Figure 8: Evolution of land prices in Bulgaria, 2010-2018



Source: Elaborations based on data by Republic of Bulgaria, National Statistics Institute, Agriculture Land Prices and Rents in Agriculture in the Republic of Bulgaria, 2018.

The importance of the above drivers of demand for finance varies by agriculture sub-sector:[24]

- **Dairy farms** mostly purchase animals, buildings and facilities to set up or expand their business. Although the sector remains a mix of large-scale corporate dairy farms and small to medium-scale individual farms, there is a recent trend towards high-quality breeding and reproduction in medium and large-scale farms. These require significant initial capital alongside the purchase of a rather expensive dairy equipment ensuring the hygiene and preserving the quality of the produced milk. In the years before the EU accession, short-term liquidity in medium to large-scale dairy farms alongside veterinary services, inputs, even guarantees for bank loans, were often ensured by processors following the increased vertical integration in the sub-sector, as dairy processing companies tried to reduce the supply from small-scale individual farms

21 Some of these holdings followed the mass privatisation model and structures, while others were newly created. Some of them cultivate part of the land they own, but the majority of it remains rented out to other farmers. Rental payments increase and follow the level of the CAP direct payments.

22 The legal requirements for the sale of agricultural land are governed by Article 4a of the Law on the Ownership and Use of Agricultural Land. It provides for the right of the user with whom the owner has a lease or rental agreement for a period of five years or more, and has used the property for one or more years, to buy agricultural land under the same conditions as it is sold to a third party. Paragraph 5 of the same provision contains an explicit reference according to which in the case of co-owned agricultural land the right of redemption of users under Article 4a of the Law on Ownership and Use of Agricultural Land applies after the right of redemption of co-owners under Article 33 of the Law on Property. See: http://www.fao.org/faolex/results/details/en/c/LEX-FAOC164528.

23 Republic of Bulgaria, National Statistics Institute, 2018, Agriculture Land Prices and Rents in Agriculture in the Republic of Bulgaria.

24 Based on interviews with Bulgarian stakeholders (5 farmer associations, 30 young farmers, 11 banks and 1 association of credit cooperatives) and the focus group discussions (with 14 participants from the farming and banking sector).

delivering unstable quantities of rather low quality milk, and instead, secure stable flow of quality raw milk.[25] Contract innovations, in particular assistance programmes that farms receive from dairy processors, had a significant positive impact on farm growth.[26] Currently, and after 13 years with CAP support, large processors remain in contracts with medium and large-scale farms, but a different process is also observed as many medium-sized individual farms (with 150-250 cows) are trying to create their own processing facilities and market brand, to avoid the dependency on large processors (respectively to ensure better prices and incomes). Local production has gained importance, thanks also to increasing tourism and marketing activities. Organic farming and free range grazing livestock in the mountains is becoming a popular way of producing milk, especially from sheep, goats and buffaloes.

- The **granivores** sub-sector (pigs and poultry) is currently facing economic losses caused by the severe impact of the African swine fever (an annual loss of 8% of the total pig population and a loss of 14% of the female swine population is expected).[27] In 2018-2019 the disease affected also the large industrial farms and excellent high-quality animals with proven family origin were lost. This is driving the sub-sector to request financing to (1) construct facilities to prevent the illness from spreading further or returning[28] (i.e. biosecurity investments) and to (2) support working capital requirements (i.e. the breeding farms concerned must exterminate and bury all ill animals at their own expense). Subsequently, these farms are quarantined and no breeding activities can take place for 12 months after the discovery of the disease and the extermination of the ill animals.[29] Additional and significant resources will be needed in the coming years for restoring the lost potential, for maintaining the protection measures and for re-establishing the sub-sector in the local and foreign markets.
- For **arable farms,** investment needs in machinery (especially in new modern tractors and harvesters) was the leading need in the first years after EU accession, followed by buildings and facilities for storage, and for land purchases. Not surprisingly, in the first RDP programming period applicable to Bulgaria (2007-2013) a significant part of the EAFRD finance for farm modernisation was earmarked for the cereal producers and their investments. Grain-producing farms (9.5% of all farmers were grain producers in 2016)[30] occupy larger areas of agriculture land. The vast majority are predominantly large-sized farms, have already purchased state-of-the-art agriculture machinery (combine harvesters, tractors and relevant equipment), with own resources, bank loans and/or EAFRD support, that is used in crop production. Grain producers are possibly the most innovative segment, possessing the newest equipment and the highest level of technical knowledge. The purchase of (additional) land enables them to not only receive CAP direct payments as financial support, but also to keep this income for the farm (and not to pay it out immediately as a rent), to guarantee its future existence and to ensure that the size of the parcels corresponds to the capability and the efficient use of the new machinery they own.
- **Grape-growers** have invested in buildings, facilities and land purchases as the re-planting of vineyards and ensuring stable the quality of grapes are the main factor driving the demand for finance. Often these investments were done by wine processors who have closed down the production cycle. This was stimulated by the privatisation in the sector and the inflow of FDIs.[31] Wine production requires also substantial levels of investment in buildings and facilities, such as warehouses, wine stabilisation tanks, wine barrels and bottling lines. These assets are an essential part of the investment strategy of the wineries, as the establishment of production lines and the possibility for maintaining the same level of high-quality wines every year requires much higher levels of finance than for other sub-sectors. Interestingly, these assets (especially new/modern ones) are seen by financial institutions as more valuable than those in other

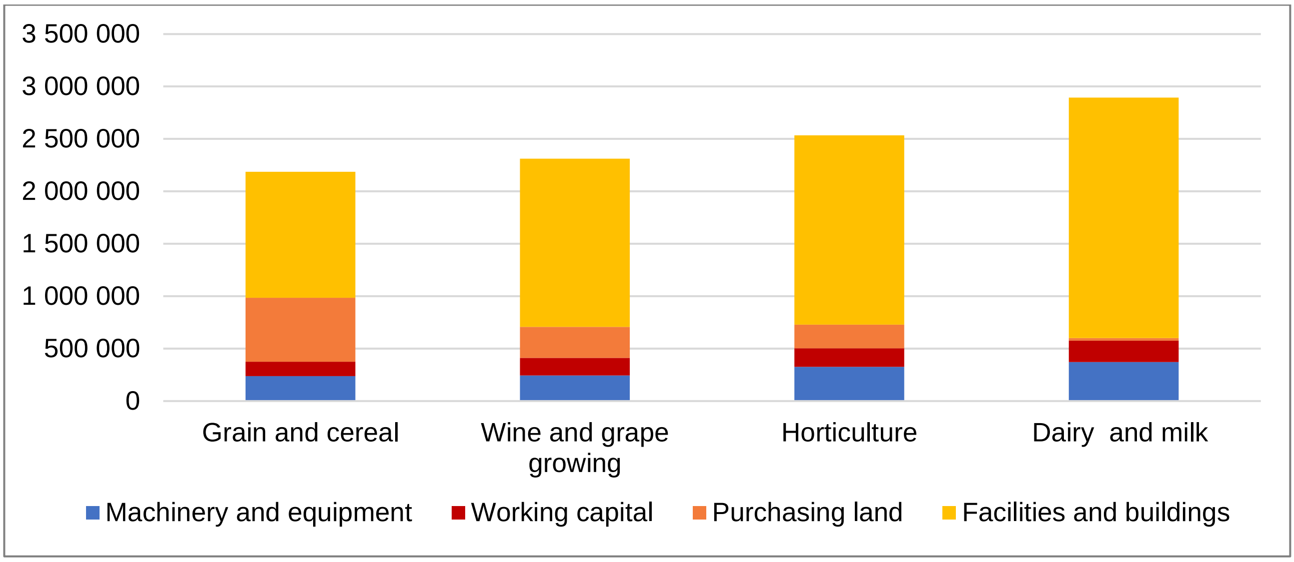
25 For more on the vertical integration in the sector, see Noev et al., 2009 and Dries et al, 2009. In Bulgaria, they prove with survey data that processors offer assistance to their milk supplying farms among which are credits for general or specific investments, access to inputs for on-farm feed production, and importantly, bank loans guarantees.
26 See van Herck et al, 2012, for more details on these findings for the Bulgarian dairy sector.
27 Bulgarian Ministry of Agriculture, Food and Forestry, 2019, Annual Report on the State and Development of Agriculture.
28 As the disease is spread among pigs by direct and indirect contact.
29 African swine fever also has effects on the processing sector as processors do not have the needed high quality raw materials to produce the required quantities. Consequently, they may turn to imports from neighbouring countries.
30 According to the 2016 farm survey. The subsequent farm survey is due in 2020.
31 FAOSTAT, 2019, Foreign Direct Investment (FDI).

sub-sectors, and wineries can therefore get easier access to medium and long-term loans if they use them as a collateral.

- For **horticultural farms**, which are usually small-sized holdings, most investments are in buildings and facilities. In these farms, production requires the construction of greenhouses, warehouses and refrigeration facilities. Greenhouse production, which is growing in importance and is mostly located in the Central South part of the country, also requires significant investments in equipment.

Bank lending to the Bulgarian agriculture sector is the highest for facilities and buildings. Data on lending activity to the agriculture sector from three banks show that the highest outstanding loans are for facilities and buildings, followed by machinery and equipment (Figure 9). Working capital loans play a smaller role. This is likely due to the lower value of these loans compared to investment loans, which explains the divergence from the *fi-compass* survey. In addition, the working capital needs of small-sized farms are often covered by Non-Bank Financial Institutions (NBFIs) rather than banks. Supplier finance is of limited relevance in Bulgaria. Figure 9 indicates that most of the agriculture lending by banks was to the dairy and milk sub-sector. Within this sub-sector, most of the financing was for investments into facilities and buildings, followed by machinery and equipment, and then working capital. The purchase of land played a more important role for grain and cereal producers, even though most of their investments also went into facilities and buildings.

Figure 9: Breakdown of loans received by agriculture in 2019, EUR



Source: Calculations, based on data received from three commercial banks, 2019.[32]

Young farmers in Bulgaria are divided in two main groups based on their 'origin': many are entering the sector as employees in their family farms and are gradually taking over the management of some parts of the business. Others have tried on their own, which require much more efforts and financing, as they start from zero. As part of them, there is also a small group of young farmers who start in the business by co-operating with older farmers that have excessive assets for management or are unwilling to spend much time on their farms and look for someone younger and energetic to whom to 'rent out' their facilities/assets/parts of the farm.

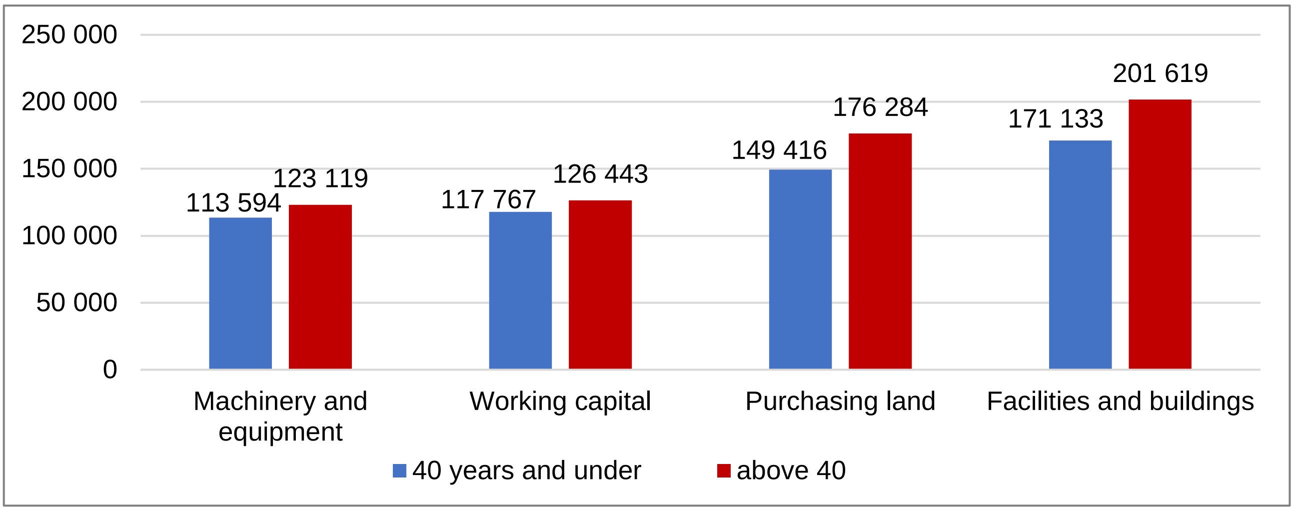
Young farmers and new entrants need infrastructure, such as facilities and buildings, and land, to establish their business. In interviews, they confirmed that this is the main driver of their financing needs and that their difficulties in accessing finance are often related to the lack of assets that can be used as collateral for medium and long-term loans.

Older and established farmers have easier access to finance and can obtain loans of high amounts. This is shown in Figure 10, where disbursed loans to commercial farms are broken down according to whether

32 These include: Unicredit Bulbank, United Bulgarian Bank – UBB, Teksim Bank.

the farmer is young (under 40) or older (40 and above). The loan amounts obtained by older farmers have been increasing, as they obtained loans to step up their production capacity. In turn, this has given them a basis for scaling up output. For older farmers, the desire to change the size of the holding is also more pronounced, as reflected in their higher investment activity. Young farmers, in contrast, are often new entrants into the sector and, given the high risk of initial investments in the agriculture sector, they are often only provided with lower loan amounts. The figures below confirm this trend, but this could be skewed as they are based on data received from only three banks.[33]

Figure 10: Average loan amounts received in Bulgaria in 2019, by farmer age, EUR



Source: Calculations, based on data received from three commercial banks, 2019.[34]

The CAP is a strong vehicle for investment support. The CAP is essential for the Bulgarian agriculture, as direct payments (Pillar I) and the rural development grants (Pillar II) play an important role in maintaining businesses and their incomes, and in stimulating demand for investment and development, which results in higher needs of finance.

Farmers' incomes are strengthened by the CAP direct payments. Banks like using the farmers' access to direct payments as a guarantee for loans of similar amounts. Direct payments are also used by medium and large farms for the modernisation of their enterprises and for covering some running costs.

In 2018, Bulgaria received a total of EUR 1.15 billion of CAP support. Direct payments were the most important component of CAP funds, at EUR 0.78 billion (representing 68% of total subsidies for the country) while the RDP accounted for EUR 0.3 billion (29.4%).[35]

The investment needs of Bulgarian farmers are substantially supported by the EAFRD. The Bulgarian RDP for the full programming period 2014 to 2020 is budgeted at EUR 2.9 billion. Of this, EUR 2.4 billion is provided by the EAFRD, EUR 28 million is transferred from Pillar I of the Bulgarian envelope for direct payments, and EUR 0.5 billion is the national contribution. At the time of adoption of the RDP 2014-2020, the biggest measure in budgetary terms was Measure 4: Investments in physical assets, with EUR 841 million. Measure 6, where young farmers are financed, had EUR 271 million in planned expenditures, placing it as the 4thin terms of monetary importance, intervention.[36]

33 Non-bank financial institutions (NBFIs), who typically finance small-sized farms, are not included in the sample.
34 Data is based on the banks' Management Information System (MIS) using their classification. The MIS only captures intervals of 10 years (for the age category). Thus, 40 years has to be used as reference instead of 35 years.
35 European Commission, DG AGRI, June 2019, Statistical Factsheet for Bulgaria.
36 European Commission, 2015, Factsheet on 2014-2020 Rural Development Programme for Bulgaria.

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

Sub-measures	Amount requested from all applications (EUR million)	Amount provided by the grant calls under the RDP (EUR million)	Amount not satisfied (EUR million)	Number of received applications	Number of non-supported applications	Number of approved applications with signed contracts
4.1 Support for investments in agricultural holdings	1 350.2	413.8	936.4	6 288	4 860	1 409
6.1 Business start-up aid for young farmers	112.5	57.0	55.5	4 501	2 396	2 105

Source: Paying Agency (State Fund Agriculture), 2020. Preliminary data.

Note: The 'Amount requested from all applications' and the 'Amount not satisfied' are calculated based on all received applications before any administrative check regarding eligibility or selection criteria have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not allowing for their evaluation, and/or with insufficient value-add, and/or ranked at a place for which the budget under the call is no longer available. Some applications could have been also withdrawn or contracts annulled or interrupted.

Farms show significant interest in the investment and start-up support from the RDP and the financial requests are much higher than the available budget. By the end of 2019, farmers had asked for EUR 1.3 billion of total public support, about three times more than what was available under the programme for on-farm investments (sub-measure 4.1; Table 2). Most of the beneficiaries (84% of those with signed contracts) have been from the fruit & vegetable sub-sector as well as from the livestock sub-sector. This high demand was also present for the start-up support requested by young farmers (sub-measure 6.1), although its financial dimension is much smaller compared to farm modernisation, as there is also a limit of the public support that a young farmer can receive. Still, the initial requested budget (before any administrative check to be implemented) has been twice as high as the available funds under the calls. In total, 1 409 farmers and 2 105 young farmers had signed contracts for grants under the two sub-measures by the end of 2019.

As an outcome, many applications, even if eligible and evaluated under the selection process, remain outside the support framework. When this is combined with the restrictive and rather risk-averse policy applied by the few banks supplying credit to agriculture, which often links their financing to an RDP grant project, it can easily be concluded that agriculture development in Bulgaria is considerably slowed down by the lack of sufficient funding capital. In addition, it is difficult to find cases where bank financing to farmers have been given with favourable conditions. If no corrective measure is taken then this growth hold-up problem will have negative medium to long-term effects, as demand will only continue to grow in the coming years – as stated by the majority of farmers and banks in the surveys carried out in the context of this study (and before the COVID-19 crisis).

Interestingly, Bulgaria has a thematic programme for small-farms' development with a specific budget of EUR 12.5 million made available for farm investment in sub-measure 4.1 in 2018. Surprisingly, the submitted applications (before any checks) totalled only EUR 3.99 million, i.e. around 3 times below the resources made available.[37]

The Managing Authority recently decided to launch a new risk-sharing financial instrument supported by the EAFRD. Based on the experience of the financial instrument in the 2007-2013 period, the Managing Authority has actively started discussions for a new instrument in the 2014-2020 programming period. Bulgaria

37 Part of this lack of demand could relate to difficulties for small farms to prepare the necessary documentation, lack of private resources to complement the grant and/or lack of sufficient knowledge about the call and its conditions.

became the first pilot case under the targeted coaching on financial instruments launched by the Directorate-General for Agriculture and Rural Development and the European Investment Bank (*fi-compass*) for training of the administration staff on the subject of financial instruments. In 2018, the Managing authority completed the ex-ante assessment for the usefulness of setting-up financial instruments under the EAFRD. As an outcome of the political and economic changes in the country, preparatory work for the creation of a new financial instrument began in 2019. By April 2020, the RDP was modified and a new risk-sharing financial instrument - Credit fund – is now under preparations to be launched. Its implementation is expected for after mid-2020 and the instrument will be managed by the national Fund of Funds.

This new EAFRD financial instrument is created as a pilot project that has to respond to three sub-optimal investment situations in the country, namely (i) restricted access to finance for farmers; (ii) very high interest rates imposed by the banks on farm loans, and (iii) the banks' risk-aversion towards investments in the sector. While the initial budget is rather limited for various reasons (EUR 20 million; Table 3), including the end of the programming period approaching, its design aims to involve banks in sharing the risk with the EAFRD resources, thus (at least) doubling the available budget for farmers. Agriculture businesses will have the possibility to apply for stand-alone loans, in which case the RDP money will cover up to 70% of the credit amount and will be provided to the banks for free. The remaining funding will have to be provided by the bank(s) selected as the implementing body. For farmers willing to finance their grant projects under the RDP, the bank will have to finance at least 50% of the loan amount. The financial instrument will support on-farm investments (sub-measure 4.1), agri-food processing (sub-measure 4.2), non-agricultural activities in rural areas (sub-measure 6.4) and viable projects under LEADER. Not surprisingly, and in line with the findings of this study, the ex-ante assessment states that the discouraged businesses in the Bulgarian economy is constantly growing and was 6% in 2017.

Table 3: Planned indicators under the new risk-sharing EAFRD Financial instrument in Bulgaria

Type of product under the financial instrument	Allocated RDP budget (EUR million)	% RDP participation (maximum)	Total expected volume (EUR million)
Loans for co-financing grant projects under the RDP	5.0	50%	10.0
Stand-alone loans	15.0	70%	21.4
Total	20.0	64%	31.4

Source: Bulgarian Rural Development Programme, 2020.

Main findings of the ex-ante assessments for the use of EAFRD supported financial instruments in Bulgaria for the agriculture sector[38]

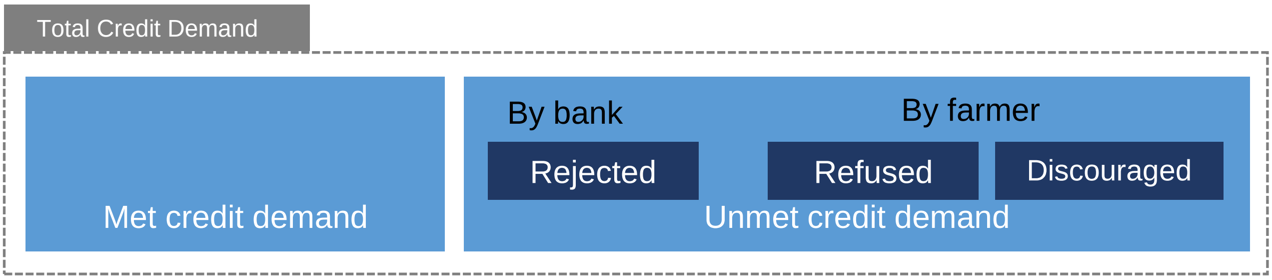
- The distribution of loans, in terms of maturity, is 47.5% for short-term and 52.5% for long-term loans.
- Since 2011, interest rates on newly extended loans have fallen from nearly 10%, reaching an average of 4% in 2017.
- The level of discouragement has increased, reaching 6% in 2017.
- Several difficulties in accessing finance for the agriculture sector were identified:
  - an absence of banks specialised in agriculture finance;
  - high interest rates (the main problem identified by businesses) and
  - high collateral requirements by banks, which are a specific problem for small and medium-sized farms and enterprises active in rural areas.
- The financing gap is highest for young farmers, who currently account for over 20% of funding. The problems they face are related to their high investment risk and the economic viability of their enterprises. Lack of sufficient collateral is also an issue, as is a lack of credit history.
- In addition, 46% of the financing gap can be attributed to very small-sized enterprises (with up to 10 employees).
- The negative impact of the existing gap also concerns other farmers and those benefitting from RDP grants.
- There is a significant misbalance between demand and supply of financing in the agriculture sector. The calculated gap in the financing is EUR 469.6 million for the agriculture sector and EUR 152 million for micro enterprises in rural areas.
- Despite the overall improvement of the indicators linked to access to finance over the last years, there is a growing share of discouraged to apply for (bank) finance enterprises, which is 6% of all businesses in the country in 2017.
- Recommendation: proposed financial instruments should include partial risk sharing. This would increase the amount of funding offered and ensure that final beneficiaries are selected in accordance with good practice. The possibility to combine financial instruments and grants should be retained.

2.2.2 Analysis of the demand for finance

The potential total demand for finance combines both met and unmet demand. The met demand consists of the value of all applications for finance which were accepted by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial institution, offers of credit refused by farmers, alongside cases where farmers are discouraged from applying for credit due to an expectation of rejection or refusal (Figure 11).

38 Ministry of Agriculture, Food and Forestry, Republic of Bulgaria, May 2018, Ex-ante assessment for the use of financial instruments to be applied under the Bulgarian Rural Development Programme 2014-2020, Report, Sofia.

Figure 11: Schematic overview of the demand side of agriculture

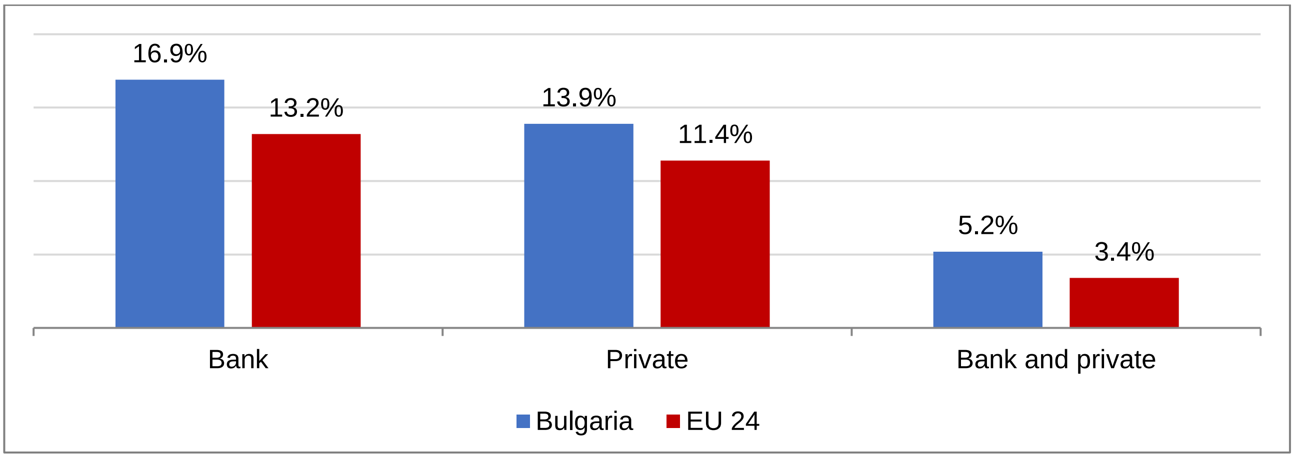


Source: Ecorys, 2019.

Based on the results of the *fi-compass* survey, the unmet demand for the agriculture sector in Bulgaria is estimated at EUR 1.2 billion.

Bulgarian farmers cover their financing needs through bank loans, savings, and by relying on friends and family.[39] Over 42% of all Bulgarian farmers asked for finance in 2017 (Figure 12), which is higher than the average for the EU 24. Applying to banks is more popular than using private finance but, nevertheless, almost 20% of the sector rely on private financing sources. Partially, this is also due to fears that their loan application could be rejected or that loans are too expensive (see subsequent analysis for more a more detailed explanation). In this context, interviews with farmers confirmed that over the last years bank financing is becoming a more attractive option rather than asking family or friends for money, although not sufficiently enough to prevent them from using informal financing. The total demand for finance from private sources is estimated to be between EUR 90 million and EUR 180.1 million.[40]

Figure 12: Bulgarian farms applying for finance in 2017



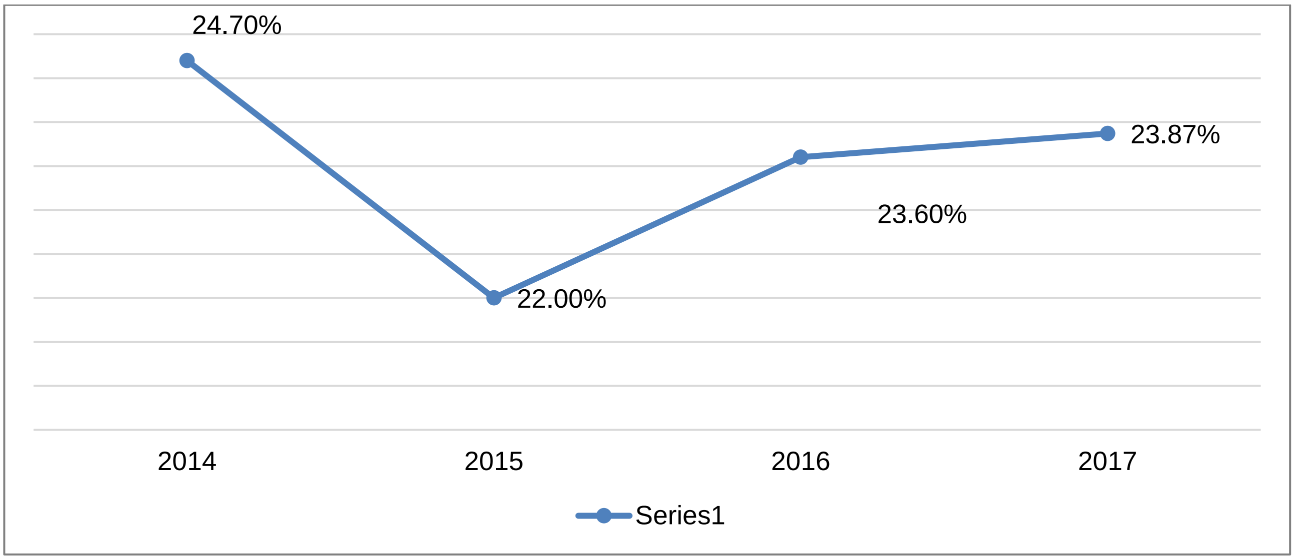
Source: fi-compass survey.

In recent years, there has been a steady growth in the deposits and loans that farmers use to cover their financial needs.[41] The liabilities of Bulgarian farms have been growing at the same pace as their assets (Figure 13), and in line with the EAFRD grant calls for farm modernisation. In the period 2014-2017, the ratio of assets over liabilities has remained relatively constant at around 23%. This means that most of the farmers'

39 This is in line with the findings of the fi-compass survey that indicates bank use: 16.9 % of respondents indicated that they applied for bank finance (3.7 % more than for EU 24) whereas only 13.9 % asked for finance from private individuals. 5.2 % of respondents applied for finance from both sources.
40 Ecorys calculation based on survey results, 2019. The volume of private financing is based on the percentage of *fi-compass* survey respondents saying that they utilise private financing (disaggregated by farm size) multiplied by the assumed volume of private financing (EUR 5 000 and EUR 10 000).
41 According to National Bank of Bulgaria data.

financial needs are met by their own funds (deposits or own savings, or CAP payments) rather than loans. There are no large differences among sub-sectors. For horticulture, dairy and granivore they are all around 22%. Only grape growers have significantly lower liabilities compared to their assets showing that few assets have been funded by debt.

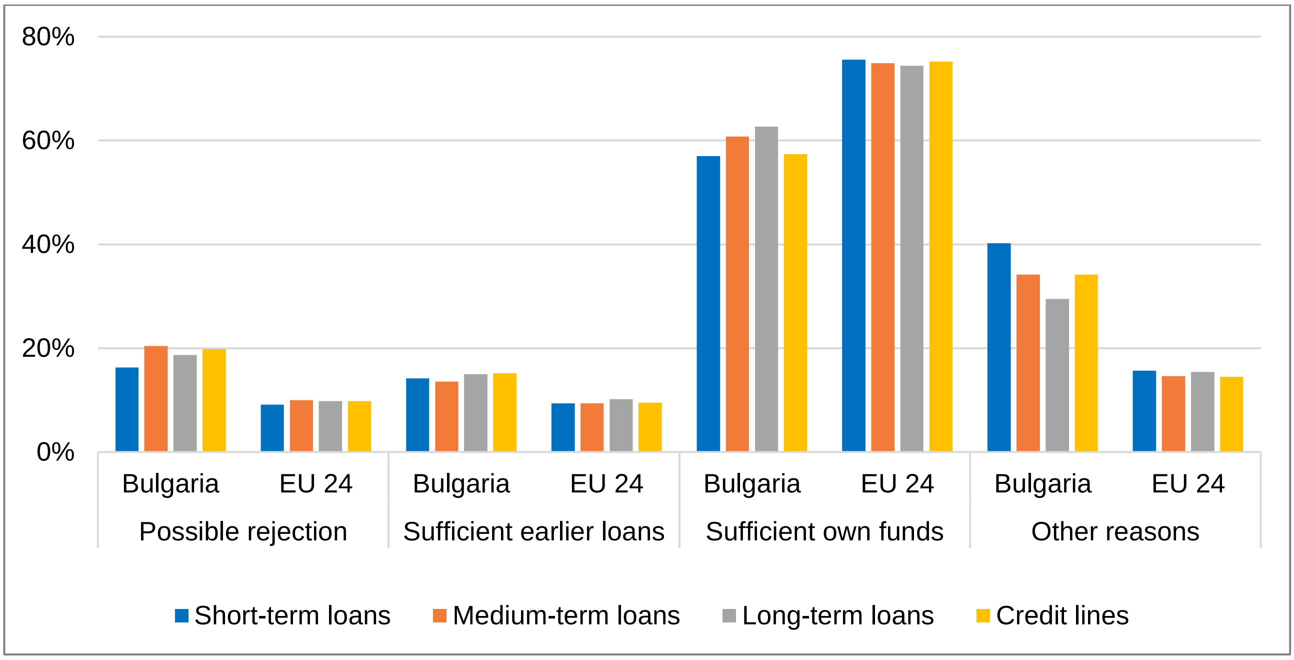
Figure 13: Assets over labilities ratio of Bulgarian farms, 2014-2017, %



Source: Calculations, based on FADN (2012-15), 2019.

According to the *fi*-compass survey, the key reason Bulgarian farmers did not apply for finance in 2017 was their sufficient level of own funds. This was the case for around 60% of the farmers, compared to 75% for the EU 24 (Figure 14).

Figure 14: Reasons for not applying for loans in the agriculture sector in 2017



Source: fi-compass survey.

The reluctance or the discouragement of farmers to apply for loans are the key underlining factors of the unmet demand (around 20% of respondents). When looking at loan products, Bulgarian farmers are more likely to be discouraged in applying for credit lines and overdrafts. Discouragement levels are also higher compared to the EU 24. The fear of a possible rejection can also be explained by a wide-spread lack of trust in the banking system, following the bankruptcy of one of the largest Bulgarian banks in 2014 due to fraud and insider trading (Section 2.3.1.3 for further details) alongside the general perception of banks about agriculture and the value of their assets, especially those in remote rural areas and/or owned by small farms. Discouragement may be an explanatory factor for the lower rejection rate in the country (than in the EU 24), as farmers may refrain from applying for loans in the first place and initial meetings with bank officers may discourage them further from applying. Not surprisingly, mostly small-sized farms are those discouraged.

According to the *fi-compass* survey, a significant share (35%) of the Bulgarian farmers had 'other reasons' (than those above) for not applying for finance. The majority of these 'other reasons', based on the results of interviews carried out with 30 young farmers[42], are outlined below and shown in Figure 15. Interviews with farmer organisations confirmed further that the below list of issues also applies across all sub-sectors and can be treated as a general aspect of the problems faced by all farmers:

(i) **Lack of transparency in banks' loan policies towards agriculture** – 65% of the group of young farmers (who received loans) stated that bank policy can be changed unilaterally, without notification from the bank, and that this may force borrowers into situations where they have additional unforeseen liabilities.

(ii) **Lack of collateral** – banks dislike and do not accept movable assets as collateral (e.g. livestock, vehicles, etc.), preferring instead other property to secure loans, such as city apartments or houses.

(iii) **Unattractive loan conditions** – 33% of the group of young farmers demanded more attractive conditions for obtaining loans in the future, given the currently relatively high interest rates. Further, most farmers felt that they were stuck with personal loans only, which carry higher interest rates than the business loans available to other sectors.

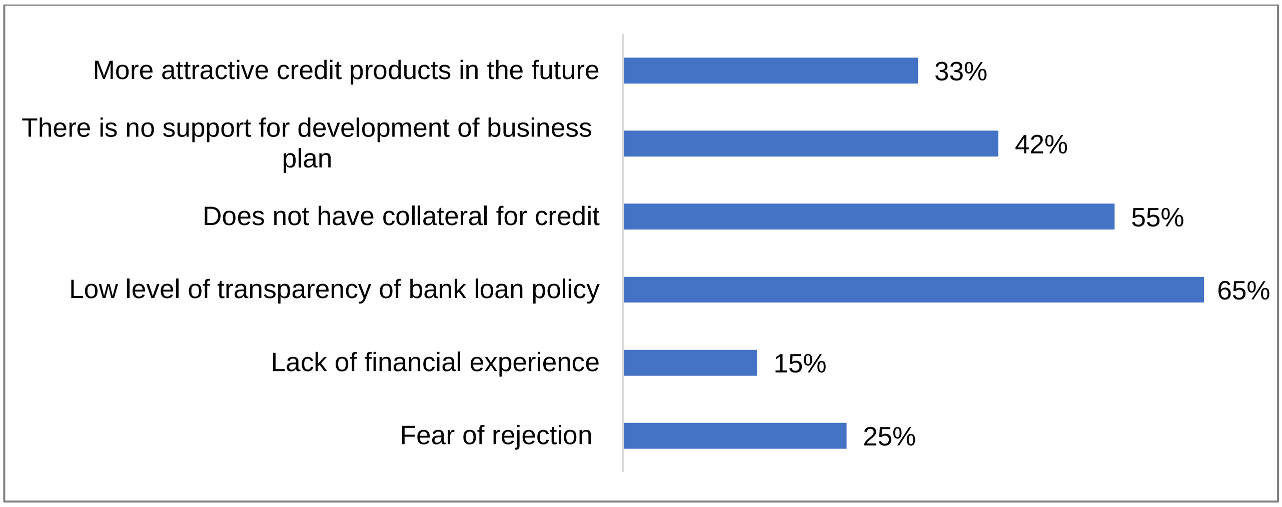
(iv) **Fear of rejection** – 25% of them said that they did not apply for financing due to the fear of their application being rejected by the bank, which is close to the results presented in Figure 14.

(v) **No business plan** – 42% of the group of young farmers noted that when applying for loans banks required them to have a business plan. This is something they typically lack support in developing themselves or for which they have to rely on costly consultants.

(vi) **Lack of financial literacy** – 15% of young farmers said that their lack of financial experience (in terms of fully understanding loan products and the obligations associated with them) is a significant barrier in applying for bank loans.

42 In 2019, for the purpose of the study a semi-structured interviews with 30 young Bulgarian farmers were carried out, to obtain more information on the current situation of young farmers in terms of access to finance.

Figure 15: Reasons why young farmers in Bulgaria did not apply for finance (despite having a need), 2019

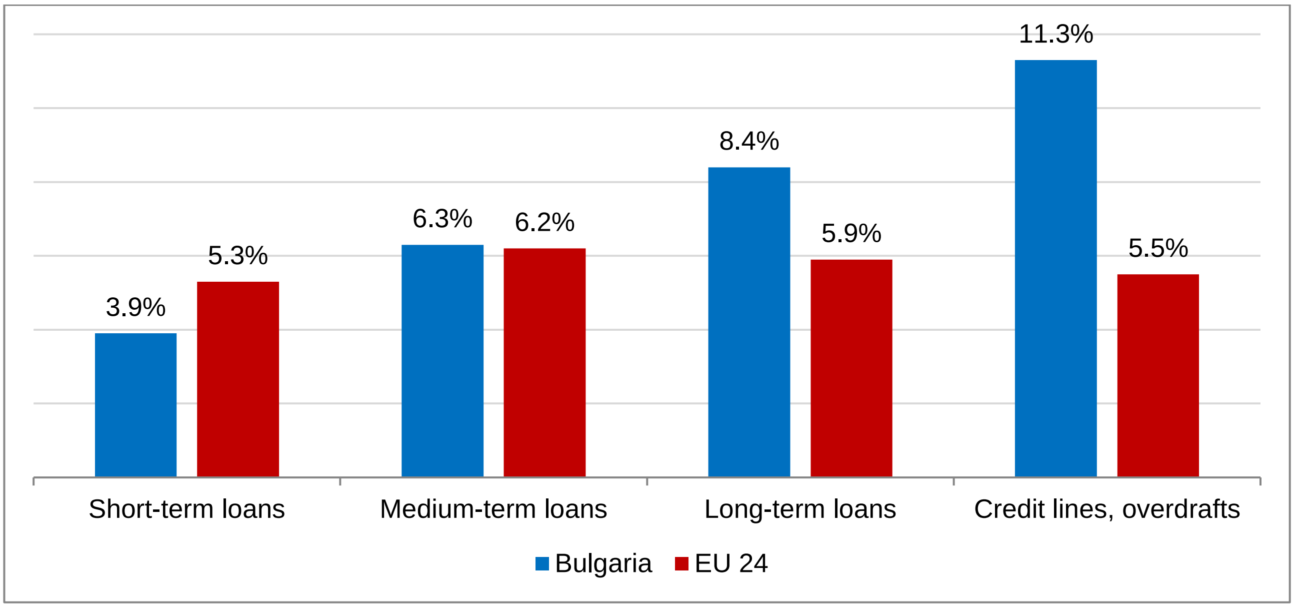


Source: Survey results based on data from interviews with 30 young farmers for the purpose of this study, 2019.

Farmers demand mostly credit-lines and overdrafts from financial institutions (

Figure **16**), followed by long, medium and short-term loans. Compared to the EU 24, more than twice as many Bulgarian farmers applied for credit lines. Long-term loans are also in higher demand. The demand for investment loans is partly connected to RDP supported investment measures. Farmers that have already received support under grant contracts with the State Fund Agriculture (Bulgarian Paying Agency) have higher access to medium and long-term loans, because banks recognise this contract as collateral. According to information obtained through the focus groups, a crucial factor in banks' lending decisions is the receipt of the advance payment under the measure that the project is funded from (measures with advance payments are M.4 'Investments in physical assets' and sub-measure 6.4 'Investment support for non-agriculture activities').

Figure 16: Bulgarian farms applying for finance in 2017, by financing product

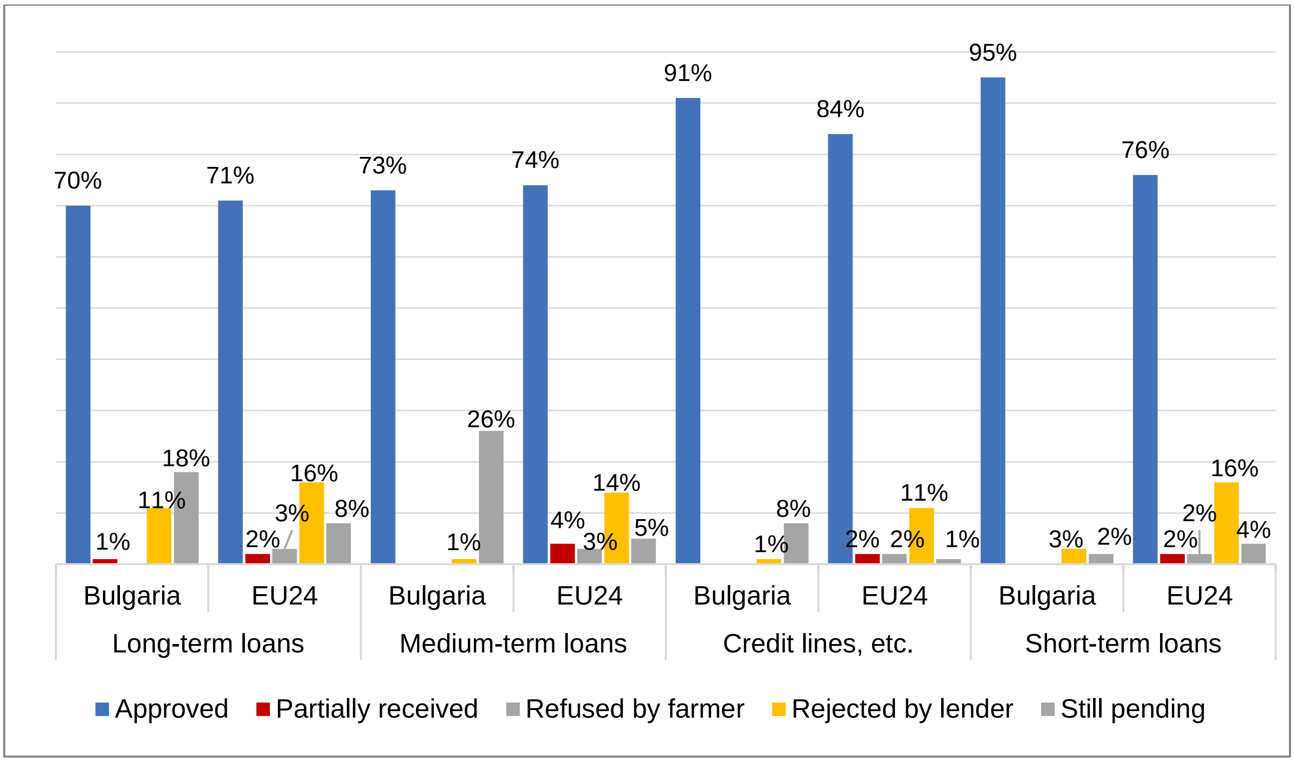


Source: fi-compass survey.

The average loan amount depends heavily on the size of the farm (Figure 17). According to discussions with the focus groups, small and medium-sized farms have comparable financing needs, while the needs for large-sized farms are much higher. The latter group requires more than double for short and medium-term loans and nearly double for long-term loans. On average, the standard loan amount for small farms is around EUR 15 000 for short-term loans, EUR 20 000 for medium-term loans and around EUR 60 000 for long-term loans. For large-sized farms, the standard loan amount is EUR 30 000 for short-term loans, EUR 45 000 for medium-term loans and around EUR 110 000 for long-term loans.

According to interviews,[43] **Bulgarian farmers receive more loan rejections than all other entrepreneurs.** This is why they often have to cover their needs with their own savings or by obtaining financing through their friends or family (mostly for short-term working capital purposes). As already reported above, the demand for finance is very often self-restricted due to a fear of loan rejections. Farmers face a higher rate of rejection for long-term loans (11%) than for short-term loans (3%) (Figure 17).

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



Source: fi-compass survey.

The rejection of loan applications by financial institutions is a key reason for the high unmet demand, with small-sized farms accounting for the highest absolute number of rejected applications. In the *fi-compass* survey, farmers mentioned that the main reasons given by banks for refusing their applications were the high risk of their investment (96% of farmers had their application rejected for this reason), banking policy limits (81%), economic non-viability of the farm (12%) and a lack of collateral (10%).

In addition, the interviewed group of 30 young farmers specified that rejections are also given because:

- banks view lending to the agriculture sector as too risky (amongst other due to price, market and weather risks) and prefer to lend to other sectors;

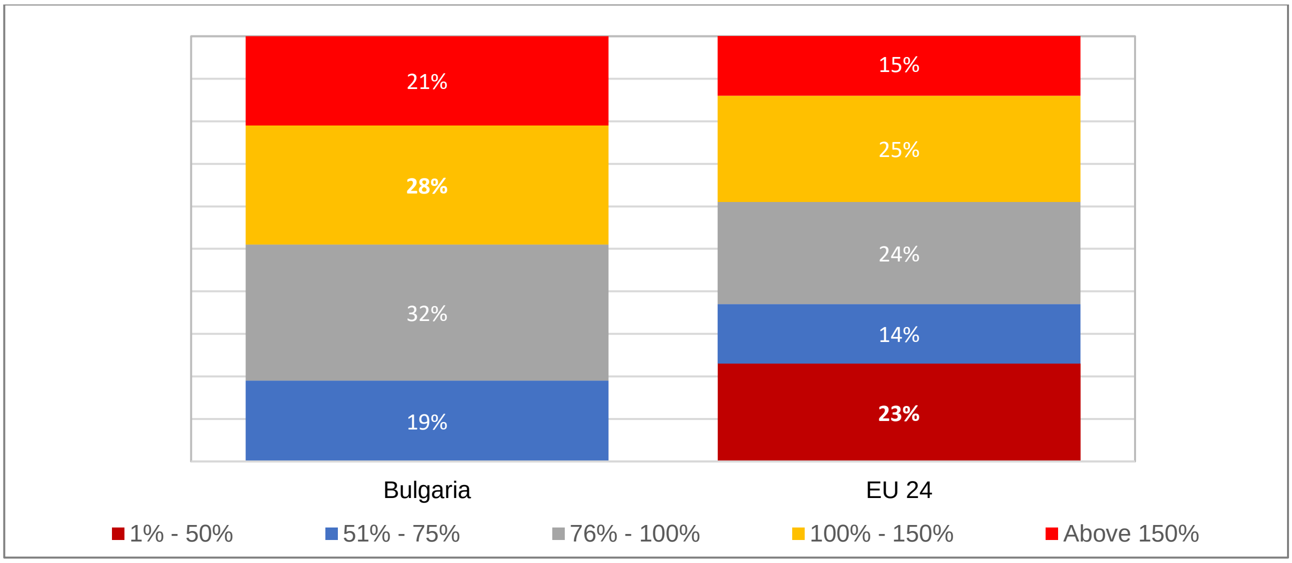
43 Based on interviews (with 5 Bulgarian farmer associations, 30 young farmers, 11 banks and 1 association of credit cooperatives) and the focus group discussions (with 14 participants from the farming and banking sector).

- the marketing strategy of banks is not focused on farmers as the segment is seen as unimportant and unattractive;
- farmers' lack of credit history or accounting history; in Bulgaria farmers are not required to keep accounting records and so many farmers (particularly small ones) do not keep them;
- farmers often have inadequate business plans; and
- farmers have an outstanding high level of debt.

As outlined already in the previous sub-section, farmers across all sub-sectors have at least three times more liabilities than assets. This is particularly the case for dairy and milk farmers. High levels of liabilities constrain farmers' capacity to take on further loans as they still have to pay off old debt(s).

Many Bulgarian farmers lack collateral of sufficient quantity and quality. In general, lending in Bulgaria occurs against the provision of collateral. About 59% of respondents to the *fi-compass* survey said that they needed to provide collateral, compared to only 43% for the EU 24. In the majority of the cases (79%), the collateral provided was personal collateral. Importantly, almost one-third of the farmers (28%) had to provide collateral of up to 150% of the loan amount and another 21% - more than 150% (Figure 18). This indicates a significant market hurdle as Bulgarian banks focus on collateral-based lending to the sector to over-secure themselves. Such high collateral levels make it particularly challenging for small-sized farmers as well as new entrants to provide the required assets, which is why they very often fail with their applications.

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



Source: fi-compass survey.

In most cases, a lack of transparency in banks' policies is what keeps farmers from dealing with financial bodies. Farmers are often unsure of whether the loan terms that have been offered are fair.[44] However, farmers' awareness about alternative sources of financing is quite limited. In Bulgaria, high-risk sources of funding, such as business angels and innovation funds, to finance agriculture business projects are still nascent and relatively unknown to farmers. Credit agencies for fast loans are also not an option, because of the high interest rates they apply, unfavourable terms and low amounts they can offer. In addition, a lack of awareness by young farmers about alternative financing possibilities, among them the innovative crowdfunding and fin-tech applications[45], is also present. While competition between financial institutions has increased to

44 Likewise, banks always question whether farmers want to use the loan for the claimed purpose.
45 Based on results from the 'Theoretical models for the development of digital agriculture' (DIAGRO) project survey. The project is funded by the National Research Fund-Bulgaria under the grant КП-06-Н-20/10. For more info please see www.diagro.iae-bg.com.

some extent, the farmers interviewed sometimes complained that lending organisations offer nearly identical terms, which signals a lack of competitiveness and tailored-approach in the banking sector.

While some of the obstacles faced by young farmers in accessing finance are applicable to all farmers, the negative impact they have on young farmers is higher. Discussions in the framework of this study showed that young farmers' businesses are particularly affected by the seasonality of the production, leading to volatile revenues, but stable costs, resulting in the volatility of their income. For farms that grow intensive crops, such as vegetables and horticulture, the prices of plant protection products and fertilisers are a significant driver of costs. Increases in the prices of such inputs can greatly affect farmers' incomes. Young farmers also tend to have lower liquidity levels. When it comes to finance applications, most young farmers in Bulgaria lack assets that are valuable to the bank, such as apartments or land in urban areas,[46] and which can be mortgaged to receive long-term funding. Most banks also require some form of additional collateral to mitigate against the risk of failure, which is higher for early-stage agriculture businesses. In some cases, when farmers experience 'hold-up' problems (i.e. delayed payments for purchased production, e.g. as in the case of large retailers or customers/processors that have a trade advantage), higher indebtedness occurs, which additionally limits access to bank loans. A specific study on the Bulgarian dairy sector finds evidence on how late payments, in the presence of poor legal enforcement, forces farmers to invest less, resulting in lower farm growth. Late farm payments, which were widespread in the first decades of transition, seem, however, to have reduced with the EU accession.[47]

Farmers, including young farmers, lack in general competence in both financial management and in the preparation of bank loan applications, project proposals and business plans, including the application for support under the RDP. State institutions provide limited direct help to farmers when applying for a bank loan. Currently, the State mostly focusses on helping young farmers receive financial assistance under the various RDP measures through the network of National Agriculture Advisory Service (NAAS) offices. While NAAS plays a key role in the start-up and development of young farmers' businesses (by setting-up business plans, the provision of agrochemical analyses as well as by providing fertilisation recommendations), it has cut its branches and staff since the EU accession and scaled down its supporting functions. This leaves farmers, young or established ones, with no option but to pay private advisory companies to draw up the necessary business plans and documents required for the application under the individual measures of the RDP and/or to banks.

46 As there is typically high demand for urban housing, these assets maintain their value and can easily be liquidated by the bank in case of need.

47 Late payments worsen farms' liquidity and credit constraints. This limits the access to inputs, which has a negative effect on the produced quantity and quality. It affects the investment capacity of farmers and is likely to also affect the trust that the farmer puts in the relationship with its processor. Farmers may fear late or even non-payments in the future. See van Herck et al, 2011, for more details on the relationships between late payments and growth in the Bulgarian dairy sector, in: Institutions, exchange and firm growth: Evidence from Bulgarian agriculture. Available at: https://www.researchgate.net/publication/239809387_Institutions_exchange_and_firm_growth_Evidence_from_Bulgarian_agriculture [accessed May 18 2020].

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

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

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

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

- Agriculture finance is dominated by three main banks - UniCredit Bulbank, Raiffeisenbank (Bulgaria) and ProCredit Bank (Bulgaria), who together have a market share of over 65%.
- Banks offering agriculture loans can also work with the National Guarantee Fund (NGF).
- The main products provided are short-term loans for working capital and long-terms loans for investments.
- The total outstanding loan volume for agriculture was EUR 5.4 billion at the end of 2018.
- For the three main banks, the most common loan amount was between EUR 12 500 and EUR 25 000, with loans mainly provided to small-sized farms.
- The main support instruments for encouraging investment activity among farmers, and especially for young farmers, are those from the RDP.
- Since 2014, there has been an expansion in the supply of both medium and long-term loans. Competition between lenders is increasing to some extent, despite limited market competition.
- The main problems that constrain the supply of finance to farmers are:
  - the significant market concentration in the banking sector;
  - that, besides the three main banks serving the sector, other banks do not have tailored loan products and lack a thorough understanding of the agriculture sector;
  - the high non-performing loan levels, which make it difficult for banks to further increase their exposure to the sector;
  - that many Bulgarian farmers do not have the required collateral needed to secure a loan; and
  - that banks' lending is closely linked to the financial support of RDP measures, with loans only being approved when investment support has been contracted by the farmer.

2.3.1 Description of finance environment and funding availability

As Bulgaria now has full access to the EU market, financial institutions, despite viewing agriculture as a risky sector, have begun to look more favourably on the opportunities for development of the sector. Since 2014, lending to the agriculture sector has been increasing, culminating in a gross credit portfolio of EUR 5.4 billion in 2018. The lending 'boom' has been driven by investments by farmers into their enterprises and by subsidies from the CAP and the Bulgarian Government. The level of finance provided by lending organisations has been almost equal to the level of government support[48].

48 Based on FAO estimations, cited in: Borisov P., et al., 2019, 'Influence of the common agriculture policy on Bulgarian agriculture', published in: Bulgarian Journal of Agricultural Science 3:439- 447. Available at: https://www.researchgate .net/publication/239809387_Institutions_exchange_and_firm_growth_Evidence_from_Bulgarian_agriculture.

2.3.1.1 Finance providers

According to the National Bank of Bulgaria, the financial needs of the agriculture holdings are potentially met by 261 finance providers (Table 4).

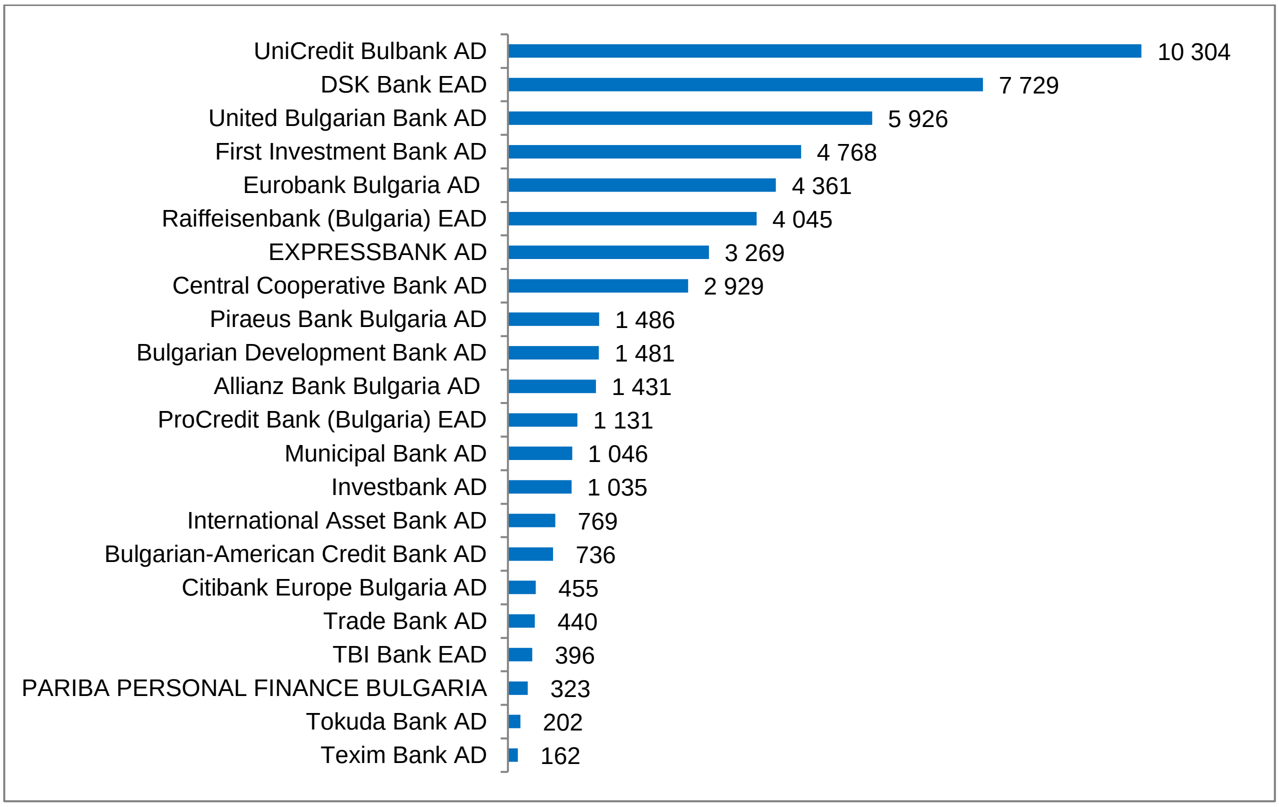
Table 4: Number of key commercial and non-commercial finance providers

Banks	Credit cooperatives	Non-bank financial institutions	National guarantee fund
26	26	208	1

Source: Bulgarian National Bank, www.bnb.bg, 2019.

The main suppliers of credit for the development of the agriculture sector are commercial banks. There are 26 banks registered in Bulgaria and almost half of them offer credit products to agriculture firms. Figure 19 provides an overview of Bulgarian banks, according to their assets.

Figure 19: Overview of banks in Bulgaria according to their assets, 2019, EUR million



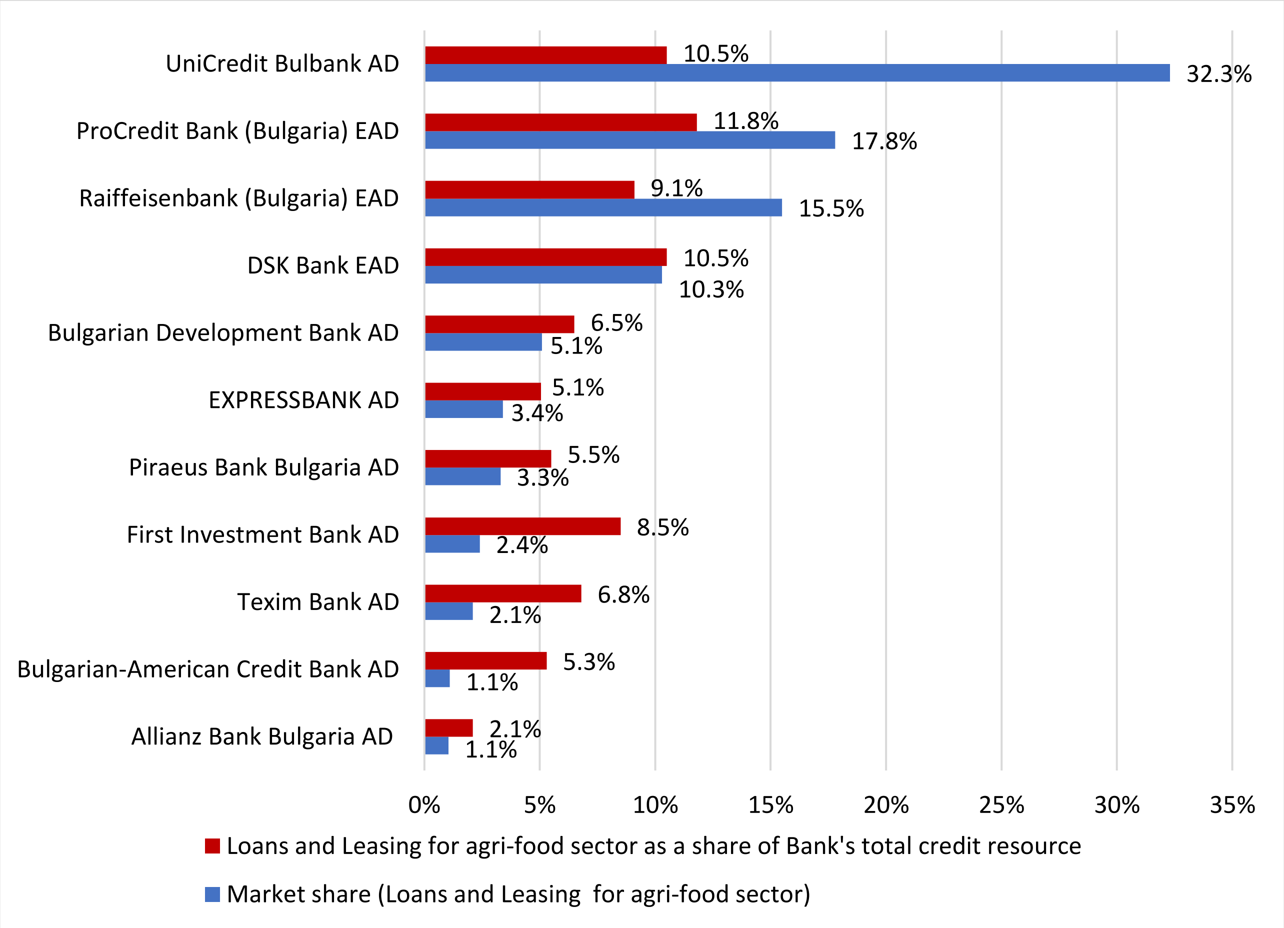
Source: Statistics of Bulgarian National Bank, 2019 www.bnb.bg.

Agriculture finance in Bulgaria is dominated by three main banks: UniCredit Bulbank, Raiffeisenbank (Bulgaria) and ProCredit Bank (Bulgaria). These banks have the largest market share in the market segment 'loans and leasing for agriculture'.[49] UniCredit Bulbank holds a 32.3% market share, ProCredit Bank (Bulgaria) a 17.8% share and Raiffeisenbank (Bulgaria) a 15.5% share (Figure 20). Together, these three banks account for over 65% of the market.

49 As banks report on loans and leasing together, it is unfortunately not possible to provide detailed figures on leasing. According to information obtained through the interviews leasing is mostly used for the acquisition of fixed assets, such as machinery and associated inventory.

The banks which provide the highest percentage share of their total credit resources to agriculture are ProCredit Bank (11.8% of the bank's total credit resource), followed by DSK Bank (10.5%) and UniCredit Bulbank (10.5%). Banks mainly provide long-terms loans, which are used to cover the investment costs of farms, and short-term consumer loans, which are used for working capital.

Figure 20: Credit resource and market shares for agriculture finance of banks, 2018, %



Source: Audit reports of the banks and project calculations, 2019.

Banks offering agriculture loans also work with the National Guarantee Fund (NGF). The NGF was established in 2008 as part of the Bulgarian Development Bank Group, and issues guarantees that complement the collateral required by the commercial banks in order to approve loans for Bulgarian businesses, including agriculture. NGF also benefits from COSME counter-guarantees and was the implementing body of the EAFRD funded 'Bulgaria Rural Credit Guarantee Fund' financial instrument set up under the previous programming period RDP (2007-2013). Under this financial instrument and for the period 2013-2015, 613 guarantees were provided to 544 grant beneficiaries implementing projects under RDP Measures 121, 122 and 123. The total amount of the committed guarantees was BGN 186 million backing loans of BGN 238 million.[50]

In the 2014-2020 period, the NGF continued to issue guarantees for agriculture by using national resources, including the amounts paid back under the previous programming period's financial instrument mentioned above. It works with 16 commercial banks.[51] Farmers with an approved loan application for an investment

50 Source: Bulgarian EAFRD Managing Authority, June 2020.

51 These are: Allianz Bank, DSK Bank, Pireus Bank Bulgaria, Bulgarian American Credit Bank, Bulgarian Development Bank, United Bulgarian Bank, Municipal Bank, First Investment Bank, Raiffeisenbank Bulgaria, International Asset Bank, Investbank, Teksim Bank, TBI Bank, UniCredit Bulbank, D Commerce Bank, Eurobank Bulgaria.

project under some of the 2014-2020 RDP measures (e.g., 4.1, 8.6) could also benefit from the guarantee scheme. The guarantee covers up to 50% of the loans, with an approximate EUR 1.5 million (BGN 3 million) cap per loan. It contributes to lower collateral requirements for farmers and provides risk-protection to participating banks. NGF gives priority to loans that are collateralised by assets financed under projects approved in the framework of the RDP, showing further risk-aversion. In addition, small-sized farmers often do not have the possibility to benefit from the guarantees provided.[52] Throughout the interviews, farmers remarked that they would prefer if there is a larger variety of financial products for all types of investments projects and if small-sized farms could also be supported. Banks would also prefer if the NGF guarantee coverage of currently 50% per loan could be increased to around 80%, to further decrease their risks when lending to the agriculture sector.

A number of Non-bank financial institutions (NBFIs) and credit cooperatives (a total of 26) also operate in the sector and are specialised in offering low-interest loans to their members, which are used for investments in land and agriculture machinery, for example. NBFIs and cooperatives/credit unions can disburse both business and personal micro-loans. In terms of business micro-loans, NBFIs and cooperatives/credit unions can disburse up to a maximum of EUR 50 000 and EUR 100 000, respectively.[53] Interviews[54] conducted indicate that the average loan amounts for NBFIs and credit unions are around EUR 10 000. Loans with a short maturity are being used to finance working capital and investments in machinery and stockpiling.

In terms of providers, sometimes farmers may also approach non-bank financial agencies (208 in Bulgaria) that offer short-term credit of up to EUR 500, but mostly against very high interest rates, short repayment periods and high penalties for delaying repayments.

2.3.1.2 Financial products

Bulgarian banks offer loans to farmers for both investment and working capital needs. Loan maturity and financing amounts vary depending on the purpose of the loan, the size of the farm and the financial capacity of the farmer. These products include the following:

- (i) Short-term loans up to 18 months, bank overdrafts and credit cards, with interest rates around 5.5%;
- (ii) Medium-term loans (up to 5 years) for investment purposes, with interest rates around 5%; and
- (iii) Long-term loans (above 5 years) for investment purposes, with interest rates based on the short-term rate according to the BNB statistics (for loans in BGN), plus a margin determined individually based on the amount, currency, term and collateral of the requested loan.

To illustrate the above, the loan products offered to the sector by Raiffeisen Bank Bulgaria, one of the key players in agriculture, are outlined below in Table 5.[55]

52 Bulgarian Ministry of Agriculture, Food and Forestry, May 2018, Preliminary Assessment of financial instruments to be applied in 2014-2020.

53 EMN, 2016, Legislative Mapping Report Bulgaria.

54 Interviews were conducted with 11 banks and the Bulgarian Association of Credit Cooperatives and Organisations for Microfinancing.

55 Based on Raiffeisenbank website information.

Table 5: Overview of Bulgaria's Raiffeisen Bank agriculture loan products

Type	Working Capital / Overdraft against subsidies from State Fund Agriculture	Medium-term loan / Agriculture Loan for Purchase of Agriculture Equipment	Long-term loan / Agriculture Loan for Purchase of Agriculture Land
Purpose	Can be used for all activities related to the cultivation of land (ploughing, sowing, fertilising). It is focused on farmers and livestock owners. Once approval for a subsidy from the State Fund Agriculture is approved, the farmer can apply for a loan. It is provided in the form of an overdraft to a current account and the amount is calculated on the basis of the stated areas and/or animals for which a request for support is submitted each current year.	Purchase agriculture machinery from official importers and dealers of new and used equipment.	Farmers that operate in the agriculture or livestock sub-sector and want to expand their farm can apply for this product. It is provided in the form of a term loan for a period of up to 10 years for the purchase of 1st to 5th category agriculture land in Bulgaria. Land that falls within the protected areas of the Natura 2000 ecological network is not being financed.
Loan Amount	Up to 95% of the expected EU subsidy, max. BGN 510 000 [56]	Up to BGN 510 000 or EUR 261 000	Up to BGN 510 000 or EUR 261 000
Currency	BGN	BGN or EUR	BGN or EUR
Loan Maturity	Up to 18 months, but not later than 5 July of the following year.	For new equipment up to 5 years, for used equipment up to 4 years	Up to 10 years
Grace Period	Not applicable	Up to 6 months for investment loans	Up to 6 months for investment loans
Interest rate	Based on short-term interest rate according to BNB statistics plus a margin determined individually depending on the amount, currency and term of the requested credit.	Based on 1-month EURIBOR (for loans in EUR) and short-term interest rate according to the BNB statistics (for loans in BGN) plus a margin determined individually depending on the amount, currency, term and collateral for the requested credit.	Based on 1-month EURIBOR (for loans in EUR) and short-term interest rate according to the BNB statistics (for loans in BGN) plus a margin determined individually depending on the amount, currency, term and collateral for the requested credit.
Collateral	Establishment of a pledge on the subsidy approved by the Paying Agency and on the borrower's receivables in the borrower's accounts with the bank.	Special pledge on the purchased agriculture equipment. Mandatory comprehensive insurance of the agriculture machinery and equipment.	The main collateral is the purchased agriculture land. Depending on the amount of the loan and the specificity of the purchased agriculture land, the parties negotiate the individual structure of the collateral offered for the particular loan.

56 Equals EUR 261 000.

Repayment	The product allows for a one-time full repayment of the principal on the loan upon receipt of the subsidy in the borrower's account with the bank.	Equal instalments of the principal and the relevant interest on the outstanding amount of the principal for the period. Possibility to define a flexible repayment plan consistent with the seasonal nature of the business.	Equal instalments of the principal and the relevant interest on the outstanding amount of the principal for the period. Possibility to define a flexible repayment plan consistent with the seasonal nature of the business.
Interest payment	Monthly, further fees and commissions apply.	Tailored, further fees and commissions apply.	Tailored, further fees and commissions apply.
Other conditions	Business must have been in operation for a minimum of 24 months.	Business must have been in operation for a minimum of 12 months.	Business must have been in operation for a minimum of 12 months.

Source: Raiffeisenbank website information, 2019.

Table 6: Financial products offered to farmers in conjunction with EU support

Bank	Loans, accompanying grants from the EAFRD	Loans, guaranteed from COSME	Other loans[57]
UniCredit Bulbank AD	X	X	X
United Bulgarian Bank AD	X	X	
Raiffeisenbank (Bulgaria) EAD	X	X	
Piraeus Bank Bulgaria AD	X	X	X
DSK Bank EAD	X	X	
Bulgarian-American Credit Bank AD	X		
First Investment Bank AD	X		
ProCredit Bank (Bulgaria) EAD	X	X	
Postbank Bulgaria AD		X	
EXPRESSBANK AD		X	

Source: Interviews with 11 bank/ branch managers/ officers, 2019.

Some banks finance young farmers. Of the 11 bank representatives interviewed, five noted that among their clients are young farmers who received loans to start their first agriculture business. Almost all young farmers who received loans had signed a grant contract under one of the RDP measures, giving them grounds to apply for a bank loan. Table 7 further outlines the fact that many of the banks have a strong focus on offering products to cereal producers.

57 Such as leasing.

Table 7: Type of clients receiving bank loans per sub-sector

Bank	Clients/specialisation	Young farmers
UniCredit Bulbank AD	Cereal producers, wineries, milk producers	X
United Bulgarian Bank AD	Cereal producers	
Raiffeisenbank (Bulgaria) EAD	Cereal producers, vegetable growers	X
Piraeus Bank Bulgaria AD	Cereal producers	X
DSK Bank EAD	Cereal producers, agriculture tourism	
Bulgarian-American Credit Bank AD	Wineries	
First Investment Bank AD	Agriculture tourism, grain producers	
DSK Bank EAD	Cereal producers	X
ProCredit Bank (Bulgaria) EAD	Cereal producers, beekeepers	X
Central Cooperative Bank AD	Cereal producers	
Teksim Bank AD	Cereal producers, agriculture tourism	

Source: Interviews with 11 bank / branch managers / officers, 2019.

Financing provided by input suppliers or other agri-businesses plays a key role in Bulgaria. Farmers can benefit from value chain financing arrangements. Particularly in the dairy value chain, the large dairies, such as Danone or Friesland, have set up sophisticated value chain arrangements.[58] This strong vertical integration has evolved over time: it started with the provision of quality inputs and extension services to farmers and moved further to provide input finance, investments loans and guarantees for bank loans. Farmers agree to sell their produce to this particular off-taker and in exchange agri-food enterprises provide such services. This also ensures that farmers will deliver the required output – in terms of quantity and quality.[59]

In the cereal sector, large farmers have started to operate as aggregators and traders. They gather smaller farmers' production and sell it on. Some of the larger farmers are also taking over the export of the crops. Larger farmers are thus contributing to effectively structuring the market.

Further business loan products are being offered under financial instruments funded by the EU Programme for the Competitiveness of Small and Medium Enterprises (COSME). In Bulgaria, as of the end of 2018, COSME had provided access to finance for 296 SMEs in the agriculture, forestry and fishing sector, for a total of EUR 39.3 million (13.2% of the total portfolio).[60]

Finally, partially guaranteed loans under the InnovFin – EU Finance for Innovators programme for innovative SME and small mid-caps with up to 499 employees are available. InnovFin provides various financing tools (including debt and equity products) focused on research and innovation investment. In Bulgaria, as of the end of 2018, InnovFin had provided access to finance for 168 SMEs in the agriculture, forestry and fishing sectors, for a total of EUR 24.9 million (15% of the total portfolio).

2.3.1.3 Description of the financing market

When the fourth largest bank in Bulgaria (at that time Corporate Commercial Bank) went bankrupt in 2014 due to fraud and insider trading, Bulgaria's financial system went into a crisis that raised questions about the viability of other banks and the transparency of their business. While the financial system has since stabilised, the trust in its credibility is yet to be restored.

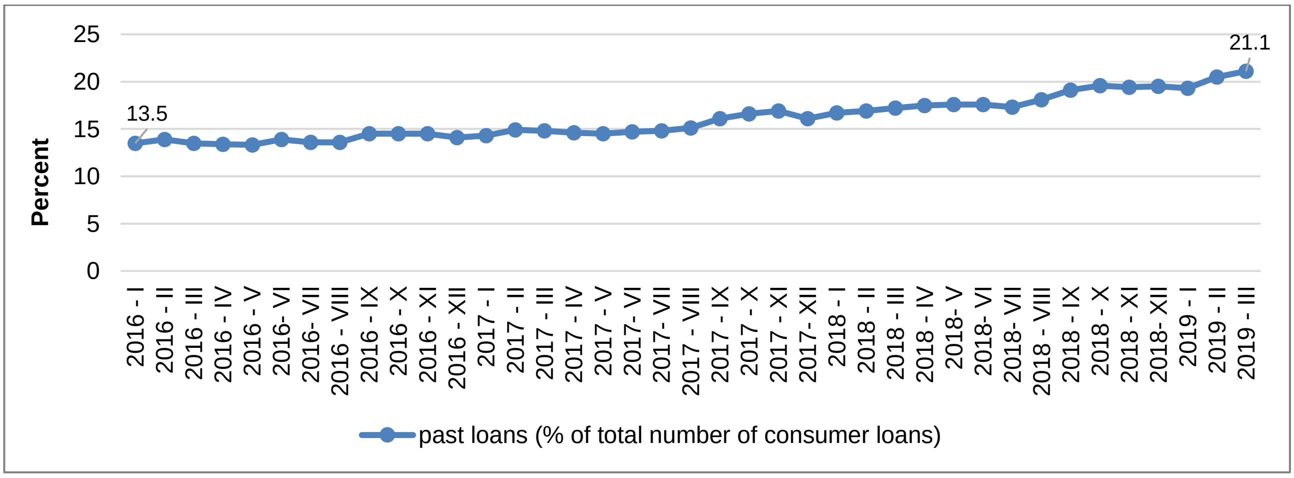
58 Swinnen J., Inclusive Value Chains, November 2018, Agricultural Development and Poverty Reduction, presentation delivered at FERDI – AFD Workshop on 'Agricultural Value Chain Development and Smallholder Competitiveness', Paris.
59 See Dries et al., 2009 and Noev et al., 2009.
60 EIF, 2019.

In 2018, the Bulgarian banking sector saw its highest profitability levels since the global financial crisis. Higher lending activity and lower impairment costs have contributed to it.[61] There have also been a number of mergers and acquisitions in the banking sector that contributed to increasing the efficiency, market shares and profitability of banks. In 2018, United Bulgarian Bank (UBB) merged with CIBANK, DSK Bank acquired Société Générale Expressbank, and Investbank acquired Commercial Bank Victoria. In 2019, Eurobank Bulgaria acquired Piraeus Bank Bulgaria.[62] New operators were also noticed. BNP Paribas Personal Finance S.A. started doing business in Bulgaria and at the end of 2018 the branch of Varengold Bank AG opened its doors for clients.

The continuing efforts of banks to optimise their portfolios led to a gradual decline in the share and amounts of non-performing loans. Nevertheless, non-performing loans in the banking system remain relatively high, with the share of gross non-performing loans and advances being 7.4% in September 2019.[63] Overall, the ratio of non-performing loans (NPLs) is highest for the construction and real estate sectors.[64]

Non-performing loans in agriculture have been high, in line with the general performance of banks' credit portfolios, and **the quality of the agriculture loan portfolio deteriorated over the 2016 - 2019 period.** Based on data from the three banks that are the main providers of loans in the sector, the share of non-performing or overdue loans in agriculture rose from 13.5% in 2016 to 21.1% in 2019 (Figure 21). Interviews with representatives of the banking sector indicated that this was caused by a mixture of farmers facing low profits and the competition from banks over clients, driven by the low interest rate environment, which has seen banks try to sell as many loans products as possible (within the limits of their covenants and policies).

Figure 21: Non-performing and overdue loans in agriculture, 2016-2019, percent share of the total number of loans



Source: Calculations based on data from 3 banks, 2019.

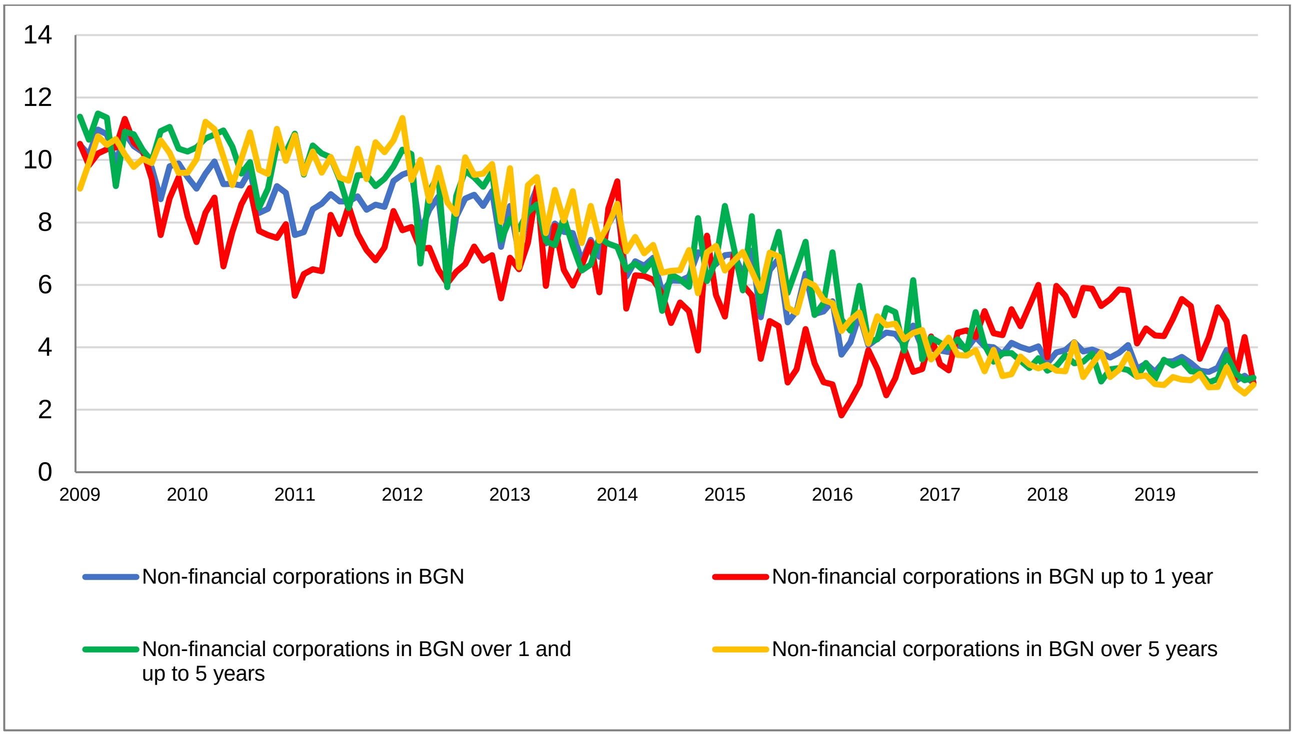
The level of NPLs make it challenging for banks to increase agriculture lending and hampers their ability to provide further financing to the sector.

There are large differences in the interest rates available to borrowers. Between 2007 and 2019, there have been sizeable interest rates fluctuations on loans to non-financial corporations. According to data from the Bulgarian National Bank, the most significant variation in the interest rate is in one-year loans (Figure 22). While interest rates have been decreasing in the last few years, they remain at relatively high levels, particularly for short-term credit. Longer-term loans, with a maturity of over 5 years, show a particularly strong downward trend in interest rates and are currently just below 3%. These loans are used by farmers to make investments

61 IMF, 2019, Article IV Consultation Bulgaria.
62 Association of Banks in Bulgaria, The banking system in Bulgaria 2018, figures and facts.
63 Bulgarian National Bank, Banks in Bulgaria, July – September 2019.
64 IMF, July 2017, Bulgaria, Financial Sector Assessment Programme.

in their agriculture holdings, such as in the purchase of agriculture land, machinery and equipment and the construction of manufacturing facilities.

Figure 22: Annual effective interest rates of loans to non-financial corporations, for loans in BGN, %, 2007-2019

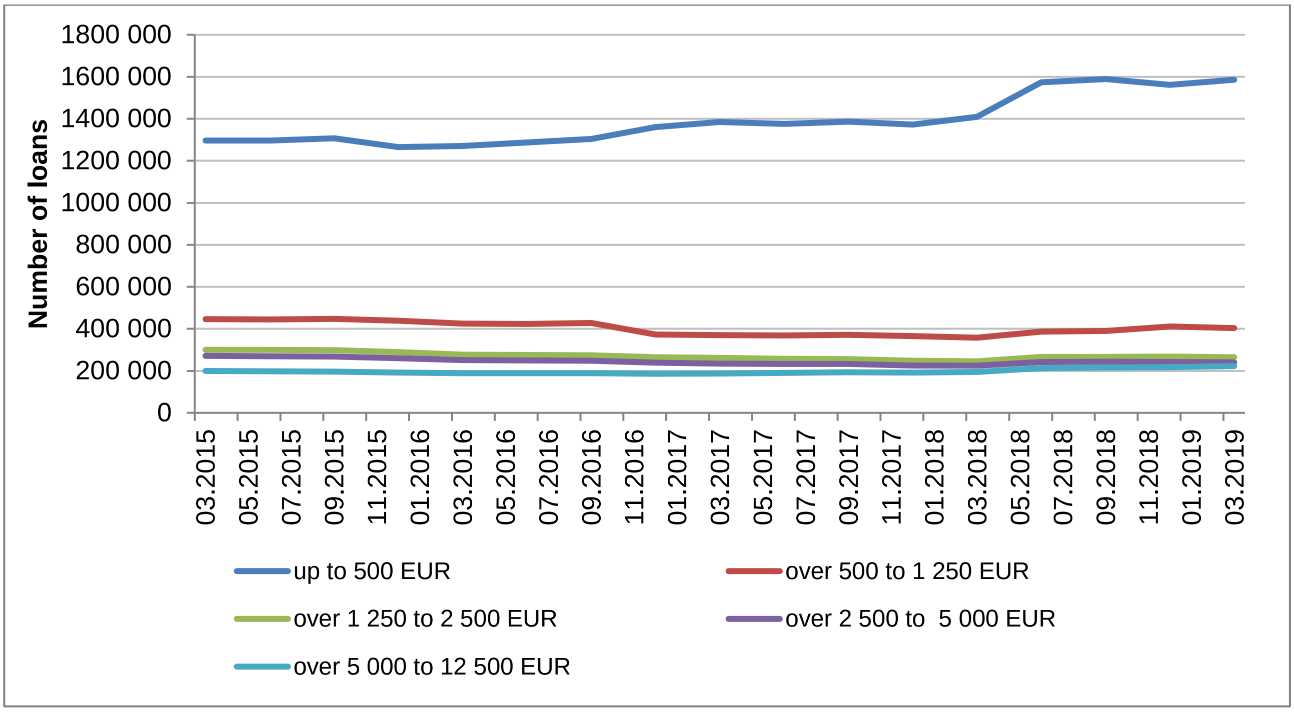


Source: Statistics of Bulgarian National Bank, 2019, www.bnb.bg.

Banks tend to mostly disburse loans between EUR 12 500 and EUR 25 000 (Figure 24). The three key banks in agriculture are giving loans to owners of small to medium-sized farms. However, according to the National Bank of Bulgaria data, most agriculture loans are short-term, with a repayment term of up to 1 year, and for amounts of up to EUR 500 (Figure 23). The key difference in the figures might be caused by the different client segment banks serve compared to NBFIs. While banks focus on well-established and possibly larger-sized agriculture holdings, NBFIs focus on very small-sized farms, individuals with some agricultural activities (e.g. unemployed, pensioners, etc.) and, sometimes, new entrants. The National Bank of Bulgaria statistics also include NBFI figures and this is possibly the cause of the much lower average loan amounts reported.

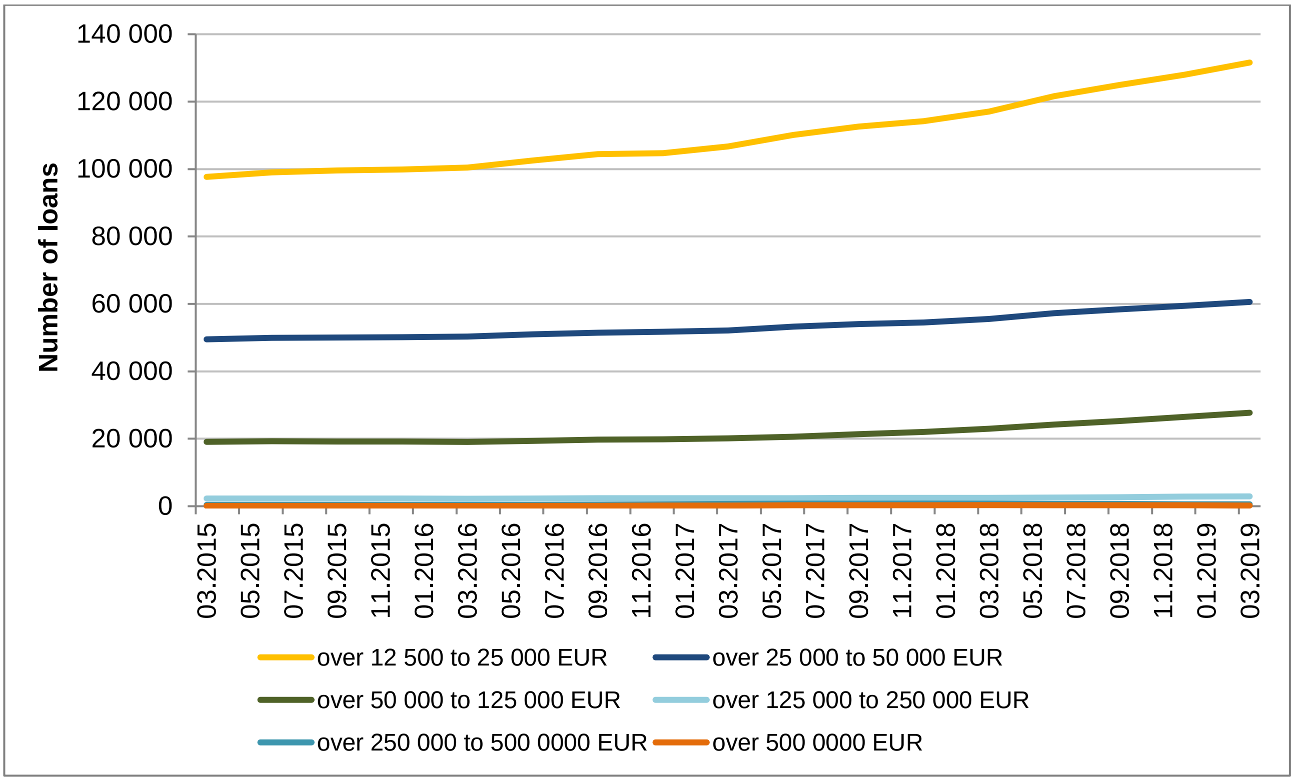
Farmers use short-term loans to cover their operating expenses, mainly monthly cash shortfalls due to delayed payment of accounts receivables. Loans of up to EUR 500 were rising during the survey period and reached 1.6 million units in 2019. Other loans disbursed are those ranging from EUR 500 up to EUR 1 250, with a payment term of up to 2 years (medium-term loans) and usually taken out to invest in the modernisation of the enterprise. Loans of over EUR 500 000 are disbursed less frequently and are typically granted to large-sized farms specialised in the production of grain, wine, and milk and dairy. Given the structure of the agriculture sector, with mostly very small-sized farms, it is unsurprising that most of the loans disbursed are for working capital purposes, as many agricultural enterprises lack the repayment capacity to service larger loans.

Figure 23: Number of loans disbursed for agriculture, according to loan size, EUR 500 -12 500, 2015-2019



Source: Statistics of Bulgarian National Bank, 2019, www.bnb.bg.

Figure 24: Number of loans disbursed for agriculture, according to loan size, EUR 12 500-500 000, 2015-2019



Source: Statistics of Bulgarian National Bank, 2019, www.bnb.bg.

Note: the values for the blue line 'over 250 000 to 500 000 EUR' and the orange line 'over 500 000 EUR' only differ to a very small extent, therefore the blue line 'over 250 000 to 500 000 EUR' is hardly visible.

Banks are more confident providing short-term loans as the associated risks are lower. Given the shorter loan duration (i.e. up to 18 months), banks are more confident, and for them it is much easier, to make projections over the loan period. Still, as outlined in Section 2.2.1, working capital loans are of not that high of importance in terms of the total loan volume.

Unsurprisingly, the commercial banks that are inactive in lending to the agriculture sector, commonly lack an understanding of how the sector operates. They have no agronomists knowledgeable on the different agriculture activities or agricultural economists. Many banks have not set up dedicated agriculture finance teams and are thus often unable to provide specific agriculture loan products (no matter their maturity) with accompanying policies and procedures. For example, the use of well-established agriculture scoring tools by specialised banks could be utilised to quickly assess the repayment capacity of a farmer, so that the transaction costs and credit risk could be minimised.

Collateral is needed to secure investment loans. Banks have mentioned that they require collateral, particularly for medium and long-term lending, and that many farmers are unable to provide assets that have the needed value. Small-sized farms, in particular, lack assets that can be easily sold by the bank (in case of default) and these assets maintain their value throughout the life of the loan. In this regard, all banks interviewed favour additional guarantee support at the highest possible level.

A significant concern for banks is the low level of financeable projects that are being presented to them. Many farmers, and especially small-sized farms and new entrants, lack the capacity to present well-structured and thought-out business plans. For banks it is virtually impossible to finance medium and long-term investment projects without convincing business proposals.

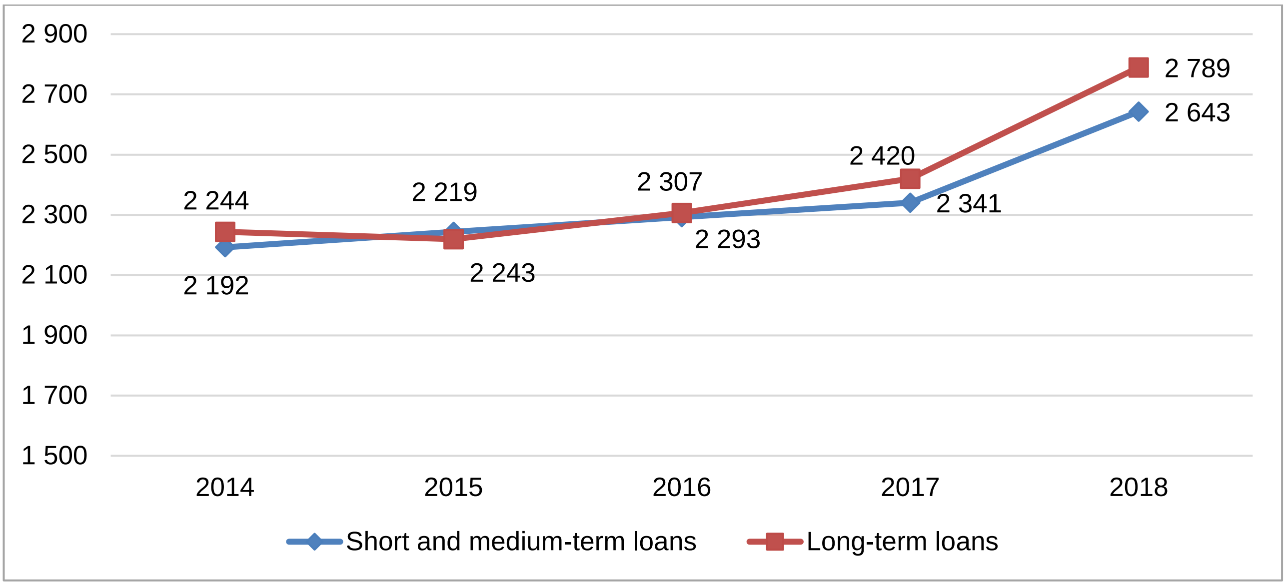
At the same time, **Bulgarian farmers lack trust in the financial system.** This is largely due to 2014 adverse financial events and it has taken time to restore trust and confidence in the system. Clients still believe that not all terms, conditions and fees are clearly outlined and presented to them when they sign the loan agreement.[65] Banks can also impose the sale of properties or assets used as collateral if a farmer stops repaying the loan, which is another reason farmers avoid taking credit, as banks typically do not account for volatility elements of farming (with exception of repayments after harvest or after obtaining direct payments).

65 Interviews with farmers, 2019.

2.3.2 Analysis of the supply of finance

Since 2014, there has been an increase in the supply of short, medium and long-term loans in agriculture, with the gross credit portfolio totalling EUR 5.4 billion.[66] The volume of long-term loans has increased by almost 30%, from just over EUR 2.2 billion in 2014 to nearly EUR 2.8 billion in 2018 (Figure 25). Similarly, the volume of short and medium-term loans has increased by approximately 20%, from just under EUR 2.2 billion in 2014 to nearly EUR 2.7 billion in 2018.

Figure 25: Supply of loans in agriculture, EUR million, gross credit portfolio, 2014-2018, EUR million



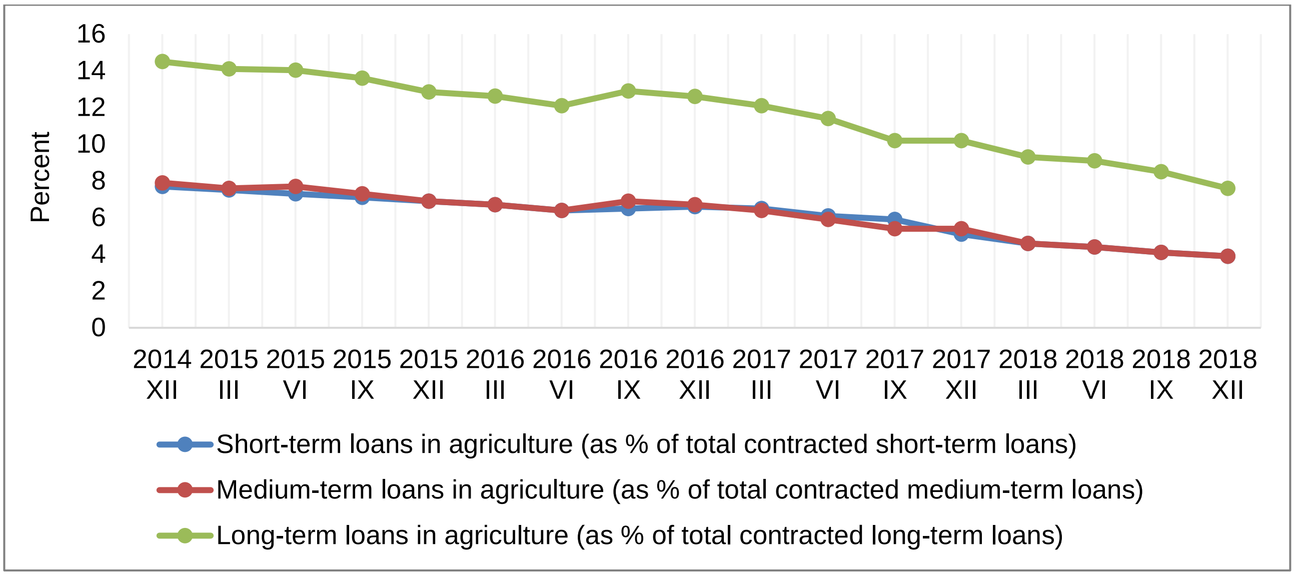
Source: Calculations based on data from the Bulgarian National Bank (2014-2018).

Due to a historically accommodating monetary policy,[67] **the banks that provide credit to the Bulgarian agriculture sector are in competition with each other.** The main drivers underpinning the rise in the supply of credit are the growing number of new larger players in the agriculture sector as well as the growing popularity of RDP measures and CAP payments. The boom in agriculture lending is part of the general credit boom that the country has enjoyed in recent years. However, in the period 2014-2018, the number of contracts for agriculture loans, as a percentage of total loans, dwindled (Figure 26). This is not due to a tightening in credit to the Bulgarian agriculture sector, but rather to the overall credit expansion in the Bulgarian economy, with the construction sub-sector, infrastructure sub-sector and the food industry being the priority for lending.

Farmers that are not benefitting from RDP investment support are often seen as risky and thus banks are more cautious.[68] In these cases they prefer to focus on larger scale farmers that have diversified incomes and well-established markets for their products. Large cereal producers are of particular interest to banks, because these farmers tend to have extensive properties and land that can be mortgaged and because they own assets that are highly valued by banks and which can be more easily accepted as collateral.

66 All outstanding principal for all outstanding client loans, including current, delinquent and restructured loans, but not loans that have been written off.
67 The base interest rate offered by the Bulgarian National Bank is 0.00%.
68 Interviews with banks, 2019.

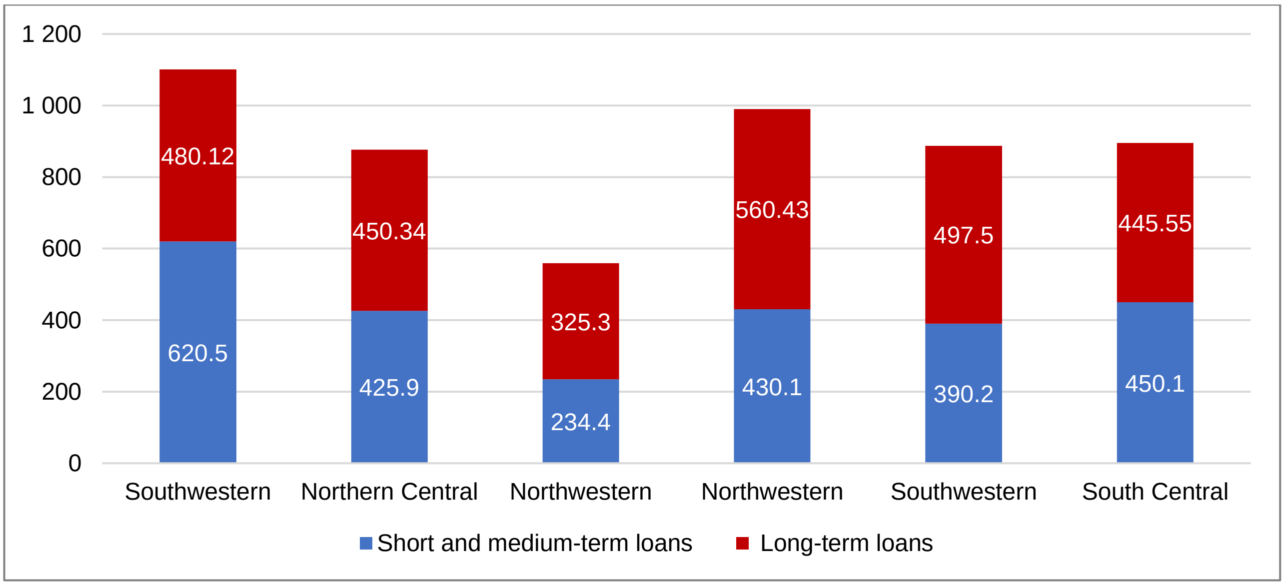
Figure 26: Supply of loans in agriculture, share of the total number of contracted loans, 2014-2018, in %



Source: Calculations, based on data from the Bulgarian National Bank (2014-2018).

The supply of credit from the banking system is secured through a network of branches. The 26 banks with a national scope have a total of 148 regional prime offices. According to data from the three leading banks in the sector, lending in Bulgaria is somewhat balanced across all regions. However, as shown in Figure 27, less credit is supplied to regions in the North West of the country, because the level of economic activity there is lower, while more credit is supplied to those in the South West.

Figure 27: Supply of loans in agriculture by Bulgarian planning regions, 2018, EUR million



Source: Calculations, based on data and publications from the Bulgarian National Bank, 2018.

Based on interviews with banks, the share of female clients and the outreach to rural clients is comparatively high (estimated to be around 40%), while the outreach to young clients is very limited (estimated to be at less than 10%).

2.4 Financing gap in the agriculture sector

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

Key elements of the financing gap in the Bulgarian agriculture sector

- The financing gap for agriculture is estimated to be between EUR 289 million and EUR 863 million.
- Small-sized farms (under 20 hectares) have the greatest financing need, but face the most difficulties in accessing finance.
- The largest financing gap is identified for long-term loans.
- The key drivers of the gap on the demand side are (i) a lack of collateral, (ii) a lack of credit history and accounting records, and (iii) a lack of financial literacy among farmers.
- The key drivers of the gap on the supply side are (i) market concentration, (ii) lack of knowledge and dedicated financial products from many banks, and (iii) banks' high risk perception of the sector, and (iv) banks' risk aversion as they tend to only finance enterprises that benefit from RDP support.
- Young farmers and new entrants, who need longer term finance to buy land and farm infrastructure to start up their business, face particular difficulties in accessing 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.

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

All the calculations are based on the results of the 2018 *fi-compass* survey for Bulgarian farms and statistics from Eurostat (see Annex A.4 for more information). The methodology used for calculating the gap is described in Annex A.3.

The financing gap arises from unmet financing demand from economically viable farms[69]. As explained in section 2.2, the unmet demand for finance includes:

(i) lending applied for but not obtained; or

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

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

For the purpose of this study, 'turnover growth' is used as a proxy of 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 both a stable (non-negative) turnover growth and no cost increase in the previous year can be considered viable;
- The **upper bound** gap is calculated under the hypothesis that all enterprises which reported a stable (non-negative) turnover growth can be considered viable.

The financing gap for the Bulgarian primary agriculture sector is estimated to be between EUR 289 million and EUR 863 million, as shown in Table 8. The financing gap mainly affects small-sized

69 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.

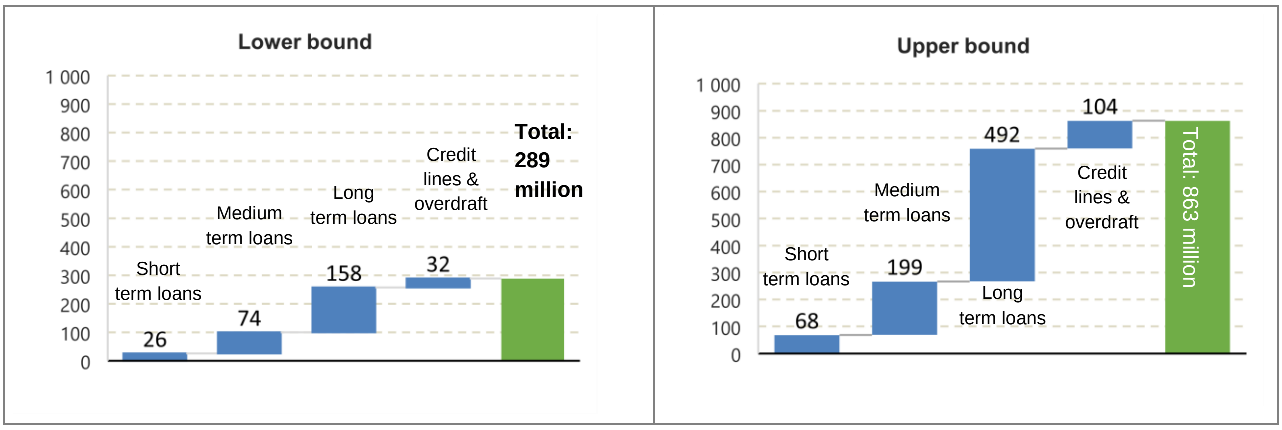
farms, representing about 73% of the total estimated financing gap. The type of loans for which the gap is the largest are long-term loans, followed by medium-term loans (Figure 28).

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

		Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/ bank overdrafts
Upper bound	Small-sized farms	**633.6**	46.0	149.7	374.0	64.0
	Medium-sized farms	**102.7**	8.8	21.6	61.5	10.7
	Large-sized farms	**126.7**	13.2	27.9	56.4	29.1
	Total	**863.0**	**68.0**	**199.1**	**492.0**	**103.9**
Lower bound	Small-sized farms	**212.3**	17.2	55.6	119.9	19.6
	Medium-sized farms	**34.3**	3.3	8.0	19.7	3.3
	Large-sized farms	**42.3**	5.0	10.4	18.1	8.9
	Total	**289.0**	**25.5**	**74.0**	**157.7**	**31.8**

Source: fi-compass survey and project calculations, 2019.

Figure 28: Financing gap by product in the agriculture sector in 2017, EUR million



Source: fi-compass survey and project calculations, 2019.

The ex-ante assessment for the use of EAFRD supported Financial Instruments in Bulgaria for the agriculture sector concludes that the financing gap in the Bulgarian agriculture sector is EUR 469.6 million and EUR 152 million for micro enterprises in rural areas. The financing gap is highest for young farmers, who currently account for over 20% of funding. In addition, 46% of the financing gap can be attributed to very small-sized enterprises (with up to 10 employees).[70]

On both sides of the market, several drivers of the gap that cause viable loan applications by farmers to be rejected, refused or farmers to be discouraged from applying, have been identified. The main problems that hinder farmers' access to finance are related to the lack of appropriate collateral and the lack of credit history and accounting records. The lack of financial literacy of farmers and their lack of experience in submitting business plans, as well as some distrust in the transparency of the banking system, may also

70 For more details on the ex-ante assessment see section 2.2.1.

contribute to the gap. On the supply side, the main identified constraints relate to the fact that three banks control around 65% of the market, while other operators lack interest and expertise in the sector. The high level of non-performing loans increase banks' perception of risk in the sector. In order to manage risk, banks tend to allow lending mainly to farmers who benefit from the financial support of the RDP measures, with loans only being approved when grant support has been secured by the farmer.

Young farmers are affected significantly by the financing gap. About 28% of the financing gap might be attributable to young farmers (Table 9) who hold a minor proportion from the farm managers (only 14%). Not only are they most affected by the lack of financing, but it is also worth noting that the gap for young farmers is entirely due to rejected applications.

Table 9: Share of financing gap impacting young farmers in 2017, EUR million

<table>
<tr><th></th><th>Financing Gap</th><th>Young Farmers Gap</th><th>Share of Total Gap</th></tr>
<tr><td>Small-sized Farms</td><td>633.6</td><td>178.9</td><td rowspan="4">28% within upper boundary</td></tr>
<tr><td>Medium-sized Farms</td><td>102.7</td><td>29.0</td></tr>
<tr><td>Large-sized Farms</td><td>126.7</td><td>34.8</td></tr>
<tr><td>Upper Boundary</td><td>863.0</td><td>242.7</td></tr>
</table>

Source: fi-compass survey.

2.5 Conclusions

This section of the study summarises the key insights gained into agriculture financing in Bulgaria, by providing an understanding of investment drivers, financing demand and supply, financing difficulties, and the existing financing gap within the sector.

The Bulgarian agriculture sector has experienced steady growth following the country's accession into the EU in 2007. It has also attracted attention from international investors. The GVA of agriculture output reached a historical peak of an estimated EUR 3.8 billion in 2017. FDI in the sector soared from EUR 35 million in 2013 to more than EUR 100 million in 2017. However, the sector is characterised by a strong polarisation between a limited number of large-sized farms, delivering most of the value added, and a vast majority of small-sized farms. While a consolidation process is emerging, it is far from complete. The Bulgarian agriculture sector is also characterised by an ageing workforce.

CAP support, direct payments and EAFRD grants, are crucial for farmers' income and investment decisions. The RDP investment sub-measures are over-subscribed with a demand much higher than the available budget. The total amount of the requested subsidy goes beyond EUR 1.3 billion until now (without counting the necessary private co-financing of more or less a similar amount), which shows a huge potential for further development and growth.

However, the sector faces several difficulties in accessing finance. Small-sized farms are by far the most constrained and they are more likely to have their applications rejected or to be discouraged from applying. There are difficulties related to the policies of banks and the fact that their terms and conditions are not adapted to the characteristics of the agriculture sector (e.g. volatility of prices, seasonality). In general, farmers also often lack the collateral required by banks. The lack of sufficient collateral also needs to be understood in the context of farmers having to provide a collateral of up to 150% of the loan amount or even more (according to the findings of the *fi-compass* survey). In addition, many farmers are not financially literate, and they do not have experience in submitting business plans.

Young farmers, in particular, encounter a variety of obstacles, such as a lack of credit history and accounting records, a lack of financial management support, and an unsatisfactory level of assistance provided by the recently downsized National Agriculture Advisory Service in the preparation of project proposals under the RDP or of business plans for loan applications.

Difficulties have also been identified on the supply side of the market. A general problem is that the level of trust in the financial system has been low, following the bankruptcy of a key commercial bank in 2014. Additionally, banks are reluctant to finance farmers who do not receive CAP and/or RDP financial support. Furthermore, many banks do not offer tailored loan products and only have a general understanding of the sector (including business cycles, cost and revenue structures, etc.). As a consequence, the market is concentrated with 3 banks controlling 65% of the market.it. Finally, a high level of non-performing loans in the sector reduces the bank's appetite to invest further.

In Bulgarian agriculture, the **financing gap is estimated to be between EUR 289 million and EUR 863 million**. Small-sized farms are the most impacted by this gap, accounting for between 80% and 90% of the total financing gap. The gap is the largest for long-term loans.

To contribute to closing the financing gap identified above, preparatory work for the creation of a new financial instrument began in 2018. By April 2020, the RDP was modified and a new risk-sharing financial instrument - Credit fund – is now being developed. Its implementation is expected for after mid-2020 and it will be managed by the national Fund of Funds.

Additional public interventions would definitely benefit farmers and the sector, particularly those that address the lack of tailored financial products. Financial instruments could increase the interest of financial institutions that currently do not operate in the sector and could promote the development of financial products targeted at certain groups or types of farms, sub-sectors, etc. In this context, several recommendations for public interventions are suggested:

- **The expected launch of the EAFRD risk-sharing Credit Fund has to be carefully observed.** Its budget is currently fragile and rather insufficient. The impact it may have on access to finance is also unknown and so are the conditions under which banks would agree to participate. Those conditions might also affect the costs for farmers and the overall performance of the instrument. These issues need a proper and detailed evaluation once the financial instrument has become operational, to ensure that an improved product is deployed in the 2021-2027 programming period under the CAP Strategic Plan.
- **The use of financial instruments could support the development of specialised financial products** (short, medium and long-term loans, as well as overdrafts) tailored to the needs of small-sized farms and increase the interest of banks that are currently not operating in the sector (this would reduce market concentration). New loans could be developed based on the seasonality of farm cash flows and/or account for price variability.
- **A guarantee fund** based on the CAP Strategic Plan's resources (EAFRD) could be designed to overcome collateral issues, particularly for small farms aiming at commercialisation and growth, and for young farmers who lack sufficient assets that can be used as collateral. This instrument could focus on the repayment capacity of the farmers, rather than simply prioritising farmers that benefit from RDP grant support. It shall also contribute to significantly reducing the collateral requirements by banks and opening the door for innovative and riskier projects. A remuneration stimuli or a performance fee could also be created for attracting more financial institutions to participate and to increase the overall bank offer to the sector.
- **Stand-alone working capital finance under the EAFRD** is an excellent possibility for solving liquidity issues and for detaching banks and NFBIs from CAP/EAFRD payments.
- Whatever product is defined as a financial instrument, **attention has to be paid to young farmers and new entrants.** Whether this target group would benefit from longer grace periods, a higher priority and higher guarantee rates, better financing conditions, etc., would depend on the type of scheme, its details and targets as well as its total budget. In this context, the **full flexibility of the EAFRD financial instruments for young farmers** has to be considered.
- With regards to small-sized farms, a **specific micro-finance scheme** could also be planned, adapted to the Bulgarian situation, with levels and conditions of financing, attractive for small farms.
- **Technical support for banks as well as farmers** might also be considered to strengthen the capacity of both sides to address market failures. Based on the above, there is potential for new financial instruments and the following options should be explored in more detail:
  - **Technical support to financial intermediaries** that are not very active in agriculture finance is needed to provide these financial institutions with policy frameworks, tools, and a hands-on understanding to help them efficiently service small-sized Bulgarian farms. Agriculture scoring tools should be utilised to quickly assess the repayment capacity of a farmer, which would reduce the credit risk of loans granted and minimise transaction costs. Financial institutions already in the sector could benefit from assistance in sustainably growing their portfolio and in designing new, innovative loan products.
  - **Business development support schemes are essential for farmers** as investors. Technical support should be provided in alignment with future schemes. The focus should be on financial literacy, business planning, farm improvement plans, lean processes, running the farm as a business, understanding the cost of repaying loans early, and so on. In particular, most farmers, and not only the older ones, lack expertise in developing sound business plans.

3. PART II: AGRI-FOOD SECTOR

3.1 Market analysis

Key elements on the agri-food sector in Bulgaria
• In 2018, there were 6 185 food and beverage enterprises in Bulgaria with a total turnover of EUR 6.2 billion. • The value of the sector's final production was EUR 5.4 billion in 2018, which was 38% higher compared to 2010. • After Bulgaria's accession to the EU, agri-food enterprises had to adopt stricter food safety regulations and adapt to competition from the EU common market. • The agri-food sector is the second largest employer in the manufacturing industry, employing 95 300 people. • The main sub-sectors are bread and pastries, meat processing, followed by fruit and vegetable processing, and dairy. • Bulgarian agri-food exports were valued at EUR 3.4 billion in 2018, 75% of which were sold within the EU.

The agri-food industry is a key pillar of the Bulgarian economy. It accounts for approximately 20% of total industrial production.[71] **It has a strong impact on both domestic and foreign trade,** affecting Bulgaria's export earnings, domestic consumption and the overall living standard of the population. The value of the sector's final production was EUR 5.4 billion in 2018 (Table 10), which marks a 38% increase since 2010.

Table 10: Annual production value of food and beverage manufacturing in Bulgaria

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Production value (EUR million)	3 945	4 222	4 380	4 511	4 476	4 690	5 025	5 321	5 456

Source: Eurostat, 2019.

The key agri-food sub-sectors are (i) bread and pastries, and (ii) meat processing. Each of these two sub-sectors account for over 10% of the sector's final output.[72] They are followed by dairy products, and fruit and vegetable processing. The agri-food sector is also the second largest employer in Bulgaria's manufacturing sector, with 95 300 people employed.

The accession of Bulgaria to the EU in 2007 has significantly affected the Bulgarian agri-food sector. Enterprises in the sector, which were already subject to privatisation, buy-outs and foreign direct investments, needed to comply with much stricter food safety regulations and to adapt to higher levels of competition from the common market. Like the agriculture sector, this has resulted in restructuring and consolidation. Increased investments into technologies, know-how and marketing have been necessary for the continued competitiveness of Bulgarian agri-food enterprises.

There are 6 185 food and beverage enterprises in Bulgaria (with nearly half of them located in the Central South and South West regions)**, which had a total turnover of EUR 6.2 billion in 2018.**[73] While more than

71 Global Agriculture Information Network (GAIN), USDA, July, 2018, 'Food Processing Ingredients Bulgaria'.
72 Bulgarian Ministry of Agriculture, Food and Forestry, February 2015, 'Bulgaria - Rural Development Programme Report'.
73 Eurostat, 2019.

90% are micro or small-sized enterprises,[74] more than 50% of the value added is created by medium-sized companies. Large-sized companies account for about 25% of the sector's value added.

Large supermarket chains dominate the Bulgarian food retail market and have strong market power in determining the price of agri-food products. The Bulgarian retail sector is led by Kaufland, followed by METRO. It is expected that Lidl and BILLA will also increase their market shares in the future. Those large retailers are dominating urban areas. However, Bulgarian customers are starting to focus more on buying organic, fresh, and locally produced food and, hence, small, specialised fruit and vegetable stores, as well as similar outlets for dairy and meat products, are starting to emerge[75]. Currently, their market share is low.

The agri-food sector has a variety of supply channels. Most small and medium-sized processors use local products, while larger ones buy from both local, nation-wide and foreign suppliers. An increasing number of farmers are setting up on-farm processing installations, including through support from the EAFRD under the RDP 4.2 sub-measure. On-farm processing is the most popular in the fruit and vegetable, dairy and meat sub-sectors. These farmers sell directly to consumers (e.g. in dairy it is now common to have vendor machines with fresh milk to be placed in villages and daily re-charged from the dairy farm). As a next step, their marketing strategies cover contracting with local (in villages or small town) small-sized supermarkets and the careful expansion of sales, first, regionally, and then in more regions or nation-wide. The setting up of farm direct sales markets (where also processed food could be sold) is rather difficult at the moment, with the Wednesday market at the Ministry of Agriculture, Food and Forestry in Sofia being the most prominent and successful example. The RDP is yet to open the relevant measure, which can be a turning point for many small-scale farm processors and also farmers.

The agri-food sector exports to 160 markets worldwide.[76] In 2018, Bulgaria's total exports were EUR 28.6 billion, of which 11.8% (EUR 3.4 billion) were from the agri-food sector.[77] While this marked a year-on-year increase of 3.8%, exports have been relatively stable over the longer term.[78] The top agri-food exports are cereal and vegetable products, at EUR 1.9 billion, and foodstuffs (baked goods, chocolate, canned vegetables, etc.), at EUR 1.3 billion.[79] EU countries are the main customers for Bulgarian agriculture and agri-food goods due to the more favourable trade conditions within the European Single Market. In 2018, the trade of agriculture goods with the EU increased by 5.3% compared to 2017, and accounted for 75% of Bulgaria's total agriculture exports.[80]

74 Investor.bg 2017-2018, https://www.investor.bg/imenata-na-biznesa/107/a/boiko-takov-mejdufirmenata-zadlyjnialost-vse-oshte-e-goliam-problem-v-bylgariia-294542/.

75 USDA Foreign Agriculture Services (GAIN Reports), 2018, Bulgaria: Retail Foods Bulgaria, https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Retail%20Foods%20Bulgaria_Sofia_Bulgaria_6-29-2018.pdf.

76 OECD World data for Bulgaria, 2017.

77 National Statistical Institute of the Republic of Bulgaria, Exports, imports and trade balance of Bulgaria by sections of SITC, rev.4 in 2017 and 2018.

78 OECD World data for Bulgaria, 2017.

79 Ibid.

80 National Statistical Institute of the Republic of Bulgaria, Exports, imports and trade balance of Bulgaria by sections of SITC, rev.4 in 2017 and 2018.

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

This section describes the drivers of demand for finance in the agri-food sector and analyses the met and unmet demand. It seeks to identify the main reasons for agri-food enterprises to request financing and the agri-food sub-sectors showing the largest need for finance. The section also provides an analysis of the type of enterprises which face more constraints in accessing credit. The examination of the demand for agri-food finance is based on the findings from the agri-food survey results of 100 Bulgarian enterprises, as well as interviews with key stakeholders in the agri-food sector, combined with national statistics.

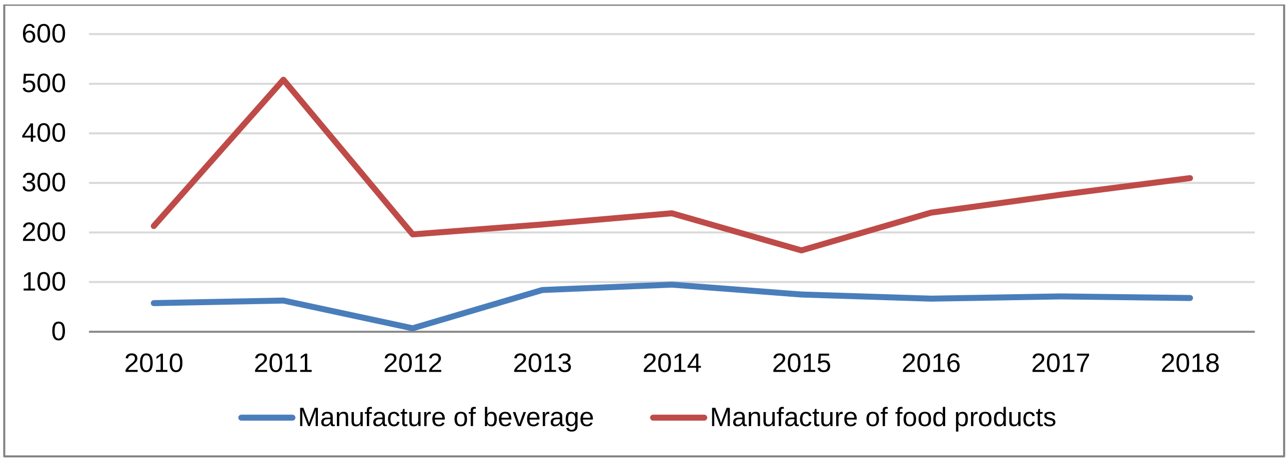
Key elements on finance demand from the Bulgarian agri-food sector

- Overall, agri-food processors foresee an increase in their financial needs, driven by (i) the purchase of machinery and equipment, (ii) the renovation of facilities and buildings, (ii) the working capital needs, and (iv) the adoption of new technologies.
- In general terms, the lack of qualified workers has caused firms in all sub-sectors to focus on technology that can reduce labour needs.
- In all sub-sectors, working capital is vital for running the business. High liabilities to suppliers and high costs of production play a larger role in the working capital needs of the Bulgarian agri-food producers compared to other EU 24 countries.
- The financing needs for investment projects in the agri-food sector are higher for the following sub-sectors: dairy products and milk processing, meat processing, wine, and fruit and vegetable processing.
- The EAFRD remains a trigger for processors to search for finance. The co-financing of the grant support under the national RDP sub-measure 4.2, which supports investments in processing, drives the demand for finance.
- While Bulgarian agri-food enterprises apply more frequently for finance than those in EU 24, their loan applications are rejected more often.
- Small-sized enterprises are the most likely to be rejected and are also the most disadvantaged in terms of financial planning and financial management capacity.
- The estimated unmet demand for finance is EUR 179 million.
- The unmet demand is driven by the following main problems that constrain agri-food enterprises' access to finance:
  - the potentially high risk of investments carried out by agri-food businesses;
  - insufficient collateral (especially for start-ups and small-sized enterprises) and a lack of credit history;
  - a lack of financial planning skills and difficulties in preparing a business plans, which are also reasons why banks reject applications from start-ups and new entrants;
  - the lack of transparency of banks' lending policies, which can discourage small-sized agri-food enterprises from applying for finance; and
  - the expectation of being rejected, which is a key reason for discouragement of agri-food companies and which might stem from previous negative experiences with financial institutions (e.g. rejection of a loan) or their lack of confidence in their repayment capacity and the strength of their business plan.

3.2.1 Drivers of total demand for finance

Gross investment in the Bulgarian agri-food sector has shown an upward trend since 2012 (Figure 29), particularly for the manufacturing of food products. The investment level is almost five times higher for this sector than for beverage manufacturing.

Figure 29: Gross Investment in the Bulgarian agri-food sector, 2010-2018, EUR million



Source: Eurostat, 2019.

The overall investment rate in the Bulgarian agri-food sector has grown slightly in the last five years. The investment rate was 30.6% for 2018 and has remained relatively stable since 2016 (Table 11).

Table 11: Gross Investment as a share of GVA in the Bulgarian agri-food sector, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Gross Investment in agri-food	271	571	203	300	334	239	307	347	378
GVA in agri-food	741.6	1 086.1	1 175.5	1 109.6	1 177.4	1 019.1	1 050.6	1 042.5	1 237
Gross investment over GVA	36.5%	52.6%	17.3%	27.0%	28.4%	23.5%	29.2%	33.3%	30.6%

Source: Calculations based on Eurostat, 2019.

The largest Bulgarian food processors include dairy, confectionary and meat processors (Table 12): The largest enterprise by turnover in those sectors is Mondelez Bulgaria Production, which is part of a global company that produces snacks, including chocolate, muesli and chewing gum. The second largest enterprise by turnover belongs to Nestle. It produces chocolate, coffee products, pet food and other products. Bella is a regional group of companies producing pastry products, meat products, margarine and oils, cheese and yellow cheese. They are the largest provider of bread and pastry products in Bulgaria followed by OMK AD. In terms of meat processing, Ken AD is the largest enterprise.

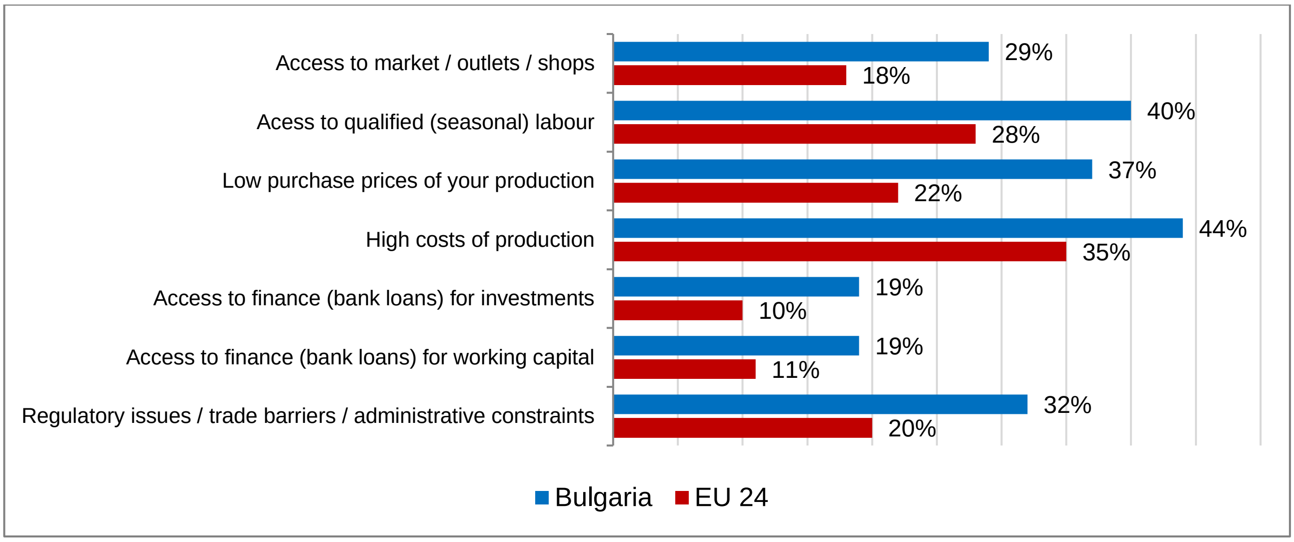
Table 12: Turnover for the 10 largest companies manufacturing dairy, confectionary and meat products in Bulgaria

Company	Turnover EUR million	Main production area
Mondelez Bulgaria Production	145.98	Produces snacks, including chocolate, muesli and chewing gum
Nestle Bulgaria AD	66.53	Produces chocolate and coffee products
Bella Bulgaria AD	64.17	Produces pastry products, meat products, margarine and oils, cheese and yellow cheese
OMK AD	43.30	Dairy, produces and markets a variety of milk products
Prestige 96 AD	36.93	Pastries, such as biscuits, wafers and sponge cakes
Tyrbul EAD	33.53	Dairy, produces cheese and cheese products
Zaharni Izdelia Varna EOOD	31.95	Confectionery, such as hard and soft sugar candy, Turkish delight, halva and waffles
Ken AD	28.90	Meat processing, produces fresh, cured and cooked smoked sausages, smoked salami, hams, pates and scalded meat
Mesokombinat Lovech (Boni Holding)	27.50	Meat processing, production of pork, and other meat products
Dimitar Madzharov-2 EOOD	26.10	Manufacture of meat and dairy products

Source: USDA GAIN Report, Food Processing Ingredients in Bulgaria, 2019.

The four main difficulties faced by Bulgarian food and beverage processors in 2018 were production costs, the hiring of qualified labour, the selling price of their production and regulatory issues (Figure 30). In 2018, Bulgarian food and beverage processors faced more difficulties with production costs (44% of respondents) compared to the EU 24 average. This was followed by the difficulty in securing qualified labour. For 40% of the survey respondents, hiring qualified seasonal labour was difficult. Labour shortages remain a challenge in Bulgaria due to emigration, although it has declined in recent years. Seasonal labour causes higher transaction costs (transport costs; salaries have to be paid daily or maximum weekly, requiring additional liquidity before the harvest is being sold) and administrative costs (additional accounting tasks, monitoring, search of additional labour in case of no show, etc.). Unemployed people could work in agriculture without losing their unemployment benefits, and during seasonal peaks it is an attractive option for farmers, but only few unemployed have shown interest in working on farms despite the regular campaigns from the Ministry of Agriculture, Food and Forestry. The third difficulty highlighted was the low prices received for their production (37%) while the fourth difficulty was related to the implementation of regulations, standards or administrative requirements (32%). Despite being ranked only third and fourth, these problems continue to affect a significant number of farmers.

Figure 30: Difficulties experienced by agri-food enterprises in 2018



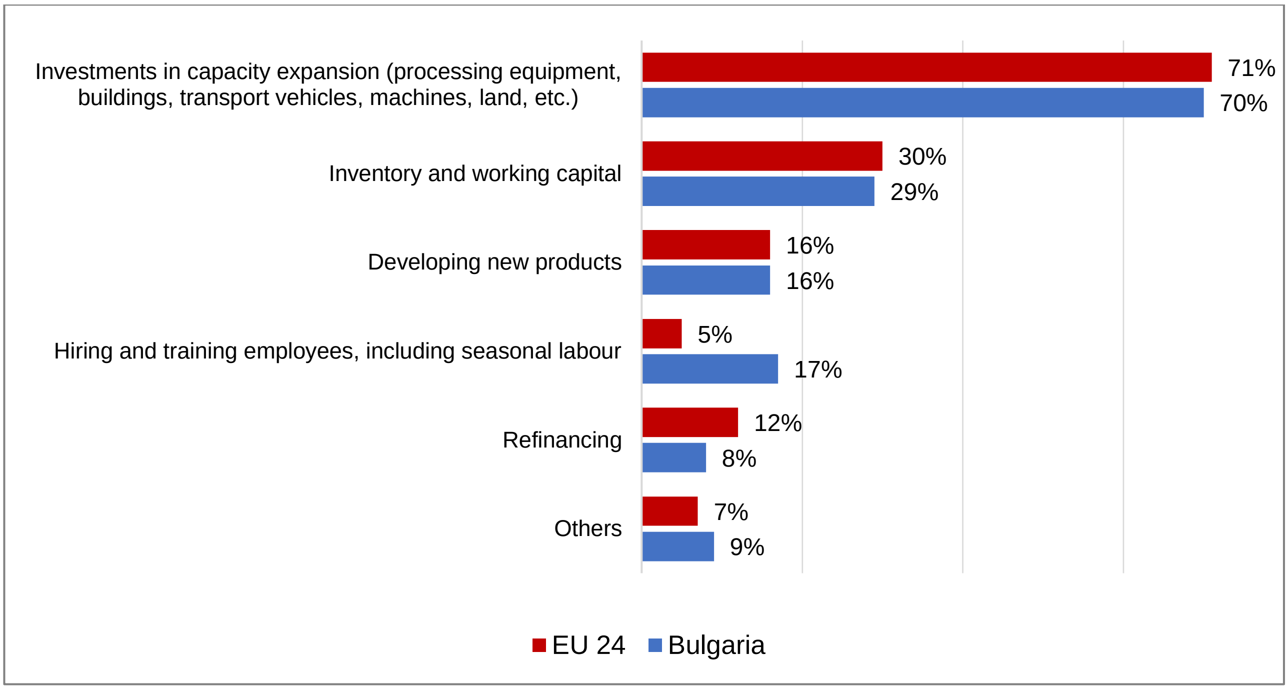
Source: Agri-food survey.

The interviews conducted for the purpose of the study with agri-food enterprises, their associations and the financial institutions serving them, confirm that the **overall the demand for finance in the agri-food sector is driven by:**

(i) the need to purchase machinery and equipment;
(ii) the need to purchase buildings and facilities;
(iii) the need for working capital;
(iv) the adoption of new technologies and IT systems (e.g. Enterprise Resource Planning systems); and
(v) the entry of new players into the sector (e.g. farmers starting processing activities).

The key drivers of finance are investment into new processes, equipment and vehicles, and the renovation or extension of facilities, etc., which is more or less aligned with the EU 24 average (Figure 31). This is followed by inventory and working capital requirements. Investments into equipment are linked to labour shortages, labour efficiency and improving quality, as already highlighted above. In addition, the focus group meetings revealed that agri-food companies are investing in their staff by providing training and capacity building, with the goal of increasing their motivation. The companies are confident that these investments will generate good returns.

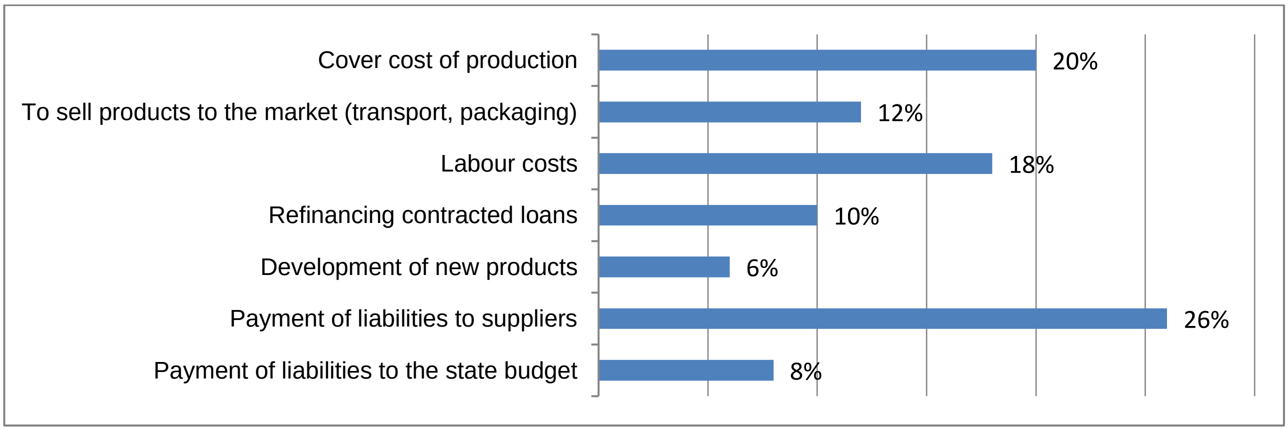
Figure 31: Purpose of bank loans in the agri-food sector in 2018



Source: Agri-food survey.

Working capital is vital for running the business operations of all Bulgarian agri-food enterprises. They rely on working capital finance to meet a variety of financial needs, such as payment of liabilities to suppliers (26%), the cost of production (20%), and labour costs (18%) (Figure 32).

Figure 32: Working capital needs of Bulgarian agri-food enterprises in 2018



Source: Calculations[81] based on interviews with agri-food enterprises and banks, 2019.

The financial need for working capital is partly driven by high liabilities of retailers / intermediaries to the processors. This is a particularly serious issue in the Bulgarian agri-food sector,[82] higher than in EU 24, as contracts with hypermarkets are not favourable for the processors (but ensure a wider market). Hypermarkets do not share risks equally and delay the payments for the received products, even if the products are sold. In addition, the hypermarkets require that all products are delivered directly to their facilities, with the

81 Average calculated based on number of total answers for respective indicator; multiple answers possible.
82 Agri-food enterprises indicated that sometimes it takes off-takers up to 6 months to pay. In such cases, agri-enterprises have to source working capital finance to keep the business afloat.

supplier covering transportation costs.[83] This challenge is mainly addressed by short-term loans and credit lines, which additionally burdens processors with costs, and reduces their further ability to take up medium to long-term loans.

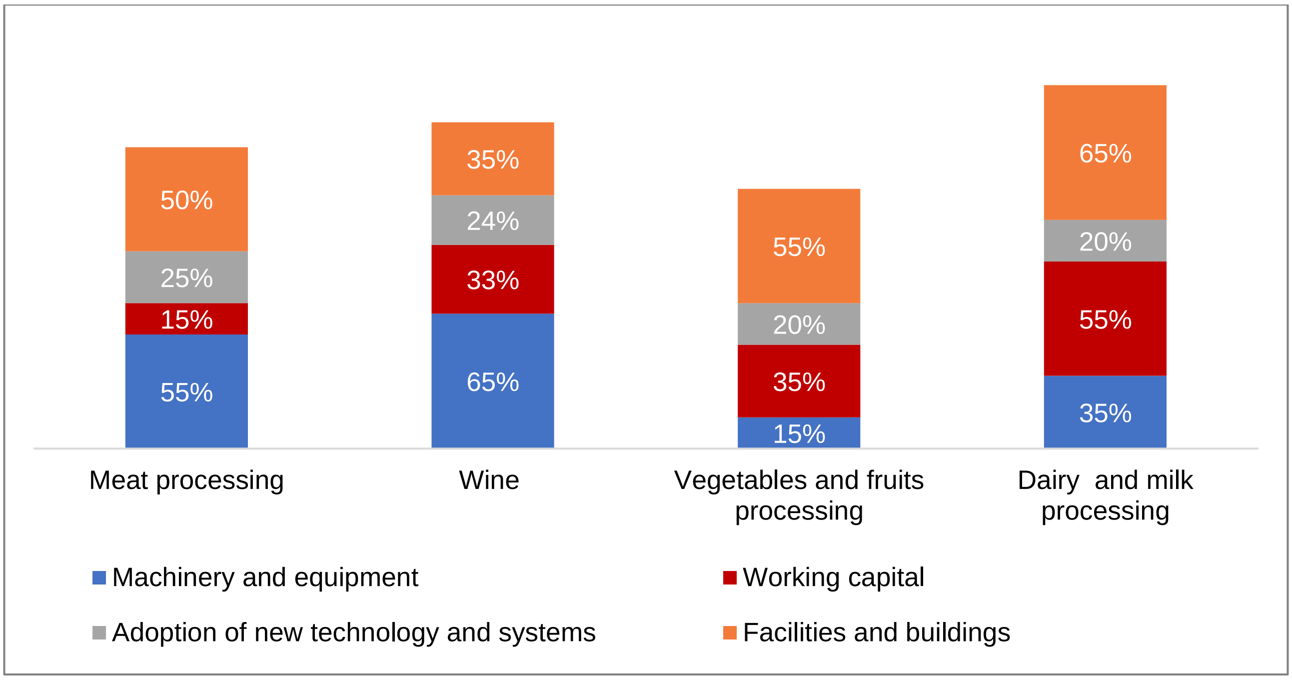
According to the accounting records of agri-food companies, salaries are a major cost component, with 45% of the companies using working capital for the payment of workers. Furthermore, 30% use working capital for better access to markets (including transportation costs) and 25% to cover previous loan obligations or to refinance new loans.[84]

Investments in automated technologies and IT systems are pursued in order to remain competitive. As indicated above, agri-food enterprises mentioned increasing costs of production as one of their key challenges. Increasing electricity and labour costs are particularly worrying for them, as they are in intense price competition with the large-scale supermarkets.

In Bulgaria, increasing numbers of consumers are demanding organic products. To be able to meet the demand, some agri-food associations said that some of their members have invested into technologies with higher water and energy efficiency, and improved waste management. Agri-food associations outlined that major technological advances are being embraced in the vegetable and fruit processing sub-sectors, including the use of improved facilities and safe and healthy packaging systems, which require substantial financing.

The investment intensity varies depending on the sub-sector. The financial needs of agri-food enterprises have also been analysed with regard to the specialisation of the enterprises (Figure 33), based on the analysis of bank data. The data shows that across the different agri-food sub-sectors, the financing need for purchasing facilities and buildings is the highest, or in any case very high, with the exception being wine. This is followed by machinery and equipment, working capital, and the adoption of new technologies and systems. These findings are in line with the findings of the agri-food survey (Figure 31).

Figure 33: Purpose of loans,[85] by agri-food sub-sector



Source: Calculations, based on data received from 3 commercial banks[86], 2019.

83 METRO and Agriculture University project 'Let's support local foods', 2016-2017.
84 Interviews with agri-food enterprises.
85 One loan can cover multiple financial needs.
86 These include: Unicredit Bulbank, United Bulgarian Bank - UBB, Teksim Bank.

Financing needs also depend on the size of the agri-food enterprise. Table 13 provides an assessment of the financing needs clustered according to turnover. It compares 2018 needs with the needs of the previous year.

Table 13: Financing needs according to the turnover of agri-food enterprises

Type of Financing Need	Turnover		
	<EUR 25 000	< EUR 100 000	> EUR 100 000
Machinery and equipment	constant /no change	↑	↑
Working capital	↑	↓	↑
Adoption of new technology and systems	constant /no change	constant/no change	↑
Facilities and buildings	constant /no change	constant/no change	constant/no change

Source: Agri-food survey. Note: An upwards arrow indicates an increasing need, whereas a downwards arrow indicates a decreasing need.

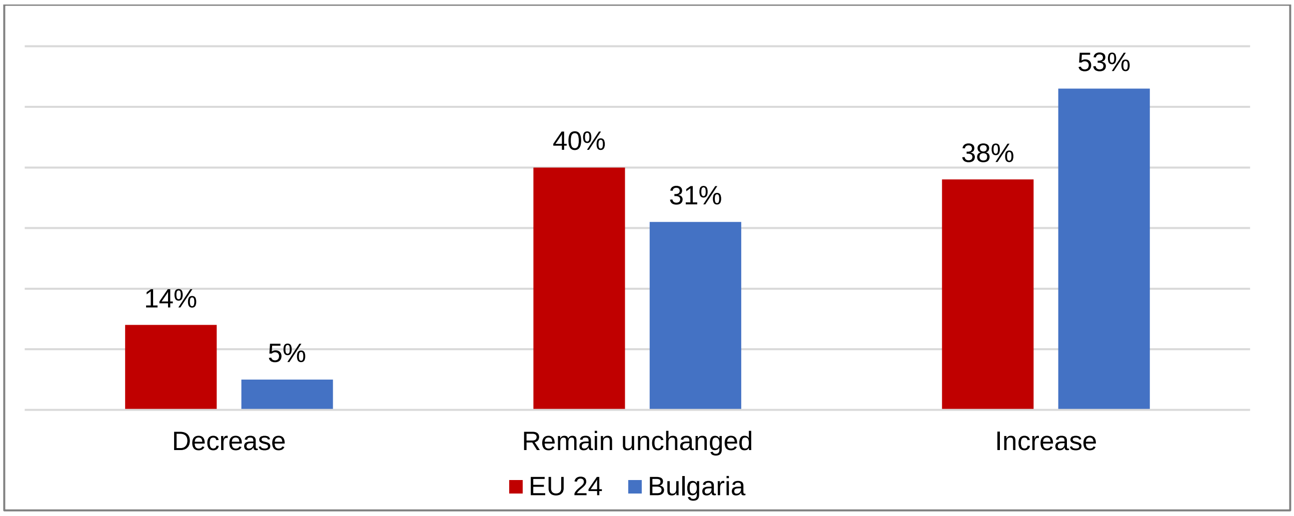
- **For agri-food enterprises with a turnover of less than EUR 25 000, financial needs are mostly constant across all purposes, with little change compared to the previous year.** Only the need for working capital has increased. These firms usually have up to 9 employees. The focus groups confirmed that the expansion of their market outreach is challenging due to their indebtedness and their overall lower risk appetite to pursue innovative investments or expansions.
- **Firms with a turnover of between EUR 25 000 and EUR 100 000 have seen an increase in the need for loans to purchase machinery and equipment, and a decrease in loans for working capital.** These enterprises are often small to medium-sized. They have more financial capital and opportunities to invest in machinery and equipment than micro enterprises. As 90% of financial aid under the RDP targets medium-sized enterprises, some of them have used this avenue and received financing for their projects by the RDP.[87]
- **Firms with a turnover of more than EUR 100 000 have seen an increasing need for loans used to purchase machinery and equipment, to adopt to new technologies and systems, and for working capital.** These large-sized firms tend to take several bank loans simultaneously, as they have easier access to a variety of financing instruments and benefit significantly from support under the RDP.

Finance demand is also driven by the growing number of new players in the agri-food sector. This is also due to the increased popularity of the measures under the RDP. In some cases, new entrants are farmers looking to close their production cycle and become independent, as well as diversify their economic activities and income by adding a small-scale agri-food processing business (e.g. yoghurt, white and yellow cheeses, meat products, jam and honey, etc.). Their initial financing needs are high, because they need to buy the necessary food processing machinery and equipment, and prepare the buildings and facilities to house them.

Bulgarian agri-food processors are expecting more of an increase in their financing needs in the coming years compared to their EU 24 counterparts (Figure 34). More than half of the Bulgarian agri-food enterprises (53%) are expecting to see their financing needs increase in the next 2 to 3 years. This is15% higher than the EU 24 average. In comparison, only 5% of the Bulgarian agri-food enterprises expect their financial needs to decrease over the coming years (9% lower than the EU 24 average).

87 Ministry of Agriculture and Food, Agriculture Reports (2017-2018).

Figure 34: Agri-food companies' expectations on future financing needs, 2018



Source: Agri-food survey.

RDP investment support plays a catalytic role in the Bulgarian agri-food sector. By the end of 2019, processors have asked for a total support of EUR 780.6 million with the initial submission of the applications (before any checks) being more than twice as high as the budget made available. In total, 398 contracts with beneficiaries have been signed for more than EUR 256 million in public support and an overall investment volume of around EUR 510 million (Table 14). This very high demand for public subsidies is likely to continue in the next programming period, as the sector develops progressively. It is a clear sign there is a significant shortage of resources, which is currently not being satisfied by the banking system.

Table 14: 2014-2020 RDP implementation data for sub-measure 4.2, by the end of 2019

Sub-measures	Amount requested from all applications (EUR million)	Amount provided by the grant calls under the RDP (EUR million)	Amount not satisfied (EUR million)	Number of received applications	Number of non-supported applications	Number of approved applications with signed contracts
4.2 Support for investment in processing, marketing and development of agricultural products	780.6	353.6	427	1 190	811	398

Source: Paying Agency (State Fund Agriculture), 2020. Preliminary data.

Note: The 'Amount requested from all applications' and the 'Amount not satisfied' are calculated based on all received applications before any administrative check regarding eligibility or selection criteria have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not allowing for their evaluation, and/or with insufficient value-add, and/or ranked at a place for which the budget under the call is no longer available. Some applications could have been also withdrawn or contracts annulled or interrupted.

3.2.2 Analysis of 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 approved by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial institution, offers of credit refused by agri-food enterprises, alongside cases where farmers are discouraged from applying for credit due to an expectation of rejection or refusal.

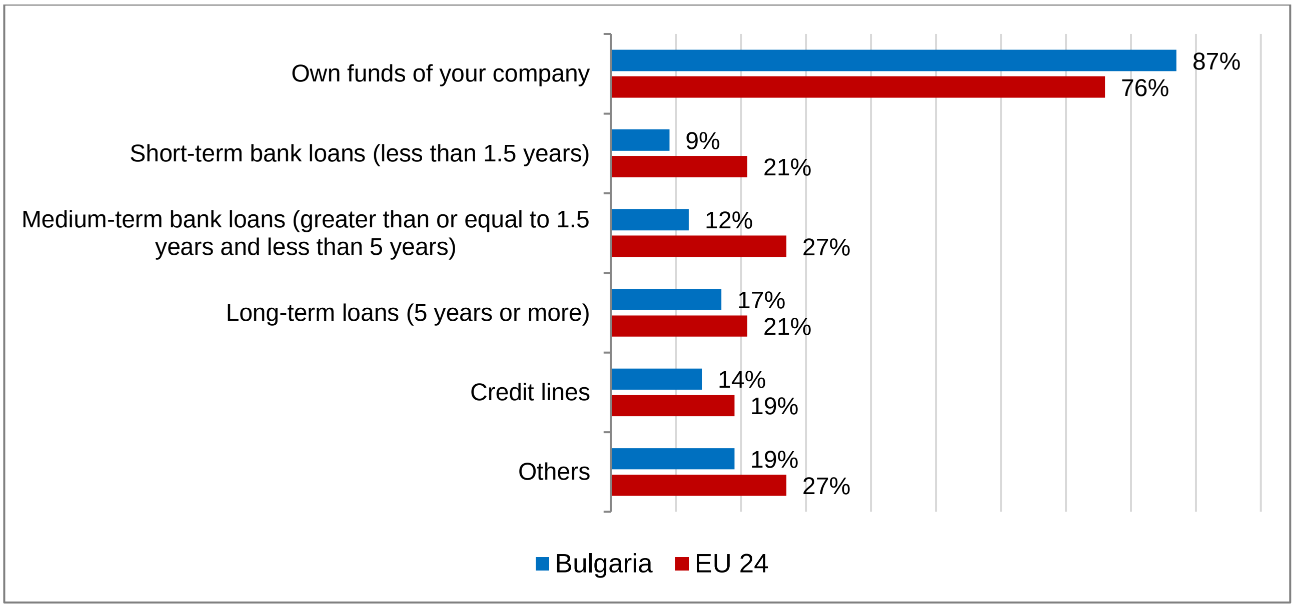
Based on the Agri-food survey, the unmet demand for the agri-food sector in Bulgaria is estimated at EUR 178.5 million.

According to the Agri-food survey, most of the funding in the agri-food sector comes from own funds (87%). The importance of banks in meeting financial needs is below the EU 24 average for all loan products (Figure 35). Interviews with agri-food enterprises confirmed that the main reason why they rely on their own funds is to ensure full control over their business risk.

These considerations explain why the majority of enterprises had not applied for external finance. Of the 33% of agri-food enterprises that applied for bank financing in 2018, long-term loans (17%), credit lines (14%) and medium-term loans were the most popular products.

Other causes for the low usage of financial products provided by financial institutions are included in the subsequent section in this report.

Figure 35: Most important financing instruments to agri-food enterprises, 2018



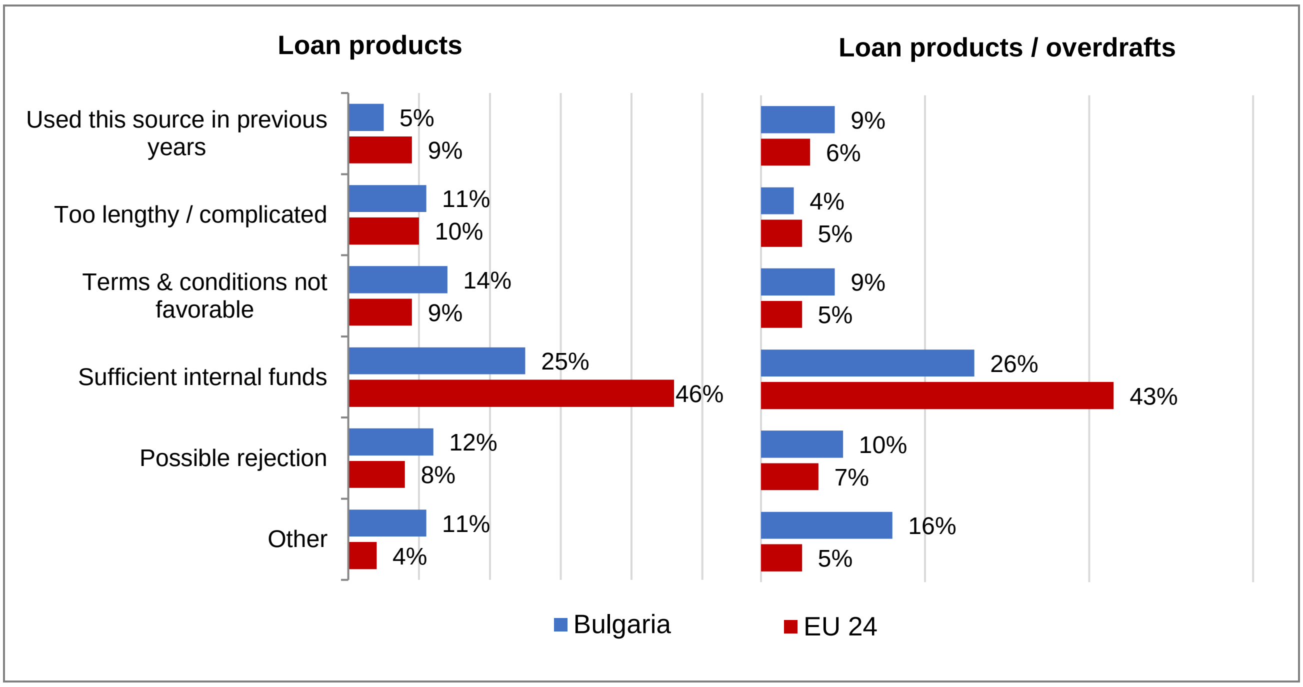
Source: Agri-food survey.

Many Bulgarian agri-food enterprises are discouraged from applying for loans. Compared to the EU 24, more Bulgarian enterprises anticipate the rejection of their applications and therefore do not apply for loans (Figure 36). The share of discouraged enterprises reached 12% in 2018. Slightly more enterprises are hesitant in applying for loan products than for credit lines or overdrafts. Nevertheless, the key reasons of not applying for a loan are the availability of sufficient own funds and the terms and conditions of the products being perceived as unfavourable.

- The Agri-food survey found that **14% of Bulgarian agri-food firms did not apply for loans because the terms and conditions were considered unfavourable**. This is significantly higher than in the EU 24.
- **Lengthy and complicated lending procedures** were also indicated as a reason for not applying.

- **Limited availability of information about financing options** was another key factor limiting the loan requests from agri-food enterprises. This was particularly the case for credit lines and long-term loans. Moreover, low levels of financial knowledge may be an additional problem for very small-sized companies.
- **A fear of being rejected** is related to past loan rejections, a lack of confidence by enterprises about their repayment capacity, as well as other factors.

Figure 36: Reasons for not applying for loans in the agri-food sector in 2018



Source: Agri-food survey.

The firms with the highest accumulated demand for loans in the agri-food sector are the small-sized enterprises. For this particular segment, interviews with agri-food enterprises and their associations indicated that every fourth agri-food enterprise is discouraged from applying. This would mean that discouragement levels of small-sized firms are twice as high as for the entire sector.

Interviews conducted with small-sized agri-food enterprises and their associations provided some further insights on the reasons for not applying for bank loans:

- The first reason, with the majority of respondents pointing at the issue, is the perceived low transparency in the banks' lending policies. Agri-food enterprises said that based on their experience with banks, they have a fear of hidden costs and stated that bank policy can very often be changed unilaterally, resulting in additional unforeseen liabilities.
- A number of respondents also mentioned the lack of cost-effective support to develop a business plan, with most of the entrepreneurs having to rely on costly consultants to obtain the required document.
- Entrepreneurs also said that they are withholding applications as they believe that they will receive more attractive conditions in the near future.
- Lack of collateral is also another critical factor, according to 10% of respondents, but it is much less of a pressing issue than for agriculture firms.

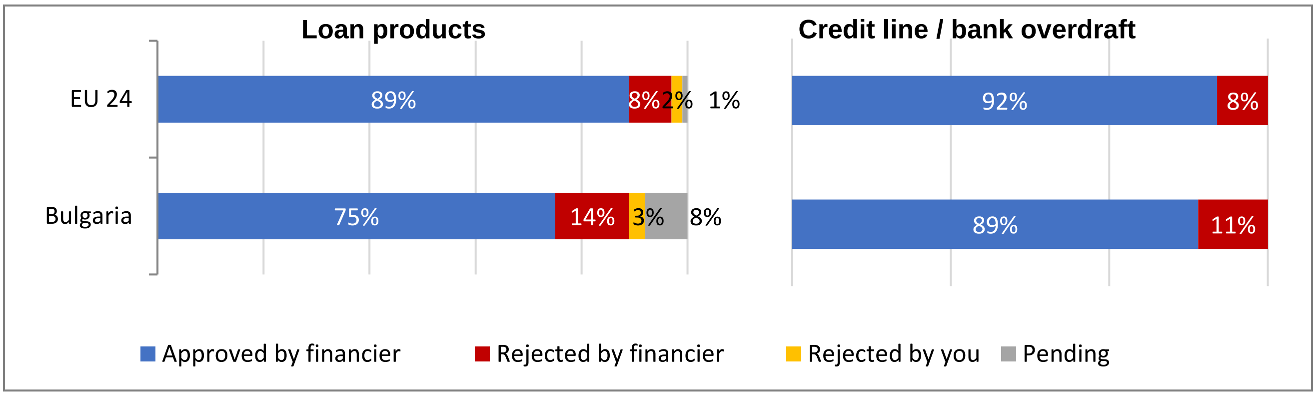
As a result the small-sized enterprises in the agri-food sector are particularly vulnerable in their relationship with the banking sector.[88] When trying to develop their business, these firms often face the following obstacles:

88 Source: Interviews with agri-food enterprises and their associations.

- Their level of working capital is extremely low, and they have high liabilities, reducing their possibilities for additional investment.
- They have a lack of competences and skills in the area of financial management, and in preparing loan applications to banks, and project proposals for the various RDP measures.
- They are dependent on a few buyers and therefore cannot grow their margins substantially.
- While their fixed production costs are stable their revenues can be volatile.

In line with the qualitative findings presented above, **the ratio of firms which have seen their loan applications rejected is comparatively high for all loan products (including credit lines/bank overdrafts)** and higher than the EU 24 average, as shown in Figure 37. Interestingly, the loan products mostly refused by agri-food enterprises are long-term loans as the terms and conditions offered by banks do not meet their needs.

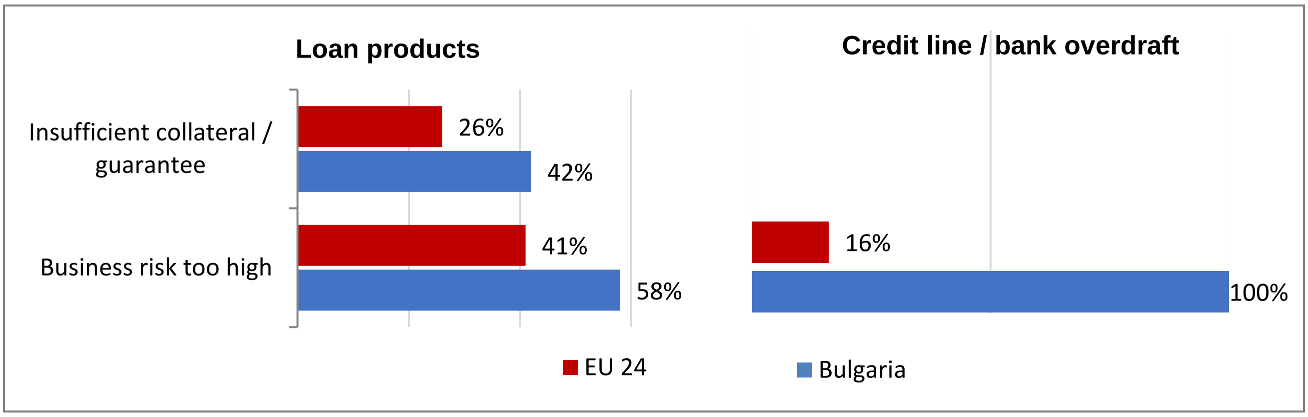
Figure 37: Results from loan applications in the agri-food sector in 2018



Source: Agri-food survey, 2019.

High business risk and a lack of collateral are the key reasons banks reject loan applications to agri-food firms (Figure 38). In addition, unfocused marketing strategies of the agri-food enterprises, inadequate business plans and a lack of credit history are also reasons for rejections. Banks also have doubts about the long-term sustainability of the operations and are afraid that these enterprises will not have sufficient liquidity to repay the loans on time.

Figure 38: Reasons for loan rejection in the agri-food sector in 2018

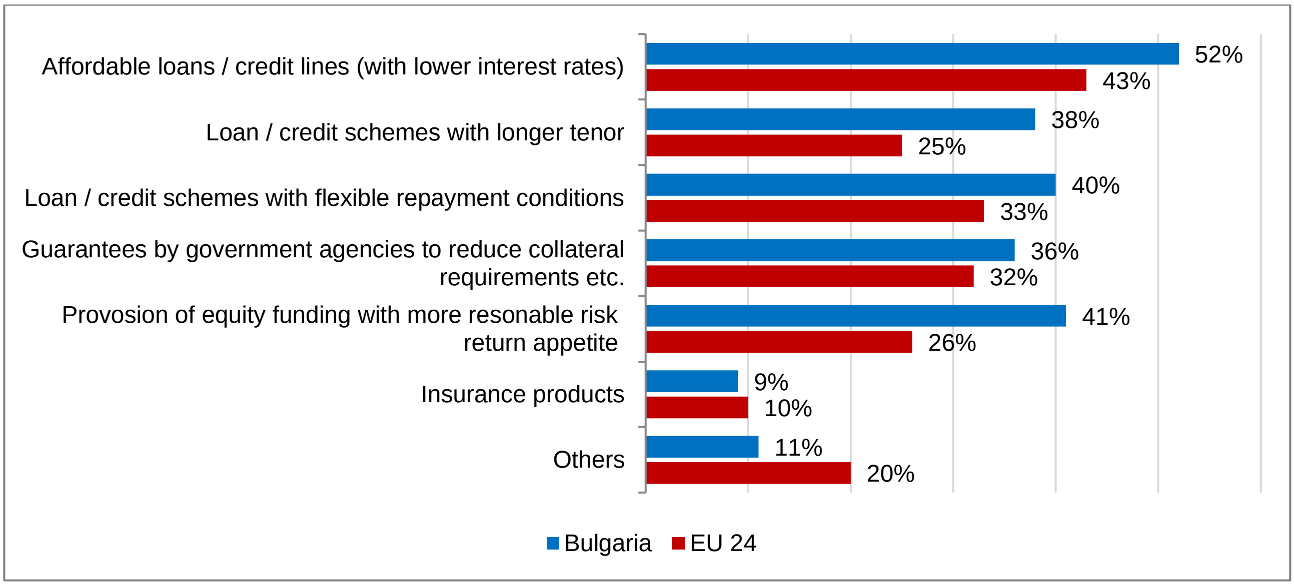


Source: Agri-food survey, 2019.

Many agri-food enterprises have never borrowed before and thus do not have a credit history. In such cases, banks are not assured that the agri-food enterprise can fulfil the contractual obligations and repay the loan instalments. A particular constraint exists for new entrants and start-ups, because, in addition to a lack of credit history, they cannot yet provide a track-record of the business operations and turnover.

Agri-food companies believe that loans with lower interest rates might help to improve their inclusion into the financial system (Figure 39). Processors consider the costs for loans too high. Many believe that public guarantees would strongly benefit them. In addition, technical support in preparing business plans and strategies for development are also demanded. To a lesser extent, agri-food entrepreneurs are also sensitive to the repayment scheme of loans, preferring longer terms and a more flexible repayment schedule (40%).

Figure 39: Solutions to reduce difficulties in accessing finance, 2018



Source: Agri-food survey.

Technical support to firms has been mentioned as a clear driver for enhanced access to finance. Issues that should be covered in such technical support include business planning and sustainable business management practices, such as cash flow management, financial planning and debt management. In these areas, the skills of entrepreneurs seem to be currently insufficient.

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

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

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

- Since 2014, banks have been increasing their lending to the agri-food sector, which they view as less risky than agriculture, but still riskier than many other sectors of the economy.
- The main drivers underpinning the increased supply of credit are the higher number of new players in the agri-food sector, and the growing popularity of measures under the RDP and other public support schemes for entrepreneurship and competitiveness.
- Banks mainly provide long-term loans to cover the investment costs of firms when EU or national support is available to the firm.
- The EAFRD will support a Risk Sharing Financial Instrument - Credit fund - that will finance stand-alone projects or complement grants for agri-food processors under the RDP 2014-2020. The initial budget is set at EUR 20 million and its implementation should start by the end of 2020.
- The following constraints to the supply of finance to the agri-food sector exist:
  - Financial product features do not meet the requirements of clients. Like agriculture enterprises, agri-food enterprises are affected by seasonality (and thus variations of income) and therefore require tailor-made repayment schedules. This discourages enterprises from applying.
  - Banks do not have tailored marketing strategies, particularly for small and medium-sized enterprises, so many potential clients are unaware of the available products.

3.3.1 Description of finance environment and funding availability

3.3.1.1 Finance providers

Banks are the main providers of credit to the agri-food sector. In Bulgaria, the overall financing of SMEs is provided by 261 finance providers, including 26 commercial banks and NBFIs (see Section 2.2.1). Almost half of all Bulgarian banks offer credit products to the agri-food enterprises. These banks mainly give medium-term loans to cover the investment costs of firms and short-term loans to cover working capital needs. Some of the loans are provided in conjunction with RDP grants. NBFIs mostly offer small, short-terms loans.

The lending market for the agri-food sector is less concentrated than for the agriculture sector. While Unicredit Bulbank also dominates lending to the sector (around 20% share), other important players include DSK Bank, United Bulgarian Bank, Eurobank and Raiffeisenbank, each of them having around 10% of the market.

3.3.1.2 Financial products

While banks view the agri-food sector as being less risky than agriculture, the agri-food sector still receives more loan rejections compared to other sectors of the economy. This is caused by the fact that, in general, their businesses are connected to the agriculture business cycle and are therefore exposed to similar risks (e.g. weather, seasonality), although processors can mitigate these risks since they can also import products to compensate any local production loss. This was confirmed during interviews with the credit staff of financial institutions.[89]

The main clients that banks serve are dairy producers, followed by wineries and meat processing firms (Table 15). The marketing strategies of the banks favour larger-sized firms, because they have stable market positions and their collateral is deemed to be valuable enough to secure the loans. Small-sized firms are the main clients that apply for loans to meet their working capital needs.[90] New entrants are appearing recently mostly in the sub-sectors of dairy processing, meat processing and wine production.[91] Many of them kick-started their business after receiving grant from the EAFRD/RDP, which they used as collateral for the bank loan.

Table 15: Type of financing ensured by Bulgarian banks to dairy, wine and meat processing, 2019

Banks	Clients/specialisation	Clients / small-sized firms	Clients / large firms
UniCredit Bulbank AD	Dairy processors, wineries, meat processors	X	X
United Bulgarian Bank AD	Dairy processors		X
Raiffeisenbank (Bulgaria) EAD	Dairy processors, wineries	X	X
Piraeus Bank Bulgaria AD	Dairy processors	X	X
DSK Bank EAD	Dairy processors, wineries		X
Bulgarian-American Credit Bank AD	Wineries		X
First Investment Bank AD	Wineries, dairy processors		X
DSK Bank EAD	Dairy processors	X	X
ProCredit Bank (Bulgaria) EAD	Dairy processors, wineries	X	X
Central Cooperative Bank AD	Dairy processors		X
Teksim Bank AD	Dairy processors, meat processors		X

Source: interviews with 11 bank/branch managers, 2019.

There are no specific agri-food loan products offered by the banks. The agri-food sector is either covered through agriculture loans (section 2.3.1.2) or general products offered to small and medium-sized enterprises (SMEs). Almost half of the Bulgarian banks offer products targeting SMEs. The key players are UniCredit Bulbank (portfolio size of EUR 2 432.1 million in 2016) and United Bulgarian Bank (EUR 882.3).[92] The latter offers a standard business loan to SMEs with between EUR 511 000 (BGN 1 million) and EUR 25.6 million (BGN 50 million) in annual revenue, and reportedly applies the following terms and conditions (Table 16):

89 The financial institutions interviewed include Central Cooperative Bank, DSK Bank, Procredit Bank, Teksim Bank, Unicredit Bulbank, UBB, FIB, Pireus Bank, BNP Paribas Bank; the interviews were conducted in summer 2019.
90 Of all 11 interviewed managers, 5 of them said that among their clients are small-sized firms who use received loans for working capital needs.
91 All surveyed bank managers declared that they have customers who start businesses for the first time in these agri-food sub-sectors.
92 CEE SME Banking Report 2017.

Table 16: Terms and conditions for SMEs loans of United Bulgarian Bank

Terms and conditions	
Currency	BGN, EUR or USD
Purpose	For working capital (working capital loan, credit line or overdraft) or investments (investment loan).
Loan period	Up to 3 years for working capital loans and up to 10 years for investment loans.
Repayment and interest	Negotiable
Collateral	Real estate, machines, transportation vehicles, receivables, cash.

Source: United Bulgarian Bank, 2019.

Pro Credit Bank also offers business loans with a maturity ranging between 3 and 15 years. The grace period can be up to 6 months. The interest rate applied varies according to the loan amount (and is the same for agriculture and other SMEs):

- for loans of up to up to EUR 150 000, the interest rate starts from 5.5%;
- for loans of up to up to EUR 250 000, the interest rate starts from 5.0%; and
- for loans of up over EUR 250 000, the interest rate is agreed individually.[93]

In total 11 banks offer loans to the agri-food sector. They often ask agri-food enterprises to show a contract for a grant support under the RDP and consequently request its use as a guarantee for the loan. The EAFRD is the most important financial vehicle to promote investment activity in the agri-food sector.

Agri-food enterprises may benefit from the newly established EAFRD Risk-Sharing financial instrument under the RDP 2014-2020. It is expected to provide financing at significantly lower than the market interest rates (expectations are for a reduction of at least 50% for grant projects and much more, up to 70%, for stand-alone projects), as from the end of 2020 when it should become operational. The instrument is to be managed by the National Fund of Funds and will have an initial capital of EUR 20 million. For more on this financial instrument see Section 2.2.1.

Agri-food enterprises may also benefit from support from the Operational Programme Innovations and Competitiveness 2014-2020 (OPIC). This is a national programme funded by the EU, under which SMEs can apply for grants.

During interviews, bank managers[94] said that entrepreneurs mainly use loans (medium and long-term) to buy equipment and to construct buildings, combining the use of funds allocated under the different measures of the RDP and long-term loans from the banks.

Banks also offer SME loans in cooperation with the NGF for the agri-food sector (Section 2.3.1.1). For SMEs and start-ups, the NGF works with six commercial banks.[95] Banks apply for the guarantees directly with the NGF. NGF provides guarantees that cover up to 50% of the loan granted by the commercial banks, but not more than EUR 160 000 (BGN 250 000). Having an NGF guarantee often allows the borrower to benefit from lower collateral requirements, but also provides security for the banks. Their use for the sector remains, however, limited.

93 Pro Credit Bank website 2019, https://www.procreditbank.bg/en/conditions/page/1121.

94 The financial institutions interviewed include Central Cooperative Bank, DSK Bank, Procredit Bank, Teksim Bank, Unicredit Bulbank, UBB, FIB, Pireus Bank, Pariba Bank; the interviews were conducted in summer 2019.

95 They are: Allianz Bank Bulgaria, Bulgarian American Credit Bank, United Bulgarian Bank, First Investment Bank, UniCredit Bulbank and Eurobank Bulgaria.

3.3.1.3 Description of the financing market

The level of non-performing loans (NPL) in Bulgaria has been on a declining trend but remains higher than the EU average. According to figures from the National Bank of Bulgaria, NPLs as a share of total loans had decreased to 5.94% in 2019. The share of NPLs to non-financial corporations was slightly above those levels and stood at 6.8%. While the NPL ratio for loans to non-financial corporations was 17.15% at the beginning of 2016.

Large-sized agri-food firms have contributed to the high NPL ratio. Banks mentioned that not all investments made by their agri-food clients have had a positive return. Increased volatility on local and foreign markets has resulted in lower cash flows and in the crippling of the enterprises' ability to pay their instalments.

As indicated above, **while interest rates have been decreasing over the last few years, they remain at relatively high levels** (Figure 22). This is particularly the case for short-term credit. Interest rates have also been fluctuating recently, making financial planning challenging for agri-food enterprises. Long-term loans show a downward trend in interest rates and at present keep the lowest ever rates, at approximately 2.8% (for local currency loans).

Some of the small-sized enterprises are relying on informal credit providers to re-finance their debt, paying high interest rates and often being impacted by hidden terms in the contracts.

Banks require collateral for loans. They primarily accept buildings, land and facilities but, in general, all assets that can be easily converted into cash and for which the banks can have access to the legal titles are acceptable. For new entrants that are establishing their own start-ups and do not possess any assets, banks require property of the owner (real estate in urban areas) or contracted financial aid under the measures of RDP. For medium and long-term investment loans, agri-food entrepreneurs often cannot provide the required collateral. They remain interested **in guarantees providing higher than the current guarantee rate and of bigger supply.**

The main criteria that influence the decisions of the agri-food companies in choosing the most suitable financing partner are [96] the longer grace periods and lower interest rates they could be offered. This finding indicates that, when it comes to larger-sized enterprises, there is competition among the finance providers. This also means that large-sized agri-food enterprises can shop around for the best offers in terms of interest and fees, maturity, collateral and repayment schedule.

Product features and accompanying lending policies do not adequately reflect the business cycles of the banks' clients. Banks are often unaware of the slow ramp-up time of investments, and the subsequent returns from them, per sub-sector, because of the time needed to establish agri-food assets and production facilities.

Also, banks do not have a tailored marketing strategy for agri-food SMEs and are unaware of how to best approach this client segment, as indicated in interviews with agri-food enterprises. This means that enterprises are not being made aware of new credit products available to them. The main communication tools that banks use are personal advisors who are responsible for providing information on new products and services.

3.3.2 Analysis of the supply of finance

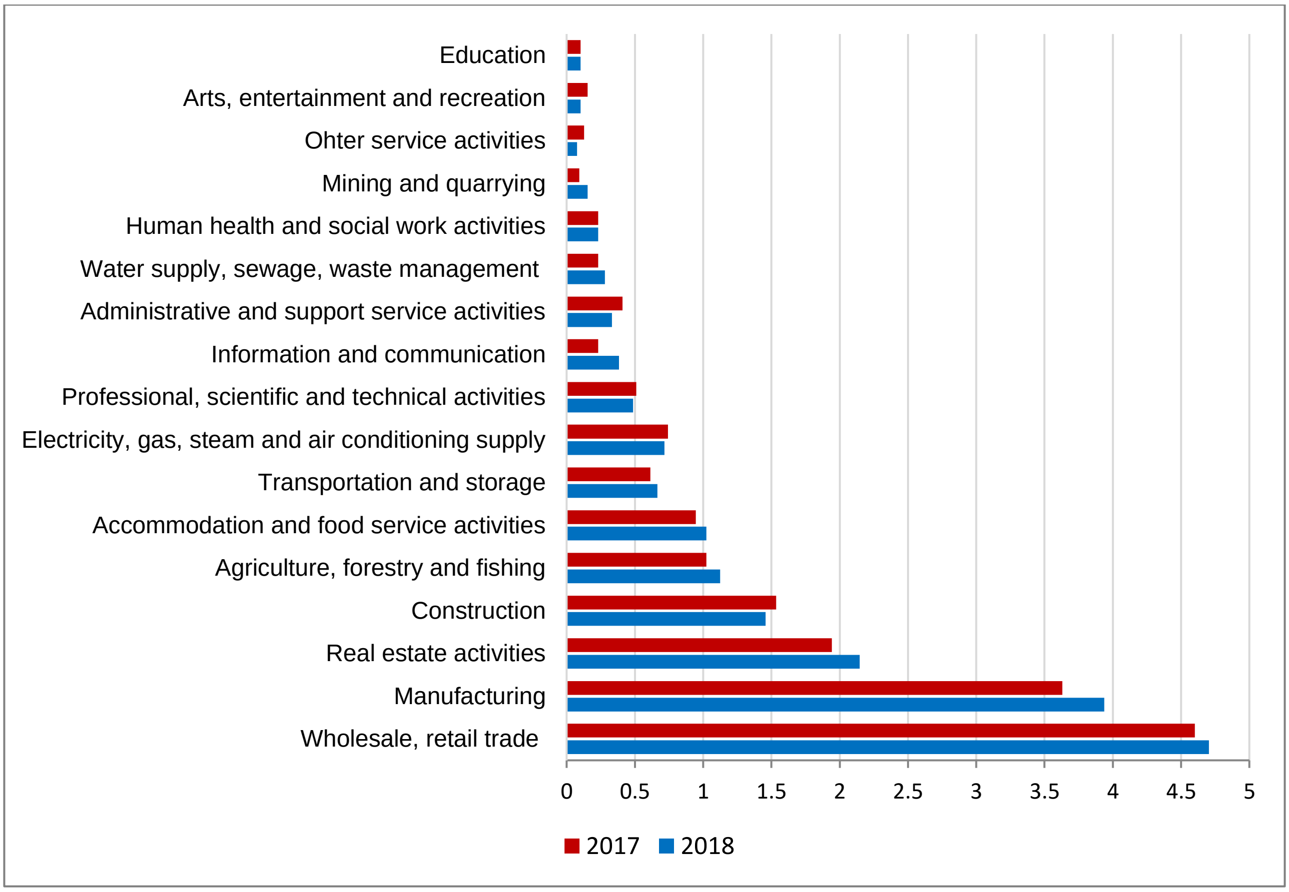
The National Bank of Bulgaria does not have disaggregated lending figures for the agri-food sector or its sub-sectors. Except for overdrafts, total loans of the banking sector grew by 4.5% on the previous year in 2018, reaching EUR 11 billion (BGN 21.53 billion) (Figure 40).

Agri-food loans are part of the manufacturing figure, which was about EUR 3.88 billion in 2018[97] (BGN 7.7 billion), or 36% of the entire lending in 2018.[98] According to Eurostat figures, food, beverages and tobacco

96 Interviews conducted with a group of 20 Bulgarian agri-food enterprises, 2019.
97 The following exchange rate is being used: INFOEURO at December 2018, 1 BGN = 0.5113 EUR.
98 Association of Banks in Bulgaria: 'The Economy and Banking Sector in Bulgaria in 2018'.

contributed 22.9% to Bulgaria's manufacturing output in 2012. **Applying this share, the total outstanding loans to the agri-food sector at the end of 2018 can be estimated to be EUR 886.9 million.**

Figure 40: Overview of loans by economic activity in Bulgaria, EUR billion



Source: Association of Banks in Bulgaria, 2018.

Banks are generally open to financing agri-food enterprises, particularly if their investment projects benefit from EU or national support, but their outreach, lending approach and product development could be further strengthened. As mentioned above, the risks of agri-food enterprises mirror those of agriculture and include, for example, weather and price fluctuations, as well as market risks. While many agri-food enterprises rely on their own funds, these are limited, and the restricted access to finance hampers their long-term development.

3.4 Financing gap in the agri-food sector

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

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

- The financing gap for the agri-food sector is estimated to be up to EUR 179 million.
- Small-sized firms have the most difficulties in accessing finance, both for long and medium-term loans. The key drivers of the gap on the demand side are (i) the potential high risk of agri-food investments; (ii) a lack of sufficient collateral; (iii) a lack of financial literacy and business planning, and (iv) the perceived lack of transparency of banks' policies and procedures.
- The key drivers of the gap on the supply side are the lack of specific products, policies, procedures and tools to finance agri-food enterprises
- The interest rate is the main factor that agri-food SMEs consider when choosing a bank loan. Even though banks tend to consider the sector as being riskier than other manufacturing sectors, the reality is that small-sized enterprises are often willing to pay back their loans sooner when they have excess liquidity (thus reducing the risks for the bank).
- New entrants face difficulties in applying for finance due to a lack of collateral, a lack of credit history and a fear of business failure.
- EAFRD financial support plays an essential role in promoting investments in the agri-food sector by encouraging new entrants who would otherwise be unable to secure any loan. Banks require enterprises to place as a guarantee for their loans the contracted financial public aid from the RDP.

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, obtained by multiplying the number of viable firms with a constrained access to finance by the average firm's loan amount.

Financing gap = Number of firms X percentage of financially viable firms with unmet demand X average loan volume

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

The financing gap arises from unmet financing demand from economically viable firms[99]. As explained in section 2.2, the unmet demand for finance includes:

(i) lending applied for but not obtained; or

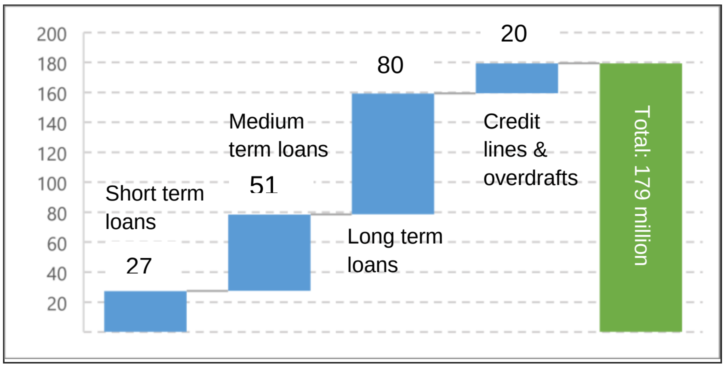
(ii) a lending offer refused by the potential borrower; as well as

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

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

99 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 41: Financing gap by product in the agri-food sector in 2018, EUR million



Source: Agri-food survey and project calculations.

The financing gap for the Bulgarian agri-food sector is estimated at EUR 179 million (Table 17). The financing gap mainly concerns small-sized enterprises, which account for approximately EUR 125 million of the gap. With regard to loan type, the gap is largest for long term loans.

Table 17: Financing gap by firm in the agri-food sector in 2018, EUR million

	Total	Short-term Loan	Medium-term Loans	Long-term Loans	Credit lines/ bank overdraft
Small-sized firms	**125.3**	17.5	36.2	57.4	14.2
Medium-sized firms	**46.8**	9.0	12.9	20.0	4.9
Large-sized firms	**6.4**	0.7	1.9	3.0	0.8
Total	**178.5**	27.3	51.0	80.3	20.0

Source: Agri-food survey.

Banks are relatively unfamiliar with the specific characteristics of agri-food enterprises and do not take them into account in their credit policies. These characteristics are (i) the slow ramp-up time of the return on investments due to the time needed to establish agri-food assets and production facilities (e.g. in the dairy sub-sector the grace period may be longer usual) and (ii) an overall lower return on invested capital compared to other economic sectors, especially for small-scale processors.

SMEs lack collateral. This is especially an issue with regards to long-term loans. While entrepreneurs may have movable assets that could cover the bank requirements, banks do not regard it as 'traditional' collateral (such as fixed assets) and do not accept them as collateral.

Small-sized enterprises and new entrants may lack credit history. They have more often relied on their own savings or support from family and friends for their establishment and development, resulting in a lack of credit history.

RDP support measures currently have a vast influence on the amount agri-food enterprises can borrow. In most cases, banks require agri-food entrepreneurs to provide evidence of RDP financial support when applying for loans. This means that the EAFRD financial aid is playing a pivotal role as a guarantee for banks when they give loans to agri-food enterprises. Banks consider this as a comfort zone and because of their risk-aversion, they do not support riskier, innovative projects, or new entrants without RDP financing, even though returns and value-add could be greater. As a result, the investment budget for agri-food processing investments under the RDP becomes a kind of proxy determining more or less what banks agree to lend to the sector. New policy measures could contribute to address this market failure in the near future and using financial instruments with appropriate conditions built into their design is also an option.

There are no tailored marketing strategies on the banks' side. Hence, agri-food enterprises (especially small and medium-sized) are unaware of new credit products, including credit lines and overdrafts. The main communication tools that banks use are TV adverts or personal advisors who are responsible for providing information on new products and services, and also for processing the feedback from customers. Additional innovative outreach channels (e.g. internet and smartphones or by working with lower value chain actors) are needed.

Start-ups often have difficulties in terms of access to finance, as confirmed in interviews[100]. While only a small share (about 10%) of viable loan applications comes from new entrants, start-ups account for almost half of all rejected loan applications. Similarly, many of those discouraged to apply for loans are new entrants. The fact that new entrants represent a large part of the gap can be explained by the barriers described in previous sections. In general, banks prefer to lend to medium to large-sized agri-food enterprises with a more stable market position and they tend to neglect early-stage businesses, even though they may offer better growth prospects. This is despite interviews with banks and agri-food enterprises confirming that small-sized enterprises show a willingness to repay their loan earlier in years where they generate high and stable revenues.

100 Interviews conducted with 20 agri-food enterprise, 2019.

3.5 Conclusions

Gross investment in agri-food has grown steadily over the past four years, especially for food products. Investment needs are perceived by many agri-food firms as having a lower priority compared to concerns related to the production costs, the hiring of qualified labour, the selling price of their production and regulatory issues. Overall, the sector is not particularly capital-intensive.

Bulgarian agri-food enterprises mostly demand finance to purchase machinery, equipment and buildings, and to cover working capital needs. In addition, they need finance to undertake investments in new technologies and IT systems. The financing need is highest for business projects in the following sub-sectors: dairy, meat processing, and fruit and vegetable processing. Across the different food sub-sectors, finance needs are significant in relation to the purchase of facilities and buildings (given their high capital intensiveness), followed by machinery and equipment, working capital and the adoption of new technologies and IT systems.

This report has identified a number of constraints on both the demand and supply side of the market, which cause viable loan applications by agri-food enterprises to be rejected, refused or discouraged. The key drivers of the gap relate to the lack of sufficient collateral and a very limited financial literacy and business planning among agri-food entrepreneurs. This is worsened by the fact that banks perceive the sector as being riskier than many other sectors of the economy, except agriculture. On the supply side, both – the lack of adequate knowledge of the sector and the lack of specific products and policies for financing agri-food enterprises - contribute to the gap.

The outstanding bank loan portfolio has grown in recent years. Lending to the manufacturing sector was about EUR 3.88 billion in 2018. Within the manufacturing sector, it is estimated that aggregate portfolio for food, beverages and tobacco amounts to EUR 886.9 million.

RDP investment measures play an important role in the Bulgarian agri-food sector. They help companies get their loans approved, as RDP support can be used as a guarantee. As national budget possibilities are reviewed, the implementation of financial instruments along with investment grants under RDP 2021-2027 are currently being discussed.

The following **recommendations for public interventions** could be considered:

- **The expected launch of the EAFRD risk-sharing Credit Fund has to be carefully observed.** Its budget is currently fragile and insufficient compared to the expressed demands by the sector. The impact it may have on access to finance is also unknown and so are the conditions under which banks would agree to participate. Those conditions might also affect the lending costs for agri-food processors and the overall performance of the instrument. These issues need a proper and detailed evaluation after the financial instrument becomes operational, to ensure that a sound and financially strong product is deployed in the 2021-2027 programming period.
- **Stand-alone working capital finance through financial instruments under the EAFRD** is an excellent possibility for solving liquidity issues and for detaching banks from EAFRD grant payments.
- Whatever product is defined as a financial instrument, **attention must be paid to new entrants.** Whether these would be grace periods, higher priorities and guarantee rates, better financial conditions, etc., may depend on the type of scheme.
- **A guarantee instrument based on EAFRD resources,** could be better designed compared to current market offers to overcome collateral issues, particularly for agri-food start-ups who lack sufficient assets. Guarantees are needed especially for medium and long-term investment loans. They shall contribute to significantly reducing the collateral requirements by banks and opening the door for financing innovative and riskier projects. A remuneration stimuli or a performance fee could also be created for attracting more financial bodies in the implementation of the instrument. Support from the RDP shall not be a condition

under such instrument. These guarantees should be well designed and should be different from similar instruments existing in the market to achieve synergies and add value.

- **The use of financial instruments could support the development of specialised financial products** by banks (short, medium and long-term loans, as well as overdrafts) tailored to the needs of small and medium-sized agri-food enterprises and to increase the interest of banks that are currently not financing the sector. Those products could also be offered using innovative outreach channels (e.g. internet and smartphones or by working with lower value chain actors).
- **Technical support is required on both the demand and supply side**. Banks' understanding of clients' needs and operations, including the agri-food chain as a whole, should be strengthened. A better understanding of potential borrowers could translate into enhanced marketing efforts, given that many borrowers are unaware of the full range of products available. On the demand side, technical support should be provided to improve financial literacy and business planning, especially for start-ups, new entrants and small-sized firms.

ANNEX

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A.2. Stakeholders interviewed

Type of Organisation (Government, NGO, Bank, Private, etc.)	Name of Institution
Agri-food entrepreneurs	20 agri-food enterprises (10 being new entrants)
Association	Association of Dairy Processors in Bulgaria
Association	Bulgarian Association of Credit Cooperatives and Organisations for Microfinancing
Association	Bulgarian Association of Producers of Greenhouse Products
Association	Bulgarian Pepper Association
Association	National Association of Young Farmers in Bulgaria
Association	National Small Family Farmers and Processors Union of Bulgaria (NUSFFP)
Bank	BNP Paribas Bulgaria
Bank	Bulgarian Association of Credit Cooperatives and Organisations for Microfinancing
Bank	Bulgarian National Bank
Bank	Central Cooperative Bank
Bank	DSK Bank
Bank	Pireus Bank
Bank	Procredit Bank
Bank	Teksim Bank
Bank	UniCredit Bulbank
Bank	UBB
Young farmer association	AgriHealth
Young farmer association	CryptoDelta
Young farmer association	South Central Region
Young farmer association	Wild rose hip
Young farmer association	Wine Cellar ‘Rumelia’
Young farmers	30 young farmers
Government	Former Minister of Agriculture and Food, Bulgaria
Government	Institute of Agriculture Economics, Sofia
Government	Ministry of Agriculture and Food
Government	NAAS
Government	Regional Administration, Department, European and Rural Development
NGO	Foundation ‘Land – source of income’
Producer Organisation	South Central Region

A.3. Methodology

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

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

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

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

The share of $\boldsymbol{Viable}$ **firms is measured by** the share of total firms that have a non-negative turnover growth[101] or a non-negative turnover and that are not in a situation of cost increase (these two criteria might be used to obtain an upper and lower boundary for the calculations).

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

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

Step1: Ratio of viable farms with unmet demand for finance

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

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

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

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

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

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

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

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

Step 2: Number of farms rejected or discouraged

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

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

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

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

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

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

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

Step 3: Standard Loan Application Size

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

Step 4: Financial gap across farm size and product type

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

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

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

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

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

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

The methodology for the gap calculation for TG II is the same as for TG I, but no lower limit on the size of enterprises is applied in step 2 (all enterprises in the population are included in the calculation). For Target Group II, we obtain each component of the financing gap formula from the following questions in the Agri-food survey of Target Group II carried out in mid-2019:
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 Bulgaria, Table 18 and Table 19 report the elements used in the calculation of the financing gap for the agriculture and agri-food sector, respectively.

Table 18: 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%	0.08%	0.00%
	Share of respondents that have not applied because of possible rejection	2.54%	3.37%	2.56%	3.19%
	Total (sum of rejected an discouraged)	2.54%	3.37%	2.64%	3.19%
Upper bound: farms with a non-negative turnover growth	Share of respondents rejected by creditor or farmer	0.08%	0.10%	0.93%	0.12%
	Share of respondents that have not applied because of possible rejection	6.68%	8.98%	7.29%	10.30%
	Total (sum of rejected an discouraged)	**6.76%**	**9.07%**	**8.22%**	**10.42%**
Total unmet demand: all farms	Share of respondents rejected by creditor or farmer	0.10%	0.10%	0.93%	0.12%
	Share of respondents that have not applied because of possible rejection	9.04%	10.58%	11.17%	13.43%
	Total (sum of rejected an discouraged)	**9.14%**	**10.68%**	**12.10%**	**13.55%**
Farms with constrained access to finance, **lower bound**	Small-sized farms	1 987	2 639	2 065	2 499
	Medium-sized farms	301	400	313	379
	Large-sized farms	153	204	159	193
Farms with constrained access to finance, **upper bound**	Small-sized farms	5 293	7 107	6 440	8 161
	Medium-sized farms	802	1 077	976	1 237
	Large-sized farms	408	548	497	629
Standard loan application size (EUR)	Small-sized farms	8 349	20 252	55 854	7 537
	Medium-sized farms	10 578	19 249	60 648	8 361
	Large-sized farms	31 198	48 985	109 203	44 528

Source: fi-compass survey.

Table 19: Elements used for the calculation of the financing gap in the agri-food sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Firms with a non-negative turnover growth	Share of respondents rejected by creditor or firm	0.00%	0.00%	0.92%	0.00%
	Share of respondents that have not applied because of possible rejection	7.38%	11.15%	5,30%	5.30%
	Total (sum of rejected an discouraged)	**7.38%**	**11.15%**	**6.23%**	**5.30%**
Total unmet demand: all firms	Share of respondents rejected by creditor or firm	2.31%	0.00%	0.92%	1.15%
	Share of respondents that have not applied because of possible rejection	9.69%	13.46%	8.76%	8.76%
	Total (sum of rejected an discouraged)	**11.99%**	**13.46%**	**9.69%**	**9.92%**
Firms with constrained access to finance	Small-sized firms	434	656	366	312
	Medium-sized firms	28	43	24	20
	Large-sized firms	2	4	2	2
Standard loan application size (EUR)	Small-sized firms	40 346	55 233	156 659	45 555
	Medium-sized firms	320 537	301 833	839 643	243 882
	Large-sized firms	316 080	528 643	1 483 980	496 000

Source: Agri-food survey.

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

The analysis for the agriculture sector in the report relies on the *fi-compass* survey on financial needs of EU agricultural enterprises, conducted from April to June 2018 across 24 EU Member States (EU 24): Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, 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 20 reports the number of respondents by Member State.

Table 20: *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-agriculture-enterprises.

A.5. TG II: Agri-food survey

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

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

The survey was conducted targeting the completion of a minimum of 45 questionnaires for each Member State. The minimum sample size obtained varied per country mirroring the differences in the size of the sector. Table 21 reports the sample size per country.

Table 21: Agri-food survey sample size per Member State

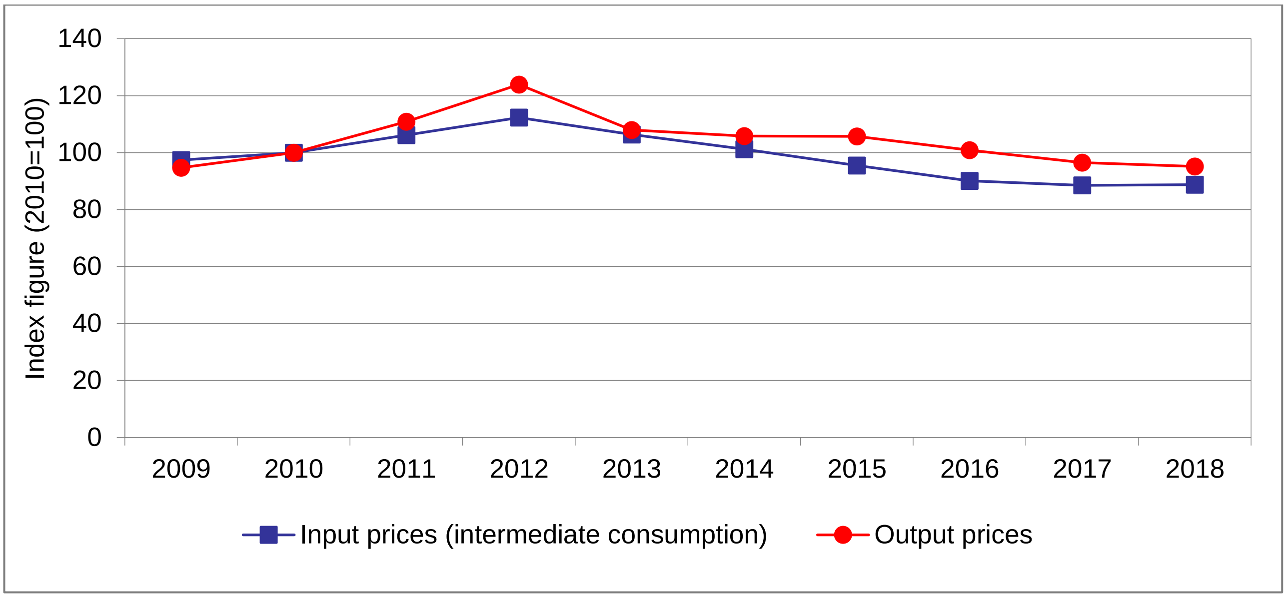
Country	No. of Respondents	Country	No. of Respondents
Belgium	100	**Latvia**	50
Bulgaria	100	**Lithuania**	50
Czech Republic	66	**Hungary**	46
Denmark	50	**The Netherlands**	80
Germany	186	**Austria**	50
Estonia	50	**Poland**	130
Ireland	50	**Portugal**	100
Greece	70	**Romania**	150
Spain	197	**Slovenia**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

Source: Agri-food survey.

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

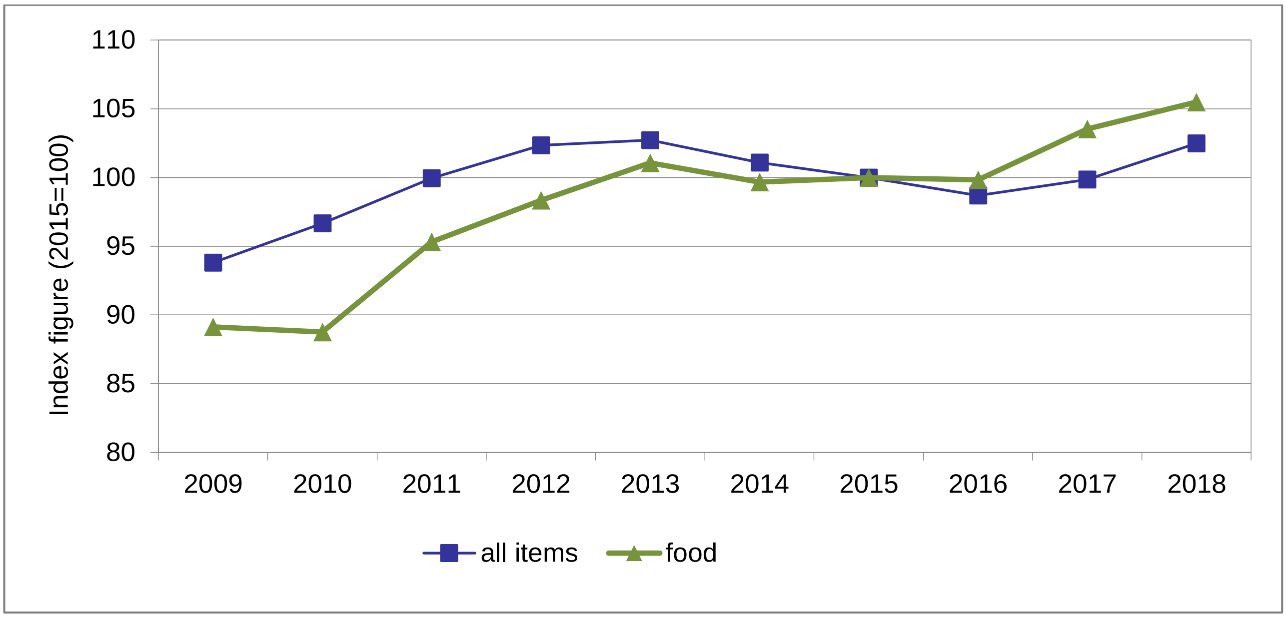
A.6. Data from the agriculture statistical factsheet

Figure 42: Evolution of agriculture input and output prices, 2009-2018



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

Figure 43: Evolution of harmonised indices of consumer prices, 2009-2018



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

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