fi compass
EAFRD

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

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DISCLAIMER

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GLOSSARY AND DEFINITIONS

Expression	Explanation
Agri-food survey	Survey of the financial needs of EU agri-food processing enterprises carried out in mid-2019 in the framework of study 'EU and Country level market analysis for Agriculture' and based on respondents' financial data from 2018.
CAP	Common Agricultural Policy
DIRCE	Directory of Enterprises of the Spanish national institute of statistics
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
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.
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
ha	Hectares
ICO	Instituto de Crédito Oficial
INE	*Statistic National Institute*
MAPA	Ministry of Agriculture, Fisheries and Food

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

MBIL	Multi-Beneficiary Intermediated Loan
PPI	Purchasing Power Parity Index
RDP	Rural Development Programme
SABI	Iberian Balance Sheet Analysis System
SAECA	Sociedad Anónima Estatal de Caución Agraria
SMEs	Small and medium-sized enterprises
SO	Standard Output
UAA	Utilised Agricultural Area
WUA	Water User Associations

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EXECUTIVE SUMMARY

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

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

Financing gap for the agriculture sector in Spain

The Spanish farmers' demand for finance, and the credit supplied to the agriculture sector has grown significantly since 2014. According to the *fi-compass* survey results, more than 70% of Spanish farmers applied for finance in 2017, which is substantially higher than the EU 24 average of 30%. At the end of 2018, the credit balance (total outstanding loan volume) to the primary agriculture sector was EUR 20.4 billion, which is an increase of 5.9% since 2017, compared to a decrease of 7.3% for all economic activities.

This positive development takes place in the context of a dynamic sector, which has been growing over the last few years mostly thanks to export performance. The agriculture output increased by 15.4% between 2014 and 2017. **The analysis highlights the following investment drivers**, which generate demand for finance:

- **Improvement of productivity:** Agricultural producers are investing in order to increase their efficiency of production. Low profit margins drive the need for more cost-efficient production. Investments concern the acquisition of new machinery, equipment and facilities, as well as investments in irrigation systems.
- **Expansion of production:** Agricultural producers also invest in land, including improvements in soil quality such as orchards and vineyards, and the purchase of additional land, as well as in increased capacities, such as the plantation of new trees (olive trees, fruit trees), new greenhouses and new facilities for pork farming.
- Although the growth in the demand for finance is mainly driven by investments in physical assets, **the need for working capital has also significantly contributed to the credit growth over the last years.** Between 2016 and 2018, the amount of working capital for the sector has increased at an average annual rate above 10%. This increase is mainly explained by the need to cover the increase of production costs (e.g. increasing costs of electricity, fuel, and feed for livestock).

The existence of CAP payments is generally considered to support farmers' activities and investments as well facilitating their access to credit as it improves farmers repayment capacity of loans, and/or provides a form of guarantee to the banks. The track records of payments received from the CAP, as well as payment entitlements held, are used by banks as collateral for the farmers' loan applications. For investments in fixed assets, CAP aid is counted by the banks as part of the farmer's ability to generate resources. Moreover, CAP payments are of particularly high relevance to young farmers, as they can contribute to reduce the entry barriers to the sector, in particular for new entrants without land or an inherited family farm, or credit history, by providing a form of guarantee to the banks.

- The EAFRD implementation in 2014-2019 shows that the investment demand by farmers significantly overtakes the available grant budgets. By the end of 2019, farmers had requested grants of a total amount of more than EUR 3.2 billion for on-farm investments and start-up activities of young farmers, of which EUR 1.5 billion was beyond what the regional RDPs' budgets could offer, indicating a significant unmet demand for financing.
- At the same time, access to finance seems to be a decreasing problem for the agriculture sector, for all activities besides these considered as being 'entrepreneurial', as evidenced by the lending provided by the public credit institute, Instituto de Crédito Oficial, ICO, to the agriculture sector.

The study shows that financial instruments can be beneficial to the agriculture sector in Spain, as the market gap is estimated to be between EUR 3 billion and 6.4 billion. The financing gap mainly concerns small-sized farms (below 20 hectares (ha)), which is by far, the most common farm size category in Spain[2]. Most difficulties relate to the access to long-term loans. The existence of a gap should not necessarily be understood as a result of a dysfunctional market. In the case of Spain, it is likely to be due to a potential for further expansion, considering the growth of the agriculture sector and the positive attitude towards investment shown in recent years. Financial instruments could help the financial sector keep up with the growing demand for finance due to a high investment appetite of the sector.

The drivers of the financing gap can be identified from the following factors:

- **The lack of collateral** due to the small-sized farm size and the fragmentation of Spanish agricultural enterprises. This is a problem for all farms, but particularly for new entrants and young farmers without prior experience and family relationships in the sector to support them, and often with poor access to land. As the effects of the financial crisis are still lingering in the banking system, the Spanish financial institutions give strong importance to the availability of guarantees and the solvency of borrowers. Additionally, the ex-ante assessment [3] undertaken for Spain found that the financial institutions required higher guarantees for providing loans to the agriculture sector than to other economic sectors. This problem was found to be particularly significant for young farmers and new entrants;
- **The lack of credit history**, which particularly impacts new entrants. Banks' risk appetite to finance new investments may still be bound by the consequences of the financial crisis;
- **The lack of adequate business plans and an insufficient level of farmers' knowledge on financing may also be a problem,** especially the lack of knowledge related to business management and finance. Occasionally, the lack of professional training is also an obstacle for obtaining finance.

Other explanatory factors, albeit probably of a more limited relevance for the overall financing gap, is the **banking policy capping the amount to lend per sector, the lack of water rights by the potential borrower, and financial exclusion**, i.e. the unavailability of financial providers operating in rural areas.

Young farmers might represent approximately 35% of the overall gap. Between 55% and 76% of the rejected and viable loan applications (rejection rate varies with the maturity of the loan) came from applicants below 40 years of age. Similarly, between 20% and 24% of the discouraged applications came from young farmers. Using this information to provide a different breakdown of farms with constrained access to finance, the financing gap for young farmers is estimated to be between EUR 1.3 billion and EUR 2 billion. Several interviewees pointed out that there is a perceived problem of access to finance for young farmers who enter farming without land.

The Spanish agricultural finance market offers a varied and extensive supply of finance. Multiple actors play an active role. These include private banks, Cajas rurales (rural cooperative banks), credit sections of agriculture cooperatives, and the Instituto de Crédito Oficial (ICO), a public agency with a large network of branches. The offer of financial products in Spain is extensive, there are several types of loans with different terms and purposes, these are investment loans, working capital loans and liquidity loans. ICO offers subsidised loans to finance investment operations and to increase the liquidity of companies.

Since 2017, a centralised **financial instrument,** co-ordinated by the National Ministry of Agriculture and **funded through the European Agricultural Fund for Rural Development (EAFRD), is available in Spain.** It provides preferential loans with a public guarantee, which is financed through the EAFRD, for the agriculture, agri-food and forestry sectors. Its implementation was motivated by the higher levels of collateral required for the agriculture sector. So far Castilla y León and Extremadura (as of 2020) have included the use of the centralised financial instrument in their RDPs and the RDP of Galicia is currently being amended. It is up to the regions to decide on the targeted sectors

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

3 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

and final recipients, the financial product (loans or guarantees), as well as budget, etc. Other regions, which have completed an ex-ante assessment of a financial instrument, and which may make use of this financial instrument are Castilla La Mancha, Asturias, Murcia, Madrid and Aragón.

RECOMMENDATIONS

The following recommendation could be considered to improve the offer of financial instruments supporting the agriculture sector:

- The main constraints to access credit relate to risk management and asymmetrical information (lack of collateral and lack of credit history). These elements are the focus of the recently set-up guarantee financial instrument to support the sector. Considering the high level of liquidity and the low interest rates in the market, for potential new instruments, guarantee instruments should be preferred over loan instruments.
- Efforts could be focused on facilitating access to finance for small-sized farms and young farmers/new entrants. A potential focus on small-sized farms should not lose sight of the fact that there is an ongoing consolidation process, whereby the development towards large-sized farms continues.
- Considering the high share of farmers requesting finance from private individuals, a specific instrument for micro-finance (under the EAFRD) might be considered.
- Additional assessments of needs at regional level are needed to ensure a greater outreach of any new centralised financial instrument supported by the EAFRD. The new post-2020 legal basis will allow the set-up of diverse schemes that can benefit the aforementioned target groups (young farmers, start-ups, small-sized farms). These could cover working capital finance, counter-guarantees, combinations between financial instruments, grants and/or interest rate subsidies, including through a single operation.
- To further enrich the knowledge on the potential from using EAFRD financial instruments, analyses on the usefulness of equity funding for specific sub-sectors could be undertaken, in particular areas where digitisation and innovation are growing alongside green investment finance.
- Financial exclusion is a growing problem affecting rural areas where there is a risk of depopulation. Promoting banking activity and presence in the most remote rural areas could be one of the objectives of the financial instruments.
- Since lack of knowledge and financial literacy amongst farmers seems to be a major constraint, financial instruments could be combined or complemented by training in business management and finance for farmers, including help with the completion of loan application forms, creation of business plans etc., especially in view of the trend towards larger, more professional farms.
- Given that access to land is complicated in some territories due to its fragmentation, it may be relevant, within the framework allowed by the EU legislation, to allow land purchase and land renting as eligible actions within the focus of financial instruments.
- Spain is going to be one of the countries hardest hit by climate change, and the rain fed production is likely to suffer high rates of abandonment. Spain's agriculture future depends on irrigation, but it will only be sustainable with the following production conditions; extension, efficiency and the improved use of technologies, which will require strong investments in the transformation of current irrigation systems. This needs to be taken into consideration when developing tools to further facilitate access to finance.

Financing gap for the agri-food sector in Spain

The investment dynamic is also positive for the agri-food sector in Spain. In 2018, 64% of Spanish agri-food firms applied for loans, the highest share of all EU 24 countries, and 18% higher than the EU 24 average. Export growth is the main dynamic behind the increase of demand for finance. The analysis identifies the following investment drivers of the Spanish agri-food sector:

(i) **Modernisation and expansion of production capacity:** The Spanish agri-food sector borrowed mainly to invest in the expansion of fixed assets and in working capital and inventories.

(ii) **Product development and training of employees:** According to the study results, 22% of the applicants for credit did so for the purpose of developing new products, and 10% for the purpose of hiring and training employees, figures that are substantially higher than the EU 24 average.

CAP, and in particular the EAFRD support, plays a positive role for the sector. In this context, the sector-specific sub-measure in the RDP, which is programmed by all Spanish regions, is key. For the period 2014-2019, in total EUR 1.2 billion were paid out under the calls for applications. A total financial demand of at least EUR 2.4 billion has been registered under the sub-measure, of which at least EUR 1.2 billion has not been satisfied.

The total amount of credit provided to the agri-food sector is growing steadily, similarly for the agriculture sector, and contrary to the rest of the economy. Overall, this indicates a positive attitude of the banking system towards the agri-food sector, which was confirmed by interviews conducted with banks for this study. In addition, the sector's share of non-performing loans is lower than that for the overall economy. **On 31 December 2018, the total outstanding loan volume in the Spanish agri-food sector was EUR 22.7 billion.**

However, based on the analysis, a financing gap has been identified and estimated to be EUR 783.3 million. Most of this gap is concentrated within small-sized companies[4] of approximately EUR 612 million. In terms of financial products, as for the agriculture sector, the largest financing gap relates to long-term loans, followed by medium-term loans.

The general drivers of the financing gap for the agri-food sector in Spain are related to the following:

- **Lack of collateral:** Based on interviews with stakeholders from the sector, the smallest companies (ten or less employees) have more difficulties obtaining sufficient guarantees and therefore are the most discouraged from applying for finance.
- **Bureaucratic application processes:** Difficulties encountered when complying with the information requirements requested by banks is highlighted as an obstacle, again, mainly for the smallest enterprises, and also due to lack of knowledge and insufficient financial literacy.
- **Lack of credit history:** This can also be considered an important driver particularly affecting young entrepreneurs and start-ups. Banks commented during the interviews that start-ups might be too risky for the banking sector, and that equity instruments might be more useful to promote their development.

In addition, it was further pointed out during interviews with representatives from the agri-food sector, that the **supply of credit for Research and Development (R&D) by the agri-food sector is inadequate**, and associated with high risks, which can be linked to the lack of knowledge from the supply side on those specific investments, in combination with banks being risk avert.

Besides the traditional banks, there is a growing network of business nurseries, accelerators and business incubators providing finance to the agri-food sector. They provide various forms of assistance to support business projects in their earliest stages, such as training, advice, seed and venture capital and helping to find capital. **Public support is**

4 The survey divided companies into small-sized companies (< 50 employees), medium-sized companies (50-250 employees), and large-sized companies (> 250 employees).

also provided for the agri-food sector by the public agency ICO, and since 2017, a **financial instrument funded through the EAFRD is also available** as explained above for the agriculture sector.

RECOMMENDATIONS

Based on the findings of this report, the following recommendations could be considered to improve the agri-food sector's access to finance:

- High risk investments, for example those related to investments in R&D, face difficulties in accessing finance. For these investments, the products offered by banks are not well fitted. It is possible that a targeted guarantee policy for this type of activities would contribute to the continued growth of the sector. Furthermore, in order to facilitate investments in environmental sustainability by the agri-food sector, financial instruments facilitating this would be useful.
- Financial instruments could focus in particular on young entrepreneurs and start-ups, which are the groups affected the most by the current financing constraints.
- Equity or quasi-equity financial instruments, (e.g. convertible loans) might help with addressing the financing constraints affecting start-ups and new entrants in general. Because of this, efforts could be made to explore the possibilities for setting up specific and focused equity fund(s) for the agri-food sector, preferably at centralised level to allow economies of scale and ensure better coverage, based on current experience of business angles, equity investors, and backed-up by well-founded ex-ante assessments and analyses.
- Considering the role that exports plays for the development of the sector, it could be considered to improve the specific financial instruments offer, e.g. export credit insurance or export guarantee.
- In order to improve the agri-food sectors' access to finance, it would be useful to provide technical support for the smallest companies, with ten employees or less, in the design of business plans and fulfilment of paperwork relating to legal bank requirements.

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 Spain. 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:

(i) Assessment of the number of farms/firms participating in the credit market and analysis of the dynamics of their demand.

(ii) Mapping of the sources of finance and examination of the dynamics of supply of credit.

(iii) Assessment of the potential existence of a financing gap, whereby parts of the demand cannot be satisfied by the existing supply but could benefit from financial instruments.

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

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

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

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

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

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

Report structure

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

2. PART I: AGRICULTURE SECTOR

2.1 Market analysis

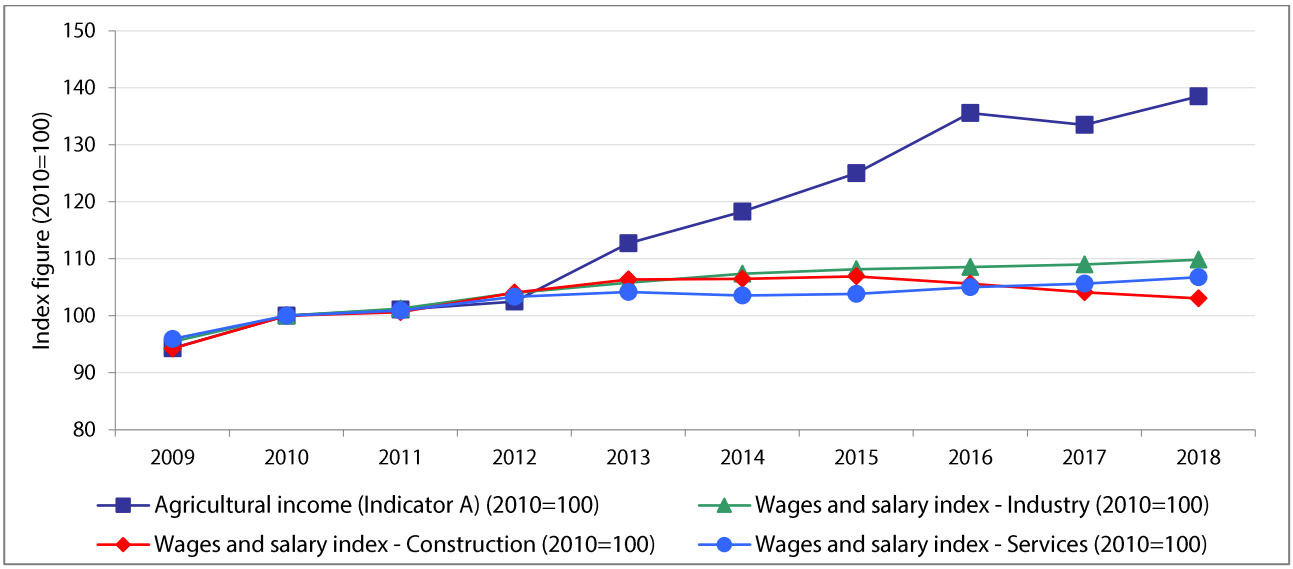
Key elements on the Spanish agriculture sector
• Spain is the third biggest agricultural producer of the EU 27. It has a diverse agriculture sector, with a very clear regional specialisation. • Between 2014 and 2017, agricultural output grew by 15.4%, and agricultural productivity by 24%. In 2018, the agriculture turnover value was EUR 52.2 billion. • The main crops produced are vegetables and fruits, and the main livestock production is pork. • Andalusia is the region with the highest turnover value from agriculture, and it is also the region with the largest crop production (olives, fruit, vegetables), whilst Catalonia has the largest animal production. • The agriculture sector is characterised by small-sized, family run farms. Approximately 93% of Spanish farms are owned by an individual farmer, thus a family farm. • Spanish agriculture is undergoing a profound structural change, whereby the number of farms is decreasing, but the average farm size is increasing. • Even if Spanish farmers under the age of 40 (defined as young farmers) represent only 6.9% of the farmers' population, they are the ones who are leading the structural change.

Spain is the third biggest agricultural producer in Europe and agriculture output along with factor output is growing. In 2018, the Spanish agriculture output was EUR 52.2 billion, of which 60.9% was related to crop production and 38.1% to animal production. The dominant sub-sectors are vegetables, including plants and flowers (approximately 20% of total output value), fruits (also about 20%) and pork (approximately 15%)[5]. Between 2014 and 2017, the Spanish agriculture output increased by 15.4%[6]. During the same time period, productivity also increased, as shown by a 24% increase in the agriculture factor income. As can be seen from Figure 1, agricultural income has increased significantly over the last decade, and faster than the wages and salary index from other economic sectors, such as the industry and construction sectors. To a large extent, this is due to its rather low starting point when compared to other sectors of the economy. Still, the positive trend is encouraging.

5 Cajamar, 2019, Observatorio sobre el sector agroalimentario español en el contexto europeo, https://www.publicacionescajamar.es/series-tematicas/informes-coyuntura-monografias/observatorio-sobre-el-sector-agroalimentario-espanol-en-el-contexto-europeo-informe-2018.

6 MAPA, 2018, Agriculture Income in Spain, 2ª rev.

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

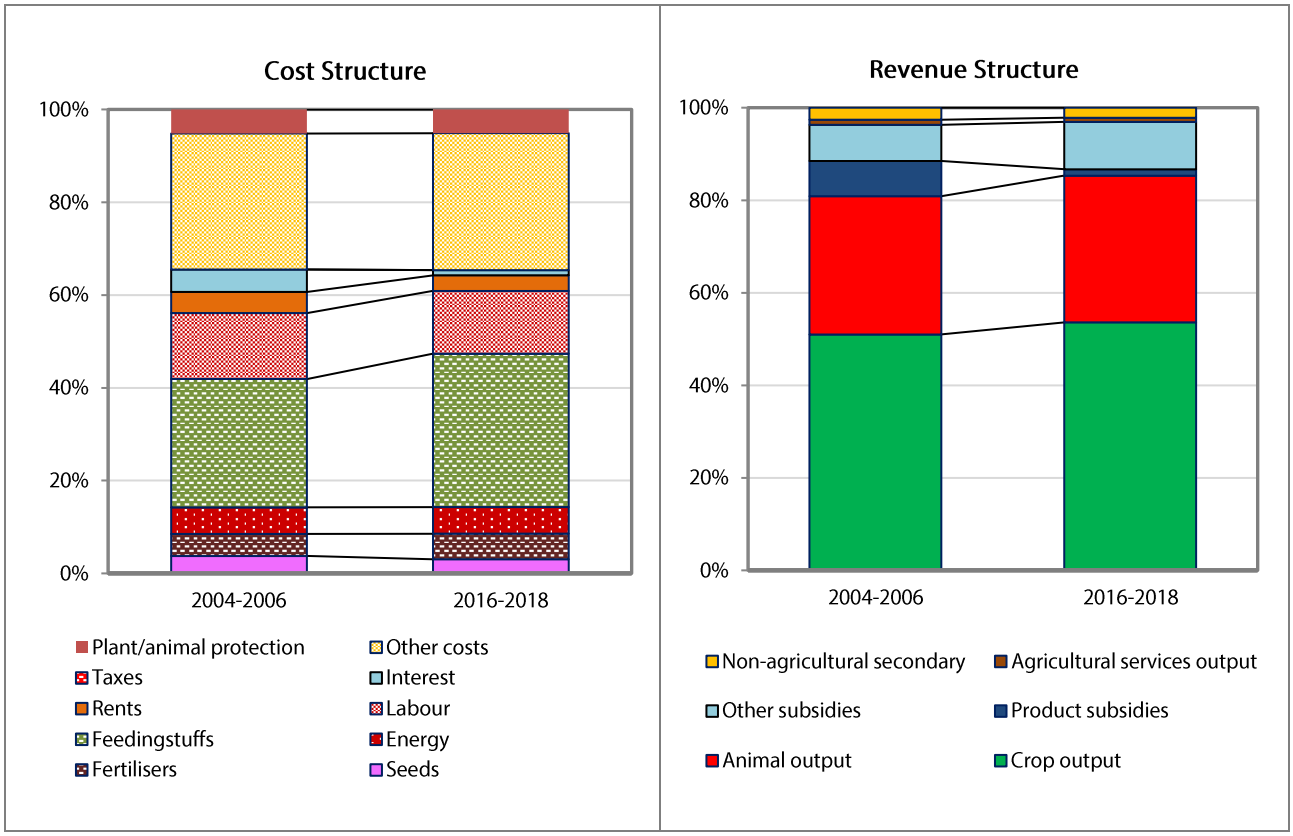


Source: European Commission, DG Agri, June 2019, Statistical Factsheet for Spain.

The cost and revenue structures have remained fairly stable over the past 15 years (Figure 2). On the revenue side, income from crop output has increased, whilst income from animal output has decreased. Several reforms of the CAP have been undertaken between 2004 and 2018, whereby the amount of support obtained from decoupled payments (other subsidies) has increased, and the share of product specific subsidies has decreased. However, the share of subsidies in total revenues remain largely unchanged. On the cost side, the costs of feedstuff have decreased (as the animal sub-sector output has decreased and that both are connected). Other important costs include labour costs (that have remained relatively stable over time), and the post 'other costs'[7], which has increased over time.

7 'Other costs' have been estimated based on Eurostat data. It includes: seeds and planting stock, energy, fertilizer and soil improvers, plant protection products, veterinary expenses, and feedstuff.

Figure 2: Agricultural income – cost and revenue structure in Spain 2004-2018



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

Spain is characterised by a diverse agricultural production, and Andalusia is the region with the largest production. Spain has several climate areas, allowing for a diverse agriculture production. However, there is a clear regional specialisation. For example, production in Andalusia (Southern Spain) is focused on vegetables, fruit and olive trees, whilst in Valencia (Spain's Mediterranean coast), farmers are mainly producing fruits and vegetables, and in Catalonia (North-Eastern Spain), farms' production is mainly pork, fruits and poultry. Andalusia is the main producer of agriculture products by value amongst the Spanish regions, followed by Castilla y León, Castilla La Mancha, Catalonia and Aragon.

Spain has almost one million farms, half of which are under 5 ha. However, an important structural change is taking place. The number of farms has decreased from 1.1 million in 2003 to 945 024 farms in 2016[8]. These farms managed a total Utilised Agricultural Area (UAA) of 23.3 million ha in 2016[9], which have also declined over the same time period (2013-2016) but less dramatically. As a result, the average farm size has increased from 22.3 ha in 2003, to 24.9 ha in 2016. However, half of the Spanish farms are still under 5 ha. This ongoing structural change is expected to continue in the future.[10]

8 INE, 2016, Survey on the structure of agricultural holdings.

9 Ibidem and Farm indicators by agricultural area, type of farm, standard output, legal form and NUTS 2 regions, Eurostat.

10 The farm structure of Spain is important to bear in mind for the forthcoming analysis in this report, where the *fi-compass* survey results will be analysed. The analysis of the survey divided farms into small-sized farms (below 20 hectares), medium-sized farms (20-100 hectares), and large-sized farms (>100 hectares). Hence, in the case of Spain, 78% of the farms fall in the category of small-sized farms as defined on a European level. However, in the understanding of the national context, a small-sized farm is considered to be smaller than 5 hectares, rather than below 20 hectares.

There is a high presence of family-run enterprises. The majority of Spanish farms (93.2%) are owned by individual farmers[11] and the sector is heavily dominated by family farm businesses. Only 6.8% of farms have a different property structure, and the biggest farms belong to this category[12]. The average size of agricultural companies is 109.1 ha, whilst the average size of family farms is 18.3 ha.

The average age of the farming population is 60 years old, and less than 7% are under 40 years of age. Only 6.9% of farm owners are under the age of 40 and more than half (53.9%) are over 60 years of age. However, young farmers are owners of the largest farms: 17.4% of farm owners between the age of 30 and 34 own farms that are over 50 ha. The equivalent percentage for those over 65 is only 4.9%. Thus, young farmers seem to be driving the structural change in the sector.

The Spanish agriculture sector has a significant weight in EU trade with a big trade surplus. Total agriculture exports amounted to EUR 20.4 billion in 2018, whilst imports accounted for EUR 5.1 billion for the same year. The leading export sub-sectors are pork meat, fruits and vegetables (particularly citrus fruits), olive oil, and wine[13].

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

11 INE, 2016, Survey on the structure of agricultural holdings.

12 Ibidem.

13 Informe Anual de Comercio exterior agroalimentario pesquero y forestal 2018, 2019.

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 analysis of the demand for agriculture finance is based on the findings from the *fi-compass* survey of 354 Spanish 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 Spanish agriculture sector

- The Gross Fixed Capital Formation (GFCF)[14] was EUR 4.5 billion for 2018. Although high in absolute terms, it is below the EU 28 average when expressed as a share of GVA.
- The investments drivers are: (i) improvement of farm productivity, in order to increase competitiveness; (ii) expansion of production, including purchase of land, in order to take advantage of economies of scale, and respond to the increasing demand for Spanish agriculture products on export markets; and (iii) the working capital need.
- The sub-sectors of Spanish agriculture that hold the highest liabilities, or that have recently shown particular investment activity, are: the livestock sub-sector, the pork sub-sector, the dairy sub-sector, as well as the horticulture, fruits and olive oils sub-sectors. In recent years, there has been an intense demand for credit from irrigation communities.
- The demand for agricultural finance is very high. In 2017, 70% of Spanish farmers applied for bank finance, which is substantially higher than the EU 24 average of 30%.
- The purchase of machinery, equipment and facilities are the main purposes of bank loans.
- High production costs and low selling prices were the central problems for Spanish farmers, whilst access to markets was considered the third most critical issue.
- CAP support facilitates farmers' access to credit. CAP payments are of particular relevance to young farmers, where the payment entitlements act as a guarantee to the banks for loans, particularly for short-term loans.
- Informal loans from friends and family members may play an important role in the farming economy. According to the *fi-compass* survey, almost 30% of Spanish farmers asked friends and family for loans.
- The level of unmet demand for finance is significant and estimated to be EUR 8.6 billion.
- The EAFRD implementation in 2014-2019 goes well and the investment demand by farmers significantly overtakes the available budgets. By the end of 2019, farmers and young farmers had requested grants of a total amount of more than EUR 3.2 billion, of which EUR 1.5 billion was beyond what RDPs' budgets could offer.
- In 2017, the rejection rates for bank loans were between 10% for short-term loans and 14% for long and medium-term loans.
- The main reasons for rejection of farmers' loan applications are: (i) lack of collateral; (ii) lack of adequate business plans; (iii) lack of credit history; (iv) restrictions relating to banking policies for the sector; and (v) farmers lack of knowledge and experience.
- Between 5-7% of the farmers that did not apply for a loan did not do so due to the fear of being rejected by the bank. The limited understanding of the financial market may explain why farmers are discouraged from

14 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.

applying for bank loans. In addition, this partially explains the high levels of demand for loans from family and friends.

- Young farmers and new entrants face more difficulties in access to finance, due to the lack of access to land, lack of collateral and lack of credit history.

2.2.1 Drivers of total demand for finance

The agriculture sector's investments in absolute terms are increasing (Table 1). In 2018, the Gross Fixed Capital Formation (GFCF) for the agriculture sector totalled EUR 4.5 billion. In 2017, GFCF as a share of GVA for the agriculture sector was 17.7%. Since 2011, this share has been stable, fluctuating between 16.7% in 2014 and 19% in 2015. Although the absolute value of investments undertaken are increasing in Spain, compared to the EU 28, the share of GVA devoted to investments in physical assets is low, for the EU 28 it is approximately 30%. Between 2009 and 2013, the total value of investments decreased, hampered by the financial and economic crisis that severely affected the Spanish economy. Since 2013, the trend has reversed.

Investments in animal and plantations assets have been driving the investment trend reversal in the sector, increasing from 30% of total investments in 2010 to 52% of investments in 2016. This reflects farmers now investing in increasingly expensive crop varieties. As a result, the share of investments devoted to machinery and capital goods has decreased from 53% to 25.5% during the same period, as this type of investments have lost weight in the overall investment portfolio of the farmers. The reduction is related to change of investments' priorities and the growing trend for organic farming has partially also contributed to this. Investments in buildings and constructions remained relatively stable around 12% for the whole period.

Table 1: Gross Fixed Capital Formation in the Spanish agriculture sector, 2009-2018, EUR million

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Agricultural Products	1 467	1 184	1 124	1 116	1 274	1 350	1 866	2 082	2 294	2 366
Animals	429	251.3	171	315.8	402.3	443.1	611.9	620.7	638.8	592.3
Plantations	1 038	932.9	953.9	800.9	872.6	907.6	1 255	1 461	1 655	1 773
Non-Agricultural Products	3 013	2 670	2 380	2 136	1 963	1 929	1 883	1 854	2 062	2 177
Materials	2 278	2 061	1 815	1 589	1 372	1 313	1 210	1 324	1 501	1 160
Buildings	476.3	482.6	498.2	500	501.6	514.5	513.1	499.5	513.6	529.3
Other	258.6	126.4	67.4	46.5	89.4	101.5	159.6	29.7	46.8	46.8
Total GFCF	**4 480**	**3 854**	**3 505**	**3 252**	**3 238**	**3 280**	**3 750**	**3 936**	**4 356**	**4 543**

Source: Eurostat, Economic Agricultural Accounts, 2019.

Since 2014, the Spanish farmers' demand for finance has grown significantly. Between 2017 and 2018, the total outstanding loan volume to the agriculture sector increased by almost 6% (see section 2.3.2 for more details). Various factors drive the demand for credit. These include:

(i) Investments in the improvement of the productivity of farms, including investments in irrigation systems, in order to improve competitiveness;

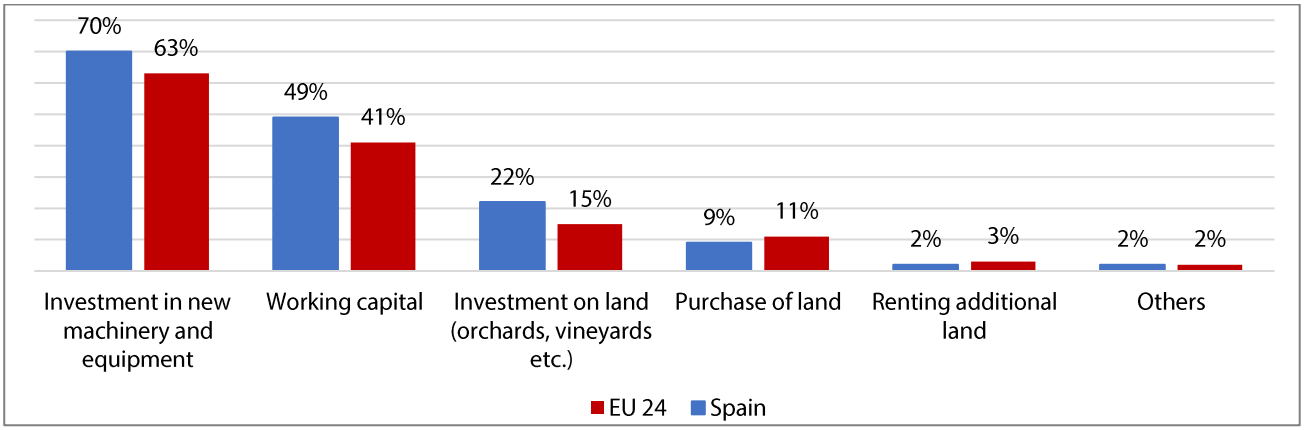
(ii) Investments in the expansion of production, including purchase of land and linked to the increasing demand for Spanish agricultural products on export markets; and,

(iii) The need for working capital to cope with increasing production costs.

Lower economic profit margins drive the need for investments in a more cost-efficient production. According to the *fi-compass* survey, the most common loan purpose for Spanish farmers was investment in new machinery, equipment or facilities (in 2017, 70% of all farmers that obtained loans intended to use it for this purpose) (Figure 3). This reveals a slightly pattern compared to the one found in the GFCF, where these investments accounted for approximately 50% of the formation of capital. Investments in machinery, equipment and facilities are driven by the lower sales margins of the farms, pushing them to ensure a more cost-efficient production. It also relates to the investments undertaken in order to expand production.

The second most common loan purpose was the financing of working capital, consistent with the increase of production costs discussed below. The third most common purpose was investment on land (22%), i.e. improvements of the conditions of land already owned (orchards, vineyards, etc.). The purchase of land was the fourth most common reason at 9%, but it is less common than for the EU 24 at 11% as shown in Figure 3.

Figure 3: Purpose of bank loans in the agriculture sector in 2017



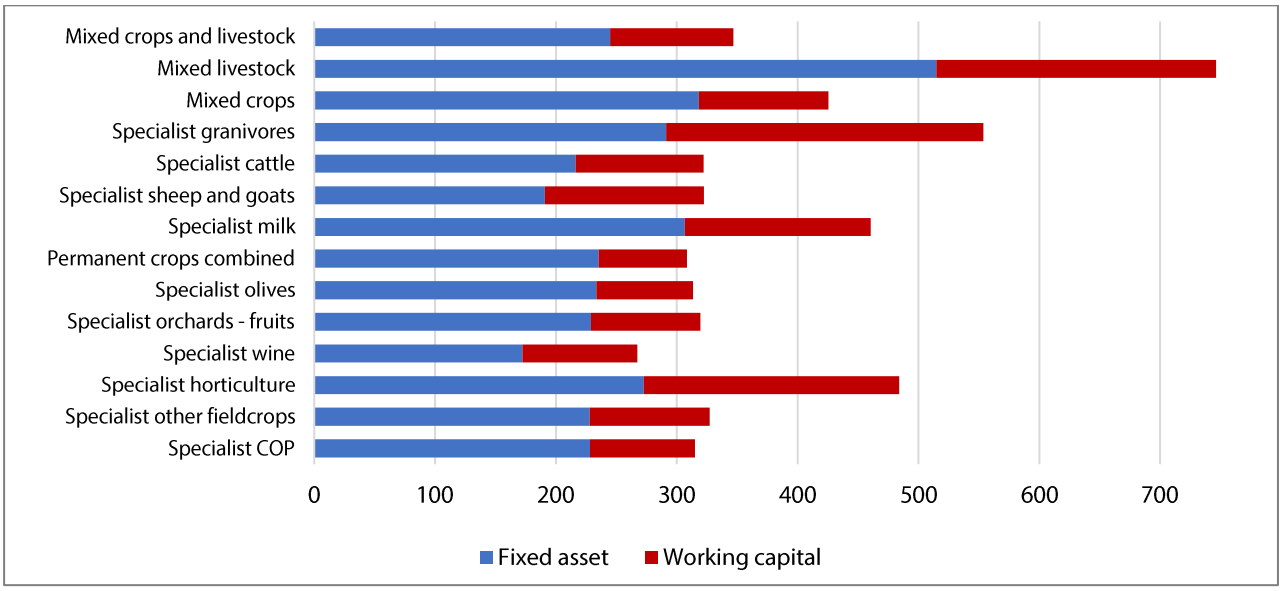
Source: fi-compass survey.

The olive, fruit and vegetable, and pork sub-sectors are driving the investments undertaken in order to expand the production and improve the productivity of farms. Over recent years, a high and growing demand for finance has been registered for the aforementioned sub-sectors, related to the investments undertaken to expand the production, for example, plantation of fruit trees (new plantations of almond trees, blueberries and pit fruit), construction of greenhouses for vegetable production and improvements/expansion of pig farms. Hence, according to the banks interviewed, these are considered the more dynamic investment sectors.

According to FADN data, mixed livestock farms, pig production, milk production, and horticulture have the highest liabilities. Based on average farms balance sheets[15], the highest levels of liabilities are held by the mixed livestock, granivores (in particular pig breeding), milk production and horticulture sub-sectors (Figure **4**).

15 National Agricultural Accounting Network, 2019.

Figure 4: Average balance-sheet size in Spain, 2017, EUR thousand



Source: MAPA, National Agricultural Accounting Network, 2019.

Investments in new irrigation systems is another important driver of demand. In the South, a significant part of the Spanish territory is warm and dry, and therefore a large share of the crop land is irrigated. In 2016, 3.1 million ha of Spanish agricultural land were irrigated (14.0% of UAA). An important change is taking place to the irrigation systems. At present, the principal irrigation system in Spain is drip irrigation at 39.4% [16] whilst 33.2% is gravity irrigation (decreased from 44.1% in 2011). The change of irrigation systems is an important driver of the credit demanded since 2011 by both farmers and irrigation communities (Figure 5).

An interesting example for financing modernisation of the irrigation systems in Spain is the Multi-Beneficiary Intermediated Loan[17] (MBIL) to Comunidades de Regantes[18]. The EIB provided a loan of EUR 150 million with long maturity (20 years) to credit institutions[19], which on-lend to Comunidades de Regantes (i.e. Water User Associations – WUA) across Spain. The sub-projects aim at upgrading and modernising irrigation water infrastructure, managed and owned by the WUA and are selected on the basis if lists of financing requests under the Rural Development Programmes (RDP) at regional level. At sub-project level, EIB resources may not exceed 50% of the total costs. Financing provided by the EIB loan and other EU resources (e.g. EAFRD grants) shall not exceed 90% of the sub-project cost in less-developed regions and 70% in developed regions, respectively. The estimated total investment is EUR 300 million.

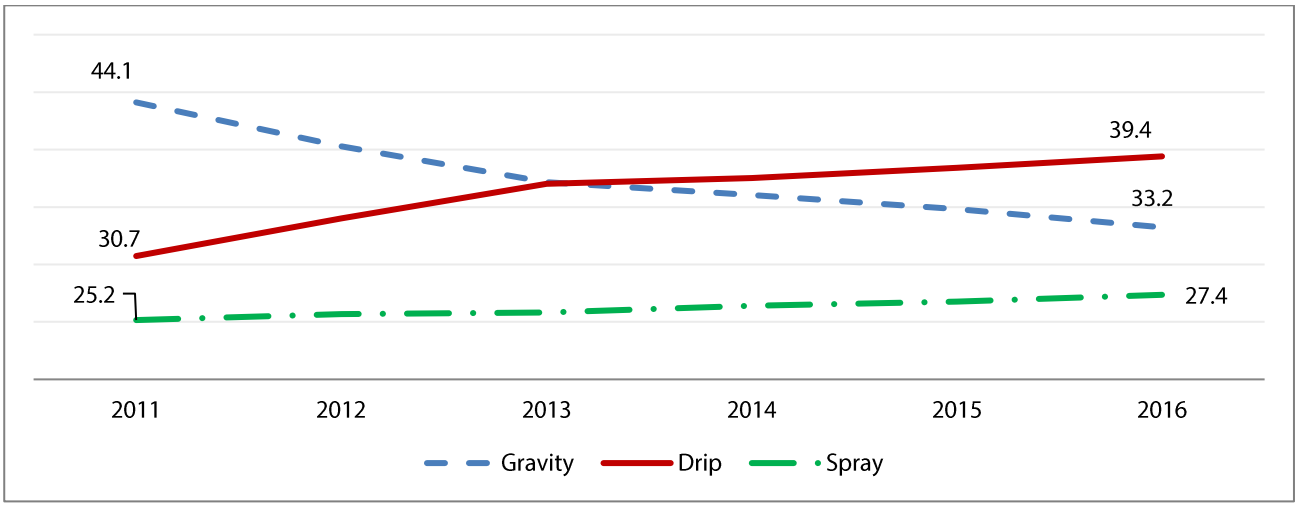
16 INE, 2019, Survey on the use of water in the agriculture sector.

17 *fi-compass, 2019*, Financing rural, agricultural and forestry infrastructure, Brochure, https://www.fi-compass.eu/sites/default/files/publications/Financing%20rural-agricultural-forestry-infrastructure-web_.pdf.

18 The 'Comunidades de Regantes' are a collective group of farmers managing agricultural land in a defined area. They are accredited, monitored and supervised by the local river basin authorities and comply with procedures and rules established by the Spanish Water Act. Spanish legislation recognises the activities of the Comunidades de Regantes as the outcome of a series of delegated administrative powers.

19 The MBIL benefits from pre-identified borrower rural outreach, as well as experience in the agriculture sector and in financing WUAs. Credit institutions under this facility usually have teams in place for originating, appraising and managing agricultural loans, including loans to WUA. The pre-identified borrowers have a portfolio of unsecured lending operations with WUA, which have allowed them to build convincing credit risk mitigation policies for risks from direct lending to these associative public entities.

Figure 5: Evolution of the Spanish irrigation systems, 2011-2016, % of share



Source: INE, Survey on the use of water in the agriculture sector, 2019.

In addition, between 2016 and 2018, the droughts led to increased investments in new irrigated land, and to the modernisation of old irrigation equipment[20]. The maintenance of irrigation is very important for the most competitive agriculture sub-sectors and regions, particularly for fruit and vegetables, and for the Southern and Mediterranean regions of the Iberian Peninsula. However, in the future modernising older irrigation systems will be more important than building new systems[21].

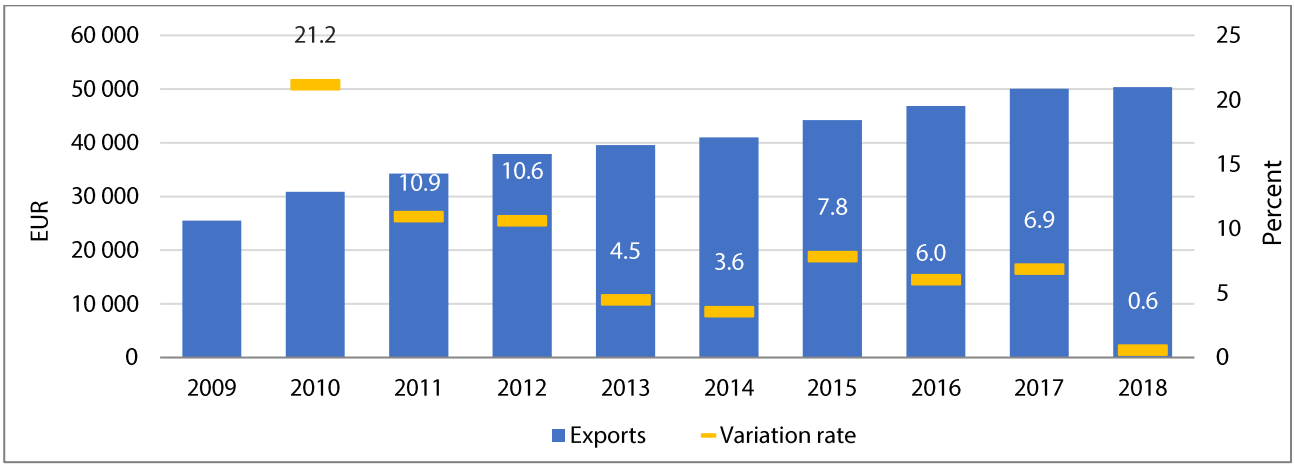
Investments, stimulating the increase of production and allowing to capture growing market shares on export markets, are of great importance. Spanish agri-food exports have almost doubled since 2009, making the increasing success abroad one of the main drivers of investments undertaken by the agriculture sector, as producers aim at capturing growing market shares[22]. Since the start of the financial crisis in Spain, the agriculture and agri-food sectors have stood out as a benchmark for competitiveness in foreign markets, achieving growth rates well above those of the overall economy (in recession until 2013) (Figure 6). Hence, the exponential growth of exports over the last decade has led Spanish farmers to undertake investments such as land purchase, investments in greenhouses, investments in the expansion and new construction of pig farms etc. (see discussion above) in order to increase sales. In addition, the ongoing structural change of the sector, with farms consolidating and growing bigger (see section 2.1), is another investment driver of farm expansion.

20 Interviews with farm organisations.

21 Berbel and Gutiérrez-Martin, 2017, Efectos de la modernización de regadíos en España. Almería, Ed. Cajamar https://www.publicacionescajamar.es/series-tematicas/economia/efectos-de-la-modernizacion-de-regadios-en-espana.

22 In 2018, the Ministry of Agriculture, Fisheries and Food (MAPA) in its annual report on external trade in agri-food, fisheries and forestry, stated that "Since 2009, exports have had a clearly positive trend, and, since then, the strong growth has almost doubled the export figure, reaching EUR 50.3 billion in 2018. Taking 2009 as a reference, the export increase has been 97.5%".

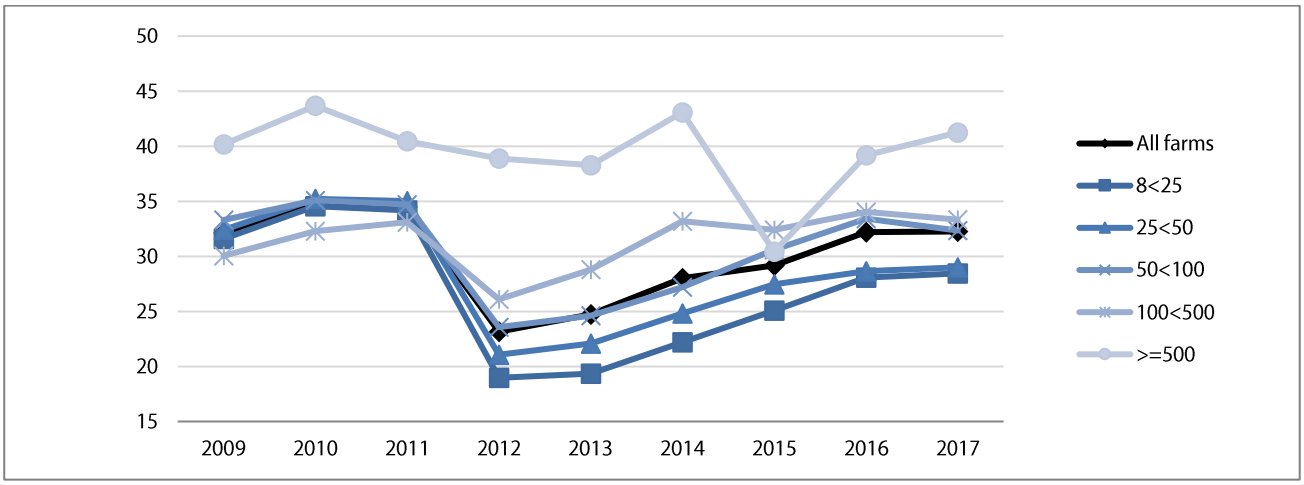
Figure 6: Agri-food, fisheries and forestry exports in Spain: evolution and variation rates 2009-2018, EUR



Source: MAPA, Annual report on external trade in agriculture, agri-food, fisheries and forestry, 2018.

Investments in working capital have increased significantly over the last few years in order to meet, amongst other things, the increasing production costs. Between 2013 and 2017, the amount of working capital for the agriculture sector has increased at an average annual rate of 10.7%, and 3.2% only between 2016 and 2017, indicating that additional financing was needed in order to meet increasing production costs[23]. Compared to total assets, differences can be observed for different farm sizes, whereby the largest farms have the highest share of working capital over total assets (40%). The average share of working capital over total assets for all Spanish farms is 32%. The main drivers of the increase in working capital were electricity (+9.7%), fuel (+9.6%), and feed for livestock (including +10% dehydrated alfalfa and +5.6% wheat)[24] (Figure 7).

Figure 7: Working capital over total assets by Spanish farm output (EUR thousand), 2009-2017 in %



Source: MAPA, National Agricultural Accounting Network, 2019,.

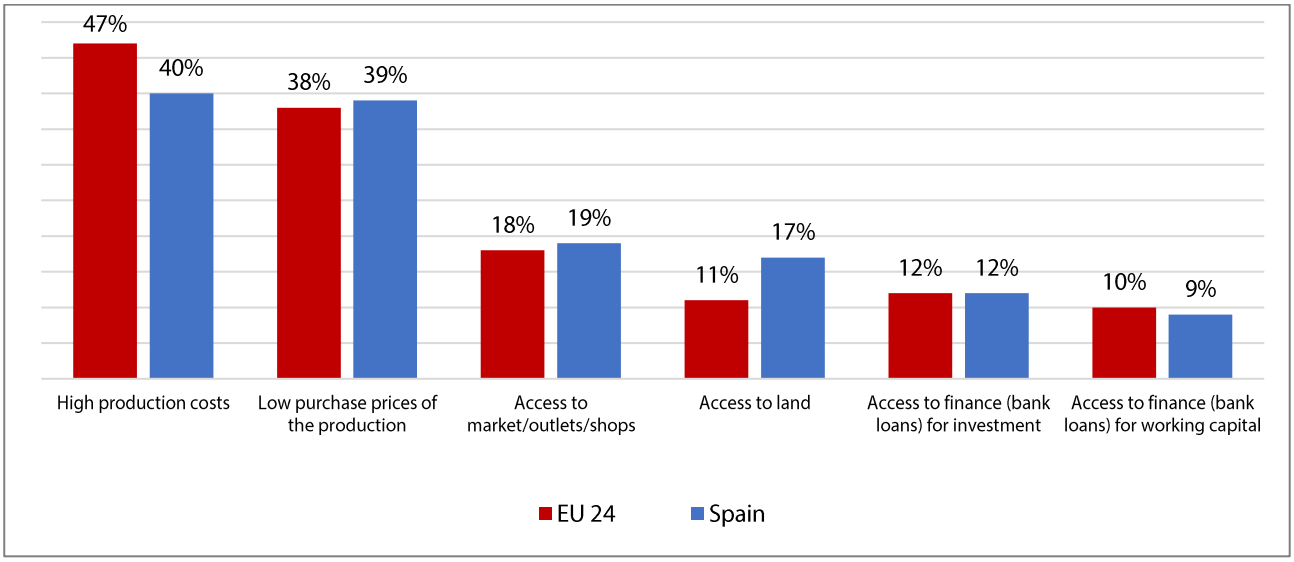
High production costs and low purchase prices are the main concerns to Spanish agricultural producers. Overall, the Spanish respondents to the *fi-compass* survey had concerns similar to those reported elsewhere in the EU 24, the

23 According to the National Agricultural Accounting Network in Spain (MAPA), the amount of working capital in 2017 was EUR 26 427 million, https://www.mapa.gob.es/es/estadistica/temas/estadisticas-agrarias/economia/red-contable-recan/.

24 MAPA, 2019, Indexes of prices paid by farmers.

exception being the access to land, which was slightly more important to Spanish farmers. Importantly, Spanish farmers indicated in the *fi-compass* survey that the costs of production (40%) and the sales prices for agricultural products (39%) were the main concerns in 2017 (Figure 8), which explains the important increase of working capital investments over recent years. Access to markets was critical for 19% of them. Access to land, as mentioned above, was a concern to 17%[25] and access to finance for investment or working capital was a difficulty for 12% and 10%, respectively. This issue will be further analysed in section 2.2.2.

Figure 8: Difficulties experienced by farmers in 2017



Source: fi-compass survey.

The contribution from the Common Agricultural Policy (CAP) varies across regions and sectors, and is substantial, although not sufficient to cover the total demand for grants from farmers. The total contribution of the CAP to Spanish agriculture, including national co-financing, was EUR 6.7 billion in 2017[26], 84% of which are direct payments. In 2017, the sub-sectors obtaining the most support from market measures were the fruits and vegetables sector and the wine sector. In fact, 23,8% of the total EU support for the fruits and vegetables sector went to Spain (EUR 237 million), 20% of the support for the wine sector (EUR 202 million), and 34.9% of the support for 'other vegetable products' (EUR 82.6 million).[27]

The total EAFRD budget for the period 2014-2020 is EUR 8.3 billion with 32% of the budget devoted to Measure 4 - Investments in physical assets, and 8.3% planned for sub-measure 6.1 – Start-up of young farmers, over the full programming period.[28] These are the two most important investment measures under the EAFRD, which are also suitable for financial instruments.

All Spanish regions have included sub-measure 4.1 Support for investment in agricultural holdings, and sub-measure 6.1 Support for business start-ups for young farmers, in their RDPs. In some of the programmes, the two support measures have been linked to each other in order to create more favourable conditions for young farmers and increase the support provided to them. The regions and the central government are co-ordinating their efforts in order to contribute to the generational change, with the aim of facilitating the incorporation of 21 300 young farmers

25 Access to land is a higher concern for new entrants compared to established farmers, which are facing less difficulties.
26 From 16 October 2016 to 15 October 2017.
27 MAPA, 2018, Informe Anual de Indicadores, Agricultura, Pesca y Alimentación 2018.
28 At the end of 2018, 30% of the RDP budget for the full programming period had been disbursed, equivalent to EUR 2.5 billion. For measure 4 about 23% had been paid out and 37% for measure 6.

in the coming years, combining EU, national and regional funds. By the end of 2019, for the two sub-measures, an amount of EUR 1.98 billion had been provided under all calls for grant applications in all regions.

The EAFRD implementation data by the end of 2019 (2014-2019) adds further evidence on the additional and unmet demand from the agriculture sector for grant finance. Spanish farmers had by the end of 2019 requested EUR 1.9 billion under all 108 regional calls for applications for on-farm investments (about 51 000 applications under sub-measure 4.1[30]; see Table 2). This represented EUR 967.3 million more than what was available under the regional rural development programmes. At the same time, about 27 385 applications for young farmers' start-up support had been submitted, amounting to a total support of EUR 1.05 billion[29], of which about EUR 294 million were not covered due to limitation of resources.[30] This implies a lack of budget available to cover grants of EUR 1.26 billion only from these two sub-measures. To this, an estimate of the unmet demand from the regions where the actual value of the unmet support demand is not known, leads to an estimate of a non-satisfied grant financing of at least EUR 1.54 billion[31]. This is a clear signal for the existing need of more resources and justifies any future increase of budgets and/or setting up of financial instruments to be able to cover at least part of the unsatisfied demand.

29 Not including the value of the support requested in Asturias, Canarias, Castilla La Mancha and Valencia.

30 Data provided by the Member State and its regional authorities by the end of 2019. To be noted that data on the requested financing from all applications for farm modernisation (sub-measure 4.1) was not available for the regions of Asturias, Canarias and Valencia. By the end of 2019, the total budget under all calls for farm modernisation in these three regions amounts to EUR 110 million with 3 017 applications being approved and supported, from all submitted 5 594 (see Table 2). Similarly, for sub-measure 6.1 (Setting up of young farmers) the data does not cover the requested financing from all applications from the same three regions and Castilla La Mancha. There, by the end of 2019, the total budget under all calls for setting up young farmers in these four regions amounts to EUR 169 million. The approved and supported applications were 3 867 from 5 544 submitted in total. Therefore, the total additional demand for grants under these sub-measures should definitely be increased with at least EUR 289 million, equalling at least EUR 1.55 billion in total.

31 The additional unmet demand from the four regions is estimated to EUR 289 million, stemming from the respective grant calls in the four regions for which total applications' budget data could not be obtained. In these regions, the share of approved and supported applications were just 54% from all submitted for sub-measure 4.1 and 70% for sub-measure 6.1 (hence budget request has been much higher than what has been available), whereby the total non-satisfied grant financing is at least EUR 1.54 billion.

Table 2: Data on the implementation of sub-measures 4.1 and 6.1 in the Spanish 17 regional RDPs under the EAFRD, 2019

Regions	No. of calls for applications	Total budget under all calls for applications (EUR million)	No. of received applications	Total budget requested by all submitted applications (EUR million)	No. of approved and supported applications	Total budget committed (EUR million)	Total requested budget not being supported (EUR million)
Sub-measure 4.1							
Spain – 14 regions	95	939.3	45 419	1 906.6	24 132	745.3	967
Spain – 3 regions*	13	110.3	5 594	n.a.	3 017	77.8	n.a.
Spain – 17 regions	108	1049.6	51 013	n.a.	27 149	823.1	n.a.
Sub-measure 6.1							
Spain – 13 regions	49	759.9	21 841	1 053.7	15 158	688.8	294
Spain – 4 regions**	10	168.6	5 544	n.a.	3 867	125.3	n.a.
Spain – 17 regions	59	928.5	27 385	n.a.	19 025	814.2	n.a.

Source: Spanish regional managing authorities, 2020.

** Includes the regions of Asturias, Canarias and Valencia.*

*** Includes the regions of Asturias, Canarias, Castilla-La Mancha and Valencia.*

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

Direct payments facilitate farmers' access to credit, and investment support leads farmers to undertake more investments and of a higher amount than what would have been the case without the support. Direct payments improve farmers' cash flow, thereby facilitating access to credit as it ensures farmers repayment capacity, particularly for short-term loans. This is particularly important for young farmers and new entrants, who are usually in greater need for liquidity, due to the high initial costs linked to starting or taking over a business. The history of the direct payments received from the CAP, as well as the payment entitlements that the farmer hold, are considered, by banks, as part of the farmer's ability to generate resources (its ability to repay), and therefore enhances creditworthiness[32]. Consequently, CAP support leads to investments being undertaken by farms that would otherwise not have access to bank finance. Investment support from the RDP also leads farmers to undertake more investments of a higher amount than what would have been the case had there not been investment support[33].

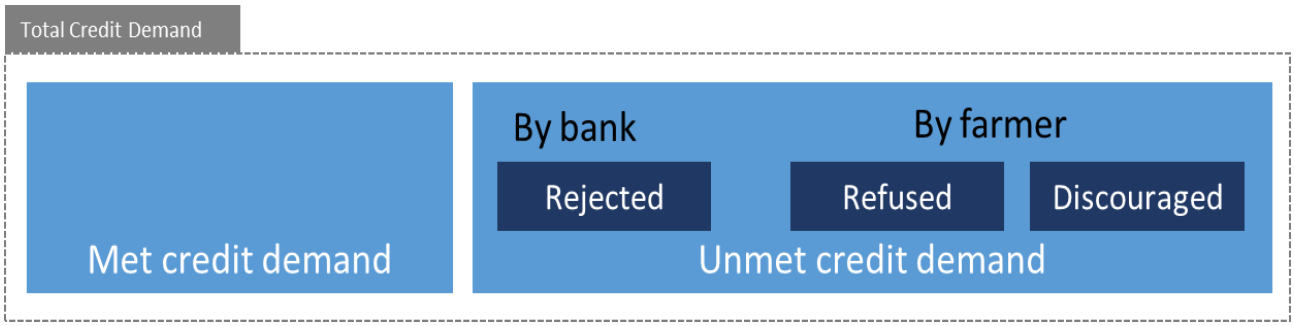
2.2.2 Analysis of the demand for finance

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 9).

32 According to bank interviews.

33 According to interview with MAPA.

Figure 9: Schematic overview of the demand side of the agriculture sector

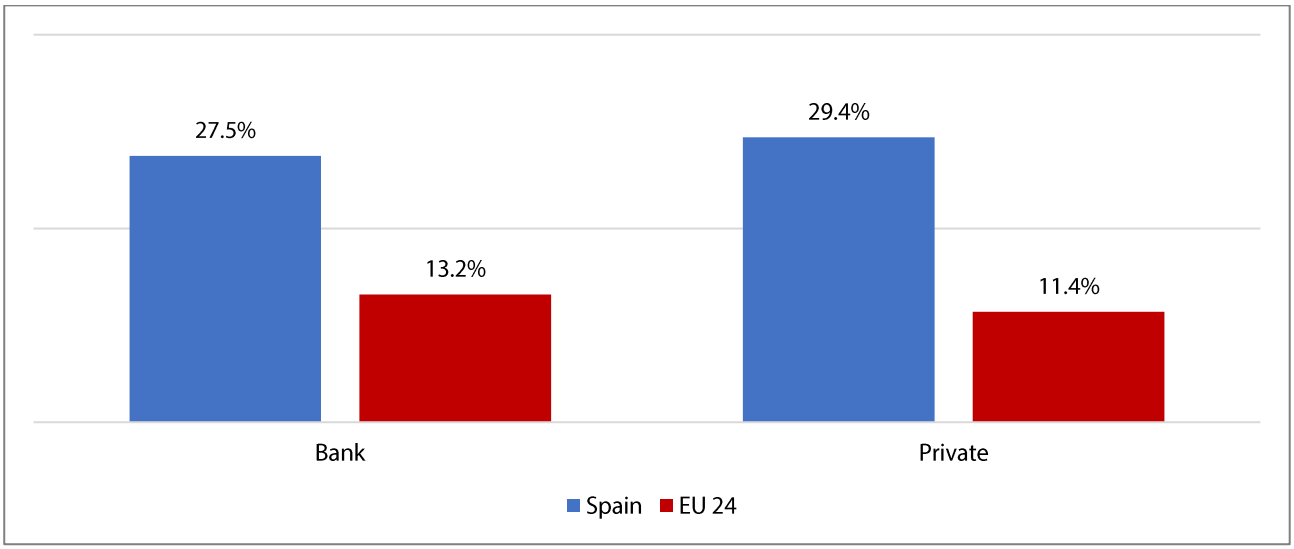


Source: Ecorys, 2019.

Based on the results of the *fi-compass* survey, the unmet demand for the agriculture sector in Spain is estimated at EUR 8.6 billion.

The demand for finance from the agriculture sector is very high. In fact, the demand for finance demonstrated by the Spanish farmers participating in the *fi-compass* survey was the highest registered for all EU 24 countries. This demand is met through various sources, in particular, 27.5% through bank loans and 29.4% through loans from private individuals, such as family and friends (Figure 10). As discussed in section 2.2.1, the key explanations for the high share of Spanish agricultural producers applying for finance is the investments undertaken in increased productivity and in expansion of production to capture increasing market shares on foreign markets.

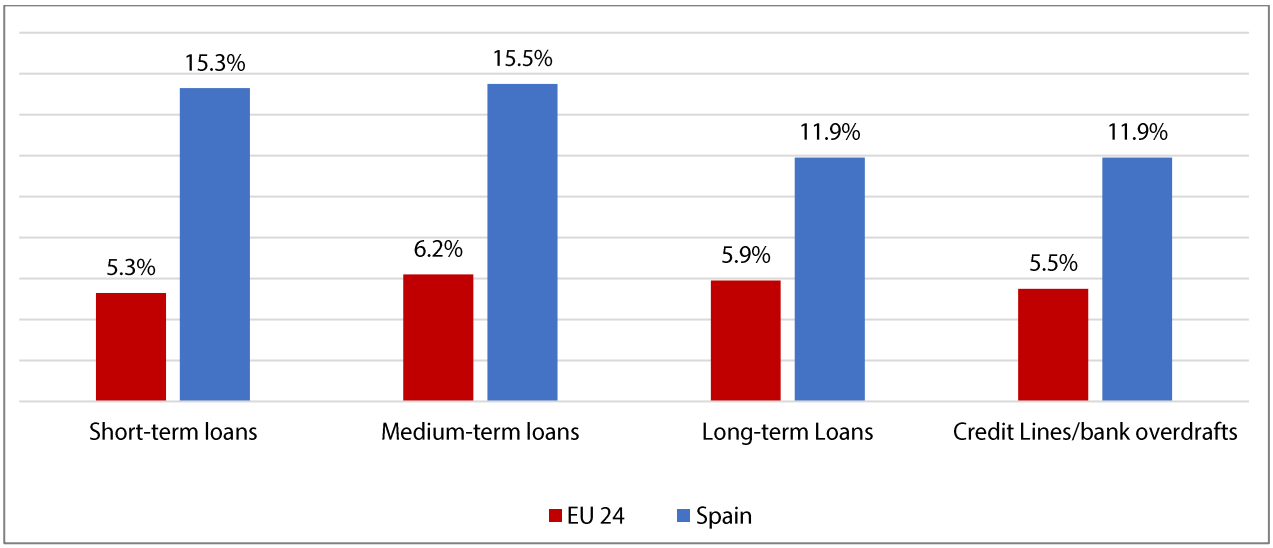
Figure 10: Spanish farmers applying for finance in 2017



Source: fi-compass survey.

Short and medium-term loans are most in demand. In 2017, most of the Spanish farmers who applied for loans applied for medium and short-term loans, 15.5% and 15.3%, respectively. 11.9% of Spanish farmers applied for credit lines and long-term loans (Figure 11). These figures are in all cases significantly higher than the EU 24 averages.

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



Source: fi-compass survey.

Informal loans from friends and family members may play an important role in the farming economy, particularly for young farmers. According to the *fi-compass* survey, almost 30% of Spanish farmers asked friends and family for private loans. The value of the loans provided from relatives is estimated to be in the range between EUR 1.2 billion to EUR 2.4 billion[34]. According to interviewees representing the agriculture sector, for agricultural producers it is common to use their own capital or that of close relatives, particularly in cases of family succession where productive assets are transferred to the child at the beginning of his/her activity. The contribution may take the form of productive assets such as land, machinery and installations, or money. Often this contribution is a donation or an advance of the inheritance in order for it not to be subject to taxation, but on other occasions it is configured as a loan between individuals, or as a capital contribution to a mercantile society in which a remuneration of the capital is expected. In addition, for small loans, many farmers may find it easier to revert to friends and family, rather than applying for bank financing. Family ties are still tight in the Spanish society, and the lack of advanced education and financial literacy, particularly amongst farmers with small-sized farms, may lead them to be more prone to ask for financing from non-financial institutions, which instil less fear, and may be perceived as less complicated by the farmers (See continued discussion further down in this section).

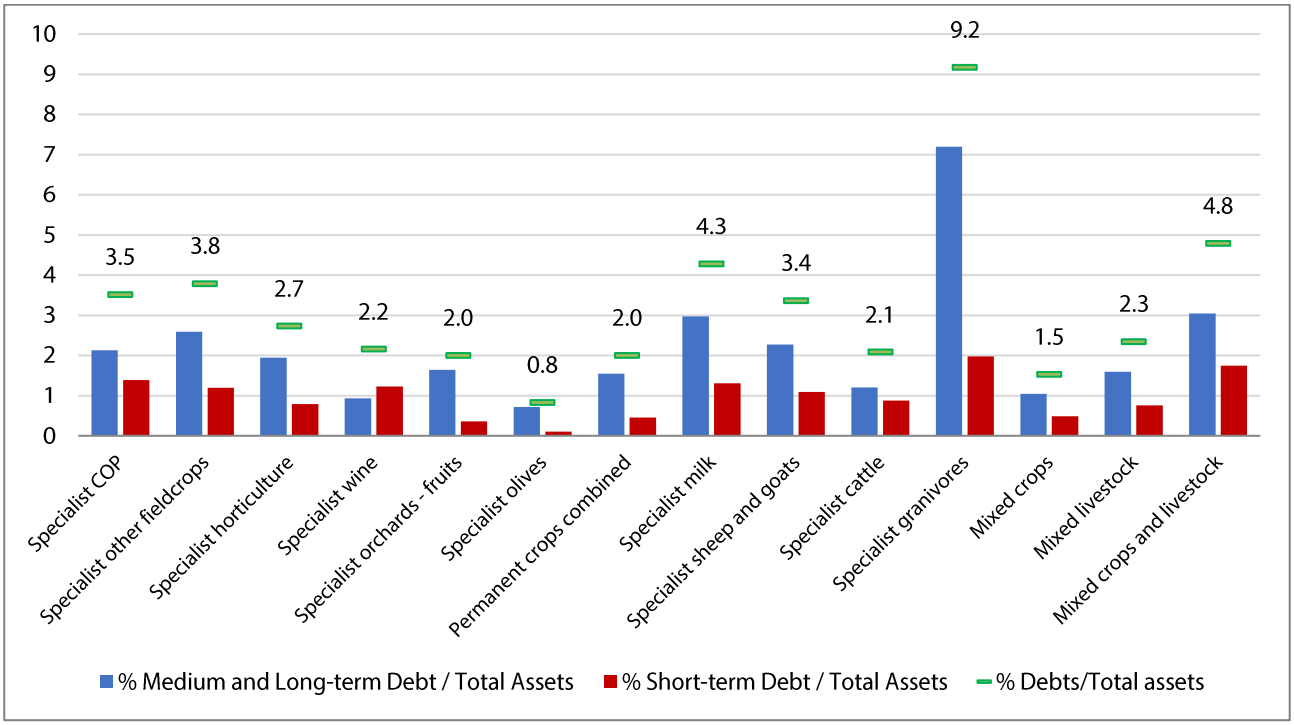
Despite the high demand for finance, Spanish farms have low levels of debt, which means that their financial costs are not a problem for the moment and may not hold them back from taking additional loans. Furthermore, interest rates are low (see section 2.3). On December 31, 2017, according to an analysis made of 73 232 farmers across all sub-sectors and across all of Spain, the average level of debt per farm was only EUR 3 121[35]. This includes farmers with loans originated from financial institutions and those that did not have access to any bank loans at the time. However, this figure does not include information on financing from friends and family. It is possible that the high share of farmers resorting to private financing as shown in the survey somewhat explains the relatively low level of debt.

34 Calculations 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).

35 Cajamar, 2019, Barómetro ANICE-Cajamar de la industria cárnica española. Primer semestre de 2019.

However, there are differences amongst sub-sectors and farm sizes. Data shows that farms with high turnover have a higher percentage of debt over total assets[36]. The average debt ratio for the Spanish farms is 3%, ranging between 1.2% for the very small-sized farms (below 5 ha) to 5.7% for the biggest ones (above 100 ha). The highest level of debt is registered for meat production at 9.2%, followed by mixed crops and livestock at 4.8% and milk producing farms at 4.3% (Figure 12).

Figure 12: Debt over total assets per Spanish farm type category in 2017 in %



Source: MAPA, National Agricultural Accounting Network, 2019.

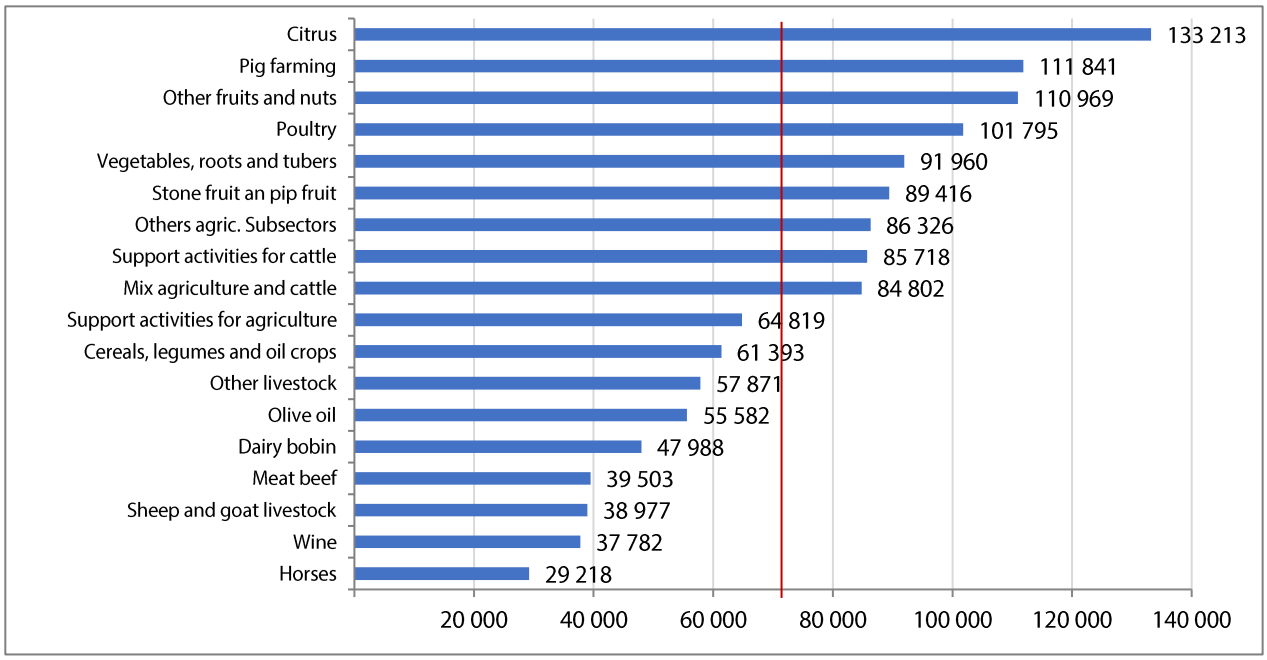
36 National Agricultural Accounting Network, 2019.

Average loan size for agriculture in Spain

In order to complement the information from the *fi-compass* survey, a sample of 4 259 loans for 2017 and 2018 was analysed. The average loan amount was estimated to be EUR 31 833. The average for short-term loans was EUR 25 749, for medium-term loans EUR 28 730 and for long-term loans EUR 55 375. The results on average loan amount have a certain selection bias as the sample only reflects the situation for the southern parts of Spain where there is a strong specialisation in greenhouse production such as vegetables.

In contrast, the information on average loan amount from the Instituto de Crédito Oficial (ICO), was analysed (see section 2.3 for more information on ICO). For its long-term loan (the financial product for businesses and entrepreneurs), the average loan amount in 2017 was EUR 72 850 across all sub-sectors. The citrus fruit sub-sector had the highest average investment loan amount at EUR 133 213. It is followed by pig farming and other fruits and nuts (Figure 13). These latter farms are usually more intensive in capital and larger than the average farms.

Figure 13: Average loan size from ICO-companies and entrepreneurs in 2017, EUR

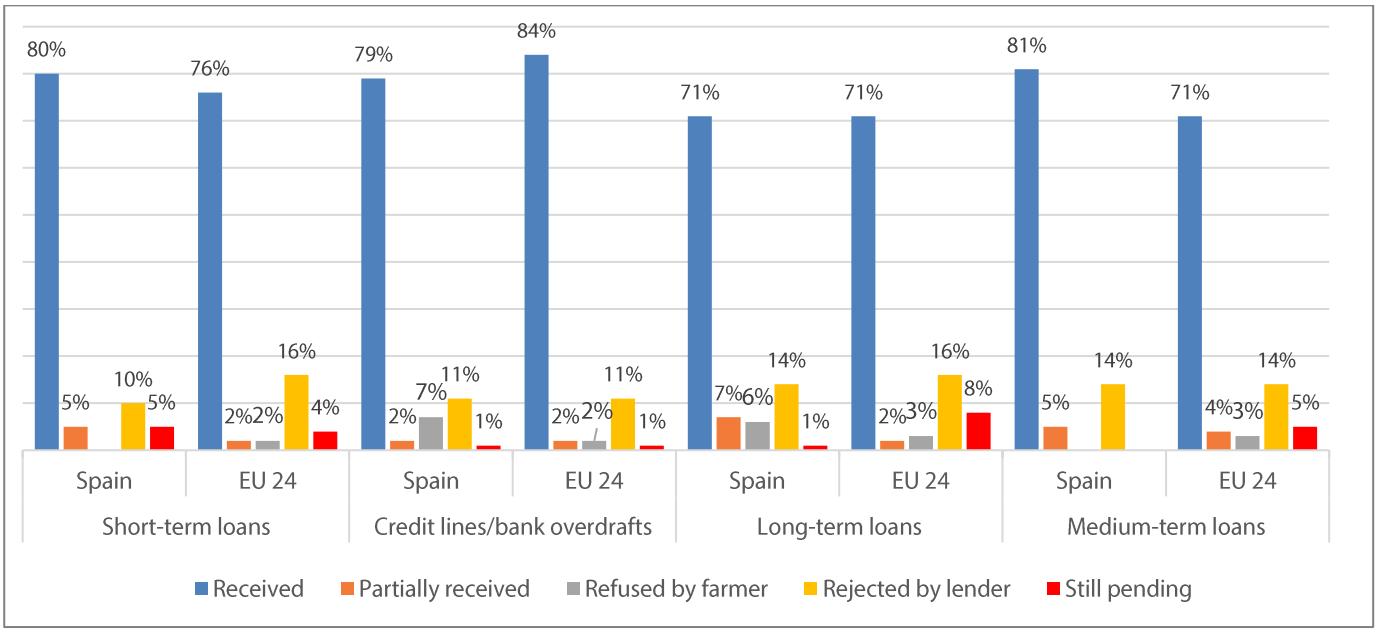


Source: MAPA, 2019 and own elaboration.

Rejection rates for loan applications vary between 10% and 14% (Figure 14). Looking at loans in 2017, approximately 80% of the farmers received at least part of the amount requested in their loan applications. The percentage of applications approved was the highest for medium-term loans at 86%, followed by short-term loans at 85%. The rejection rates were between 10% for short-term loans and 14% for long and medium-term loans, equal to or below the EU 24 averages depending on the maturity, but higher than for comparable countries (e.g. Italy). Banks interviewed did not provide numbers on the share of rejections but considered the results from *the fi-compass* survey to be in line with their perception of reality. As a contrast, in the ex-ante assessment undertaken in 2016, 36% of the farmers surveyed considered access to finance to be a problem[37].

37 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

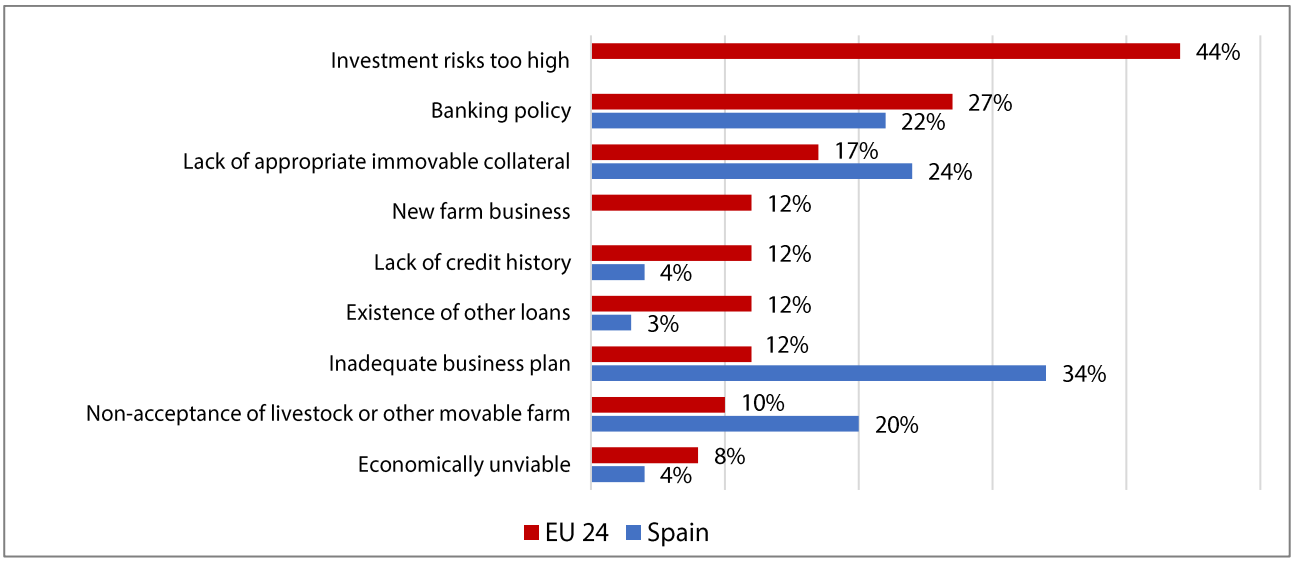
Figure 14: Results from applications for finance in the agriculture sector in 2017



Source: fi-compass survey.

Lack of collateral and inadequate business plans are the main reasons for rejections. According to the *fi-compass* survey, the main reasons for rejection in Spain were the lack of adequate business plans (34%), lack of adequate immovable collateral (24%), banking policy (22%), and the non-acceptance of livestock or other movable farm products as collateral (20%) (Figure 15).

Figure 15: Reasons for applications' rejection in the agriculture sector in 2017

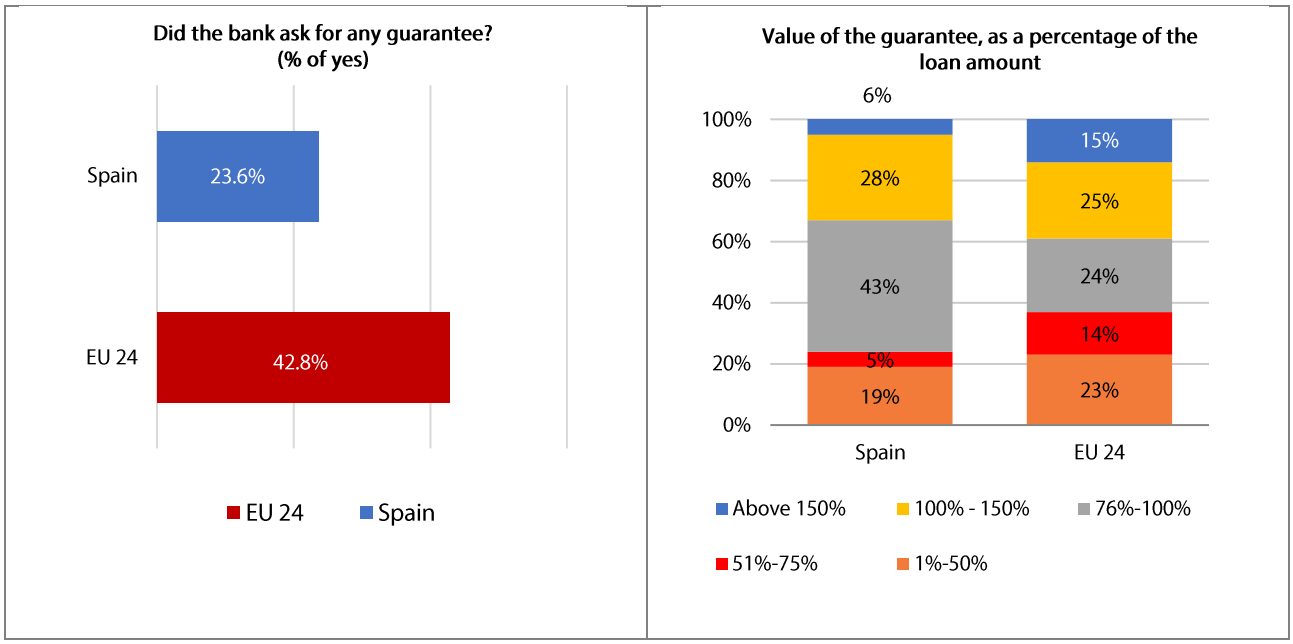


Source: fi-compass survey.

The effects of the financial crisis are still being assimilated by the Spanish banking system, leading banks to ask for higher collateral. In total, 44% of the *fi-compass* survey respondents claimed that banks had announced that lack of appropriate collateral is the main reason for the rejection. As the effects of the financial crisis are still being assimilated by the Spanish banking system, the fact that lack of collateral is reported as the main reason for rejections

is not surprising. The Spanish financial institutions give high importance to the availability of guarantees and the solvency of borrowers (in this case farmers). Before implementing the centralised financial instrument (see section 2.3.1.2 for more details), an ex-ante assessment for the use of EAFRD financial instruments was carried out for the Spanish market[38]. This ex-ante assessment found that there was a market failure due to the fact that the financial institutions operating on the national market asked for higher guarantees for providing loans to the agriculture sector than to other economic sectors, whereby there was an inefficient allocation of resources in the economy. This issue, according to the ex-ante assessment, was found to be particularly significant for young farmers and farmers without credit history. Interviews with agriculture organisations have further underlined the obstacle that lack of collateral implies in accessing finance for young farmers (see discussion further down in this section on young farmers). According to the *fi-compass* survey, 77% of Spanish farmers were asked to provide a guarantee with a value above 75% of the loan amount requested, higher than the EU 24 average which is 64% (Figure 16).

Figure 16: Information related to guarantees requested by agricultural producers, 2017



Source: fi-compass survey.

Other important reasons for rejecting loan applications from the agriculture sector include the lack of appropriate business plans, banking policy, and lack of credit history (Figure 15)**.** According to the banks interviewed, the main reasons provided for the rejection of a loan application were the existence of other loans (often debt classified as doubtful credit), scoring rejection[39] and banking policy (sector lending cap), and the lack of appropriate experience of the farmer, often linked to the inadequate business plans.

- **Lack of credit history** was identified as a problem for young farmers and new entrants by both bank interviewees and farmers' representatives. In the Spanish ex-ante assessment on financial instruments, the lack of credit history was found to be one of the reasons aggravating the difficulties of farmers in accessing finance[40].

38 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

39 Some banks have automated scoring systems that often take into account criteria such as industry risk, customer and industry history in the institution, the existence of past loans or insufficient expected revenue generation. Normally they do not have these systems for all sectors, so not all transactions go through the automated system.

40 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

- **Banking policy** refers to banks that have established maximum debt limits for a specific activity. Above a certain level of debt (which can be expressed, for example, in euros per hectare or euros per head of cattle), more details are required by the client on the viability plan, and higher guarantees are required in order to approve the operation. Each entity has its own limits, which depend on the knowledge of each entity in the different agriculture activities (many factors influence this, such as the technology used in the production, the area in which the farm is located, etc.). These types of banking policies are applied mainly by smaller financial institutions, hence respecting the limits established by the regulator in relation to the concentration of risks in certain clients.
- **Incorrect or incomplete business plans**, whereby the plan is not credible or lacks relevant information due to the farmers' lack of financial knowledge. This is a common reason for rejection of loan applications by farm managers. Some banks try to get around the problem by working directly with the farmers. For example, Cajamar (a cooperative bank) works with models for each type of farm, e.g. vegetables in greenhouses or in open air; traditional, intensive or super intensive olive groves; citrus depending on the varieties and the area, pork from fattening in closed cycle or in integration etc. When the numbers presented by the farmer to the bank are very different from those of the bank, the bank tries to gather more information from the farmer (it may be that the farmer is going to use some element that the bank does not know of: a technology, a new variety; or the farmer may have closed previous purchase/sale contracts) in order to be able to approve the loan. Even so, the fi-compass survey highlighted this as a very relevant problem for Spanish farmers, and it is linked to farmers' level of financial literacy (see further discussion below). Also, in the Spanish ex-ante assessment, the lack of appropriate business plans was found to be a constraint to farmers' access to finance[41].
- **The lack of sufficient water rights for the exploitation to be financed with the loan**. For irrigation investments, banks ask for a documented justification of water availability;
- **The lack of appropriate experience of the farmer.** This is particularly the case for the young farmers and new entrants in the sector. Farmers who cannot prove their experience of managing a farm have a harder time in obtaining credit, according to bank interviews;
- **Existence of previous defaults,** or that the potential borrower is in a situation of lack of sufficient liquidity that makes the bank foresee an upcoming default, is another reason for rejection mentioned by banks.

Young farmers and new entrants face more difficulties in access to finance, due to the lack of access to land, lack of collateral, and lack of credit history. The Spanish banking sector is described as risk avert after the economic crisis, which lead banks to avoid financing riskier projects. This includes farm activities with more innovation, and the early activities of young farmers[42]. When a farmer inherits a farm, the initial investment is usually high for two reasons. Firstly, it is common that the heir needs to buy out other siblings, or even the parents, whereby the starting capital required to take over the farm is high. Secondly, usually younger farmers opt for expanding the production, compared to the volume of production undertaken by the parents, in order to take advantage of economies of scale, and have a more profitable farm business (see section 2.1). Usually, the most profitable farms are larger than the average size farms. However, this requires investments in machinery, equipment, facilities, and where possible, in land. These are large-scale, expensive investments, whereby the banks usually require collateral. The most common form of collateral is land. However, due to the fragmented land market in Spain, it is often difficult for farmers to access more land[43]. Thus, when land is accessible, young farmers often do not have enough land to provide as collateral in order to access the credit requested for the purchase of more land. Hence, for young farmers, this becomes a 'catch 22' where the

41 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

42 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

43 A common problem for young farmers is the lack of available land (especially in areas where small holdings predominate). Land may not be on the market for sentimental reasons or it may not be possible to obtain a homogeneous plot of land that could contribute to make the investment profitable. Hence, for young farmers and new entrants who would like to expand their business, whereby they would ask for finance, the lack of access to land may hold them back from investing. A possible solution (interviews) to this problem could be land banks.

lack of sufficient current land becomes an impediment to buying the available (more) land. Naturally, for new entrants to the sector who have not inherited a farm, accessing land of appropriate size, fertility and with good location becomes even more difficult. Furthermore, one of the reasons why young farmers are rejected loans is possibly because parents or other relatives who are asked to act as guarantors of the loan simply decline or fail to provide the necessary guarantee[44].

Additionally, the lack of credit history further complicates the new entrants' possibility of accessing finance, as the banks do not have credit records on the potential borrower (who usually asks for large volume loans), whereby they decline the request.

Main findings of the centralised ex-ante assessments of financial instruments in Spain for the agriculture sector[45]

- Investment drivers identified: Investments in machinery and equipment, expansion of business, purchase of land.
- Difficulties in accessing finance: 36% of individual farm managers found difficulties in accessing finance.
- Groups with more difficulties in accessing finance: Young farmers, and farms with a higher degree of innovation in their activity. Because these groups are found to be riskier, and therefore require higher guarantee. When the farmer lacks credit history (young farmers, small-sized farms), the problem is aggravated.

Reasons for difficulties in accessing finance:

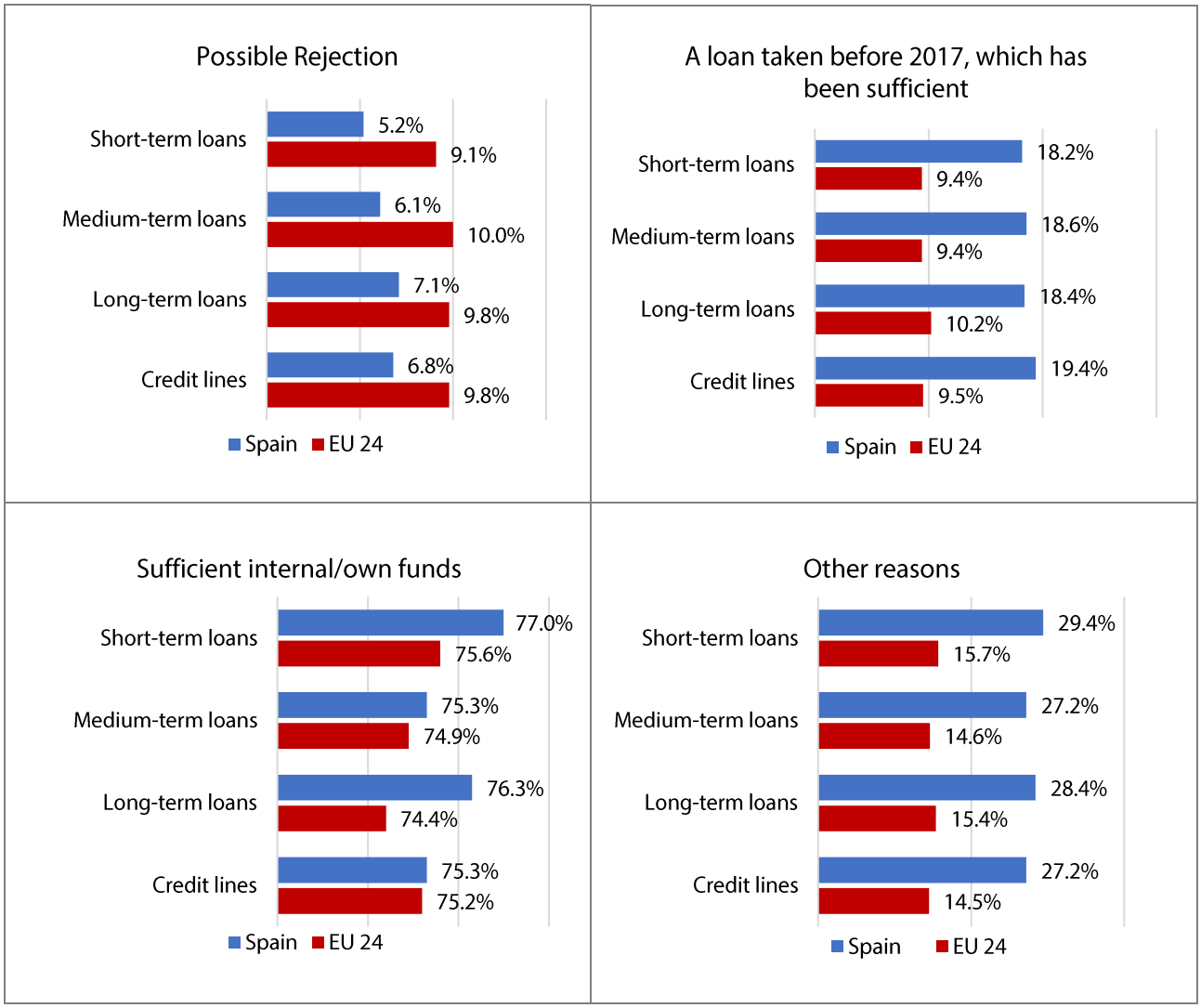
- Risk avert banks after the economic crisis, which lead banks not to lend to high-risk projects, unless this can be compensated for with higher interest rates, or through high guarantees.
- The financial institutions demand higher guarantees for providing loans to the agriculture sector than to other economic sectors.
- Lack of adequate business plans on behalf of the farmers.
- Lack of credit history.
- The financial situation of the company and low repayment capacity.
- Main conclusion of the assessment: a market failure exists on the Spanish market, which motivates the provision of public guarantees to financial institutions for the financing of investments in the agricultural, forestry and agri-food sectors.
- Financing gap in rural areas (agriculture, agri-food and forestry sector) of EUR 3.8-7.6 billion.
- Recommendation: Introduction of a capped portfolio guarantee financed through the EAFRD, implemented for sub-measures: 4.1, 4.2, 6.1, and 8.6, with the aim to decrease the risk for financing the agricultural, forestry and agri-food sectors, and hence favour their access to finance. Loans with longer repayment period are to be facilitated. Main target groups: young farmers, agricultural cooperatives and the agri-food industry (foremost microbusinesses, less than ten employees), and natural persons within the sectors with a lack of credit history.

Some farmers did not apply for loans due to the fear of being rejected. More than 75% of Spanish farmers responded in the *fi-compass* survey that the main reason for not applying for a loan in 2017 was because they had sufficient own resources (Figure 17). The second most reported reason was the fact that they have a prior loan that covers their needs (between 18 and 19%). Between 5 and 7%, depending on the loan maturity, responded that they did not apply due to the fear of being rejected. This is below the EU 24 average, but still a significant number in comparison to other EU countries. Between 27% and 29% of the farmers had other reasons for not applying for a loan.

44 Interviews with farmers' organisation and banks.

45 MAPA, 2016, Evaluación ex ante de un nuevo instrumento financiero plurirregional para los fondos FEADER 2014-2020. To be noted that the ex-ante assessment done by the Spanish Ministry for Agriculture covers five regions only: Aragón, Castilla y León, Castilla La Mancha, Extremadura y Región de Murcia.

Figure 17: Reasons for not applying for loans in the agriculture sector in 2017



Source: fi-compass survey.

Spanish farmers have a very low level of higher agriculture education, and a low level of financial literacy, which cause farmers to refrain from asking for finance. In Spain, there are numerous extension services that transfer knowledge and information to farmers. In addition, Spain has a lot of *Cajas Rurales* - cooperative banks present in rural areas, and numerous credit sections of agricultural cooperatives (see section 2.3.1.1), which offer advice to farmers in various ways on how to access finance. Even so, the financial literacy amongst the Spanish farming community is generally understood to be low.

A recent study also shows the importance of undertaking additional economic and financial training for farmers (identified as the second most important measure to undertake in order to strengthen the competitiveness of the sector according to the ranking)[46]. This study is focused on Spanish agricultural cooperatives, but the same argument is made explicitly in several regional RDPs. All Spanish RDPs make reference to the poor training of farmers and the farm workers. In the RDPs of Andalucía and Asturias, explicit reference to the low level of training in management and finance is made.

46 Arcas, N. et al., 2019, La apuesta por el talento en las cooperativas agroalimentarias. La formación como palanca para el crecimiento. Almería, Cajamar Caja Rural.

Furthermore, the level of higher agricultural education amongst the Spanish farmers is very low. In Spain, 78.3% of farmers have only on-the-job training[47], the share is even higher for farms below 5 ha at 83.6%. Only 1.9% of agricultural producers have specialised higher education in agriculture. In addition, the banks pointed out the lack of appropriate training by the farmers as one of the top five reasons for rejecting loan applications.

The relatively low level of financial literacy may explain the share of farmers being discouraged from applying for loans due to the fear of being rejected. It may also be an explanation for the high share of Spanish farmers asking for financing from friends and family. Family ties are still tight in Spanish society, and this, combined with the limited understanding on the side of the farmers about the financial market, may lead to a fair share of farmers preferring to ask family members or friends for a loan, before going to the bank. This may also explain why the average level of debt of EUR 3 121, as analysed from bank data, is relatively low. It may be that a large group of farmers rely on private financing, hence, these loans naturally do not show up in the balance sheets of the banks.

Technical support could improve farmers' access to finance. Despite the efforts already made to train farmers, both by the *Cajas rurales*, and by the extension services funded through the RDPs, as well as other initiatives, additional efforts are motivated in order to increase agricultural producers' access to finance. Foremost, capacity building could be aimed at improving farmers' capacity of preparing business plans, but also linked to basic training on financial markets. Modules on business development services, basic knowledge of accounting, selection of the most appropriate product according to bank needs, could generate benefits for the sector. Also, additional training aimed at improving farmers' technical skills is recommended, as one important reason for banks to reject loan applications, in particular from young farmers, relate to the farm managers lack managerial capacities.

47 On-the-job training refers is method of teachings skills, knowledge and competencies required by employees to perform a specific job in its field.

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

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

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

- The offer of financial products in Spain is extensive. There are many different loans with different terms and purposes among which also investment loans, working capital loans, and liquidity loans.
- There are different types of financial entities active on the Spanish market: private banks, Cajas rurales (rural cooperative banks), credit sections of agriculture cooperatives, and the Instituto de Crédito Oficial (a public agency) with a large network of branches. Amongst private banks, Caixa Bank and Cajamar have the highest market shares.
- Interest rates for agriculture loans are usually variable: EURIBOR 12 months plus a margin with a range between 1.25% (mortgages) to 1.75% or a fixed interest for credit lines (2-3%).
- Collateral required by the agriculture sector is higher than that required for other sectors.
- In 2018, the total outstanding loan volume to the agriculture sector was EUR 20.4 billion, with a constant growth since 2014 (21.1%), reflecting that the agriculture sector is attracting increasing investment capital in Spain. Commercial banking is contributing to the expansion of the sector, providing additional financing.
- Despite the increase in agriculture lending, the sector's solvency is improving.
- The improvement of the Spanish solvency position is linked to fast GDP growth compared to credit.
- The constraints in the supply of finance are due to banks being risk avert after the economic crisis, leading them to provide less financing to riskier investments, such as those undertaken by young farmers, or investments with a higher degree of innovation. In addition, the restructuring of the financial sector over the last years may lead to financial exclusion of the rural population, including farmers.

2.3.1 Description of the finance environment and funding availability

2.3.1.1 Finance Providers

An extensive network of financial suppliers operates in the Spanish market. The Spanish banking landscape consists of four different types of entities: the traditional banks with national or multiregional coverage, the cooperative banks, other credit entities and the credit sections of several agriculture cooperatives.

Several traditional banks are the result of recent consolidation processes and the conversion of saving banks. The cooperative banks are usually smaller entities with local coverage and a high share of market in their areas, in particular the Cajas rurales (only one of them has national coverage). One of the other credit entities is public: The ICO (Table 3). Banks, cooperative banks and credit sections are also deposit entities, thereby using the deposits to extend credit.

Table 3: Number of credit branches in Spain by Regions

Communities	Deposit entities	Other credit ent.	Credit sections	Total
Andalusia	4 269	31	106	4 406
Aragón	1 034	6	9	1 049
Asturias	635	4		639
C. Valenciana	2 559	11	33	2 603
Canary Islands	887	10		897
Cantabria	329	1		330
Castilla y León	1 956	5	2	1 963
Castilla-La Mancha	1 507	4	16	1 527
Catalonia	3 601	19	71	3 691
Extremadura	888	4	6	898
Galicia	1 491	8	4	1 503
Balearic Islands	759	2		761
Madrid	3 168	38		3 206
Murcia	787	4		791
Navarra	485	1		486
Other territories	37			37
Basque Country	1 314	6	1	1 321
Rioja, La	305	1		306
Total Spain	26 011	155	248	26 414

Source: Bank of Spain and Cooperativas Agroalimentarias de España, 2019.

The agriculture sector is served by numerous banks, where Caixa Bank and Cajamar have the highest market shares. The main agents on the Spanish credit market are Santander, Caixa Bank, BBVA, Bankia, Sabadell and Bankinter[48].

Although the above-mentioned banks have national coverage, there are other agents, with provincial or local coverage, who traditionally have had a very close relationship with rural areas and the agri-food sector such as the Cajas rurales. These are cooperative banks, of which Cajamar is the biggest and the only one with a near national coverage (but not uniform coverage). This cooperative is the base of the cooperative group and it has a clear specialisation in the agri-food sector. According to information from interviews, Cajamar Cooperative Group has an approximate 13% share of the agricultural market. The assumed market leader is Caixa Bank, presumably with a higher market share than Cajamar.

Credit sections of agriculture cooperatives are relevant actors on the financial market at regional and local levels. The agricultural cooperatives[49] are legislative competence of the regions, thus regional differences exist. However,

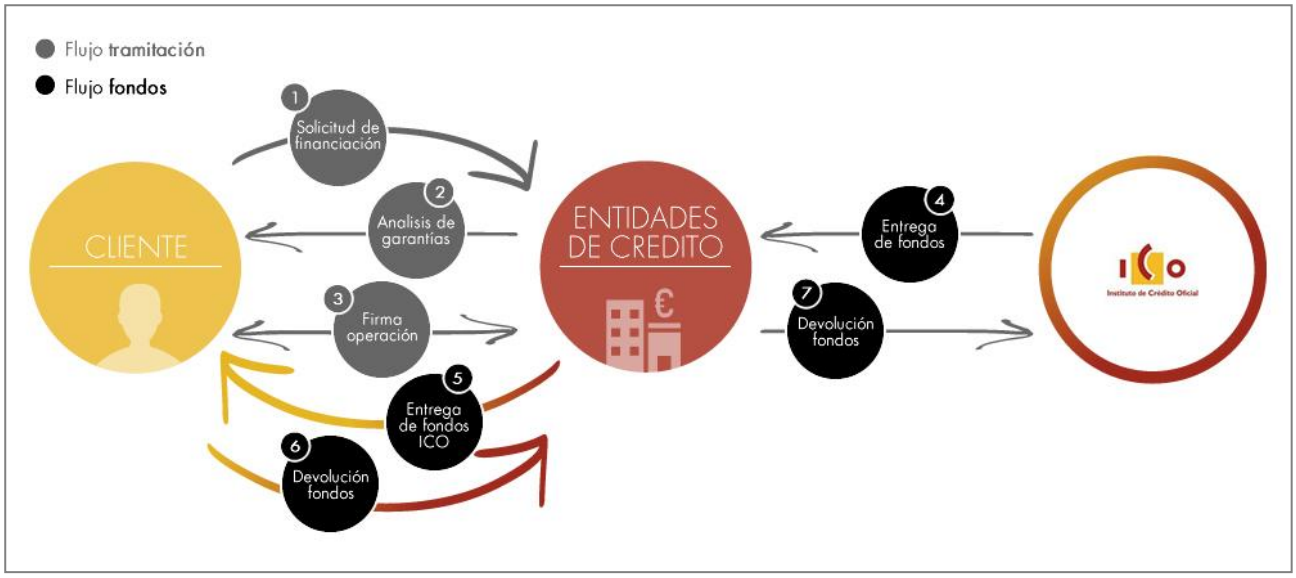
48 The Bank of Spain publishes general statistics which only shows the total outstanding loan volume for agriculture, livestock farming forestry and fisheries. The Ministry of Agriculture provides similar information, but without fisheries.

49 The cooperative Banks are an exception as they are supervised by the Bank of Spain or the European Central Bank. Today, the only Spanish cooperative bank under ECB supervision is Cajamar and its cooperative group. The ECB supervises banks with assets in excess of EUR 30 billion, which are economically relevant for the country as a whole or which are internationally active.

usually, the credit section of the agricultural cooperatives can operate as a bank, offering various kinds of financial products and services to their clients. The clients in some cases have to be members of the agricultural cooperative, and sometimes the loans are available to the general public, this depends on the region and its regional laws. Cooperativas Agroalimentarias de España, the national organisation of the Spanish agricultural cooperatives, estimates that the joint market share of the credit sections of the agricultural cooperatives is approximately 0.5% of the total market (not of the agricultural market).

The state financial agency offers subsidised loans of importance to the agriculture sector. ICO is a public bank and the State financial agency. Its functions are mainly to promote economic activities that contribute to growth, the development of the country and the improvement of the distribution of national wealth'[50]. As a public bank, ICO grants loans to finance investment operations and liquidity of companies. It has two operating lines. The first of which is intermediated financing (helping to bridge a temporary gap between collections and payments), which mainly targets self-employed workers and small and medium-sized enterprises. ICO determines the budget of each line, the purpose of the loans, the interest rates and the repayment terms, and provides funds to the private banks. They analyse the operations, determine the guarantees to be provided and assume the risk (Figure 18). The second line is direct financing, usually these loans are tailored to the needs of the applicant company with a minimum amount of EUR 12.5 million. In this case, ICO studies, grants and assumes the risk. However, this financing is preferably granted in collaboration with private banks or public entities.

Figure 18: ICO´s intermediated financing operating diagram



Source: ICO, 2019, www.ico.es.

2.3.1.2 Financial Products

(I) Private banks products

A wide array of loans, adapted to various sub-sectors, are available to the Spanish agriculture sector. The Spanish banks, cooperatives and credit sections of agricultural cooperatives provide a wide offer of loans to farmers for both investment and working capital financing. The offer is tailored to the needs of farmers. Loans, especially for working capital, are adapted to the characteristics of the sub-sector, e.g. average maturation periods, collection systems, technologies, etc. For professional farmers, the advance of the CAP often serves as a campaign loan, financing pre-

50 ICO, 2019, www.ico.es.

harvest activities and the actual collection of the value of the harvest and the aid itself. There is even a special offer of credit cards to purchase inputs. This credit has a maximum available limit that can only be used in a given period and in specific establishments, usually suppliers (Table 4).

Additionally, ICO (the public entity) has different products to support the sector:

- ICO-Empresas y emprendedores: for investment and working capital, established companies and entrepreneurs, including new entrants;
- ICO-Internacional: liquidity facility and investment outside of Spain;
- ICO-Exportadores: factoring for exports;
- ICO-Crédito Comercial: factoring for Spanish internal market; and
- ICO-Garantía SGR/SAECA: loans with a guarantee from a mutual guarantee company.

Table 4: Overview of financial products offered to farmers by private banks, Cajas rurales and credit sections

Type of Product	Purpose	Maturity	Interest Rate
Investment Loans (mortgage loan)	Capital investment, purchase of land	Mostly medium and long-term, max. 15 years	EURIBOR 12 months +1.25%
Investment loan (personal guarantee)	Capital investment	Mostly medium and long-term, max. 8-9 years	EURIBOR 12 months +1.75
Working Capital Loans	Working capital	Short-term credit line adapted to growing season	1.5%
Credit lines	Liquidity and working capital	Short-term, usually 12 months	2-3%

Source: Summary based on interviews, 2019.

(ii) EAFRD funded financial instruments

Preferential loans with a public guarantee, financed through the EAFRD, are available to the agriculture and agri-food sector in the region of Castilla y León and, as from 2020, in Extremadura. Since 2017, a financial instrument funded through the EAFRD is available in Spain[51]. Although Spain has 17 regional Rural Development Programmes, the instrument is centralised and co-ordinated by the national ministry of agriculture (MAPA). The instrument is available, in principle, to all regions[52] (*comunidades autónomas*), and it is up to the regional administrations to decide to use it by contributing resources from their RDP budgets.

The objective of the instrument is to facilitate access to finance for farmers' and the agri-food industry, particularly to young farmers and entrepreneurs, as well as to the forestry sector, and to provide access to finance with preferential

51 Information in this section based on official information from the webpage of MAPA, https://www.mapa.gob.es/es/desarrollo-rural/temas/programas-ue/periodo-2014-2020/marco-nacional/ifgc/, as well as interviews, and information from: https://www.ficompass.eu/sites/default/files/publications/JuanJosé_LozanoBarriuso_The%20financial%20Instrument%20of%20the%20Rural%20Development%20Programme.pdf.

52 To be noted that the ex-ante assessment done by the Spanish Ministry for Agriculture currently covers eight regions (Aragón, Castilla y León, Castilla La Mancha, Extremadura y Murcia (May 2016), Asturias (June 2019), Galicia (January 2020) and Madrid (February 2020).

conditions. Besides the Ministry of Agriculture and the regional administrations, the other partners involved in offering the financial instrument are Sociedad Anónima Estatal de Caución Agraria (SAECA), acting as a financial intermediary, and the financial institutions that choose to participate (12 banks participating for the moment)[53].

The regional administrations decide voluntarily whether to set up a financial instrument or not, and whether to use the one offered by the central authority. So far Castilla y León and Extremadura (as of 2020) have included the use of the centralised financial instrument in its RDPs and the RDP of Galicia[54] is currently being amended. It is also up to the regions to decide on the targeted sectors and final recipients, the financial product (loans or guarantees), the budget, etc. Other regions which have completed the ex-ante assessment, and which may make use of this financial instrument are Castilla La Mancha, Asturias, Murcia, Madrid and Aragón.

The centralised ex-ante assessment carried out for the Spanish Ministry of Agriculture, before putting in place the centralised financial instrument, showed that financial institutions require higher guarantees for loans to the agriculture sector than for other economic sectors, and that the groups particularly affected by this were young farmers and farmers without credit history (see the box in section 2.2.2).

The established 'credit guarantee instrument for rural financing' focuses on reducing the risk assessment of investment projects in the agricultural and agri-food sectors as well as other enterprises, (e.g. forestry businesses), in order to promote their access to finance provided by private financial institutions. The instrument model is a capped portfolio guarantee. It consists of portfolios of new loans, with a standard 80% credit risk coverage for each loan and with a cap of 20% of the total portfolio. Hence, the financial instrument guarantees 80% of the loan-to-loan risk until the maximum guarantee cap rate (20%), from which level the financial intermediary assumes the entire risk. Loans are available for between 3-20 years, with varying conditions for repayments.

The final recipients willing to apply for the financial instrument need to first obtain a favourable credit report from SAECA (that they comply with the priorities and terms to be able to apply for a loan guaranteed by the financial instrument) as well as a recognition of the right to loan guarantee by the regional government. Only after that, the potential final beneficiary can formalise a loan application with a financial institution. The financial institution retains the right to not approve the loan application based on its internal assessment procedures.

Castilla y León is so far the only regional administration to have the centralised financial instrument up and running. The agreement between the regional administration and the Ministry was signed in October 2017. According to the regional priorities, loans that can obtain a guarantee from the centralised financial instrument are those that comply with the terms for sub-measures: 4.1 Support for investments in agricultural holding; 4.2 Support for investments in processing/marketing and/or development of agricultural products; and 8.6 Investments in forestry technology and transformation, of the RDP. In addition, loans fulfilling the requirements of sub-measure 6.1 Business start-up aid for young farmers can be approved. It is possible to combine grants under these measures with loans guaranteed from the financial instrument for the same purpose; however, it is not a pre-requisite to obtain a grant in order to obtain the loans.

The loans guaranteed are always linked to new investments, with the exception of the loans that will be provided for young farmers under sub-measure 6.1. For working capital, the maximum loan amount that is guaranteed is EUR 200 000, or 30% of the investment, as required by the EAFRD regulation. For investments in agricultural holdings, the maximum loan amount set by the regional managing authority is EUR 400 000 for natural persons, and EUR 1 million for legal persons. For agri-food enterprises, the maximum loan amount is EUR 5 million. The interest rate applied is EURIBOR +2%, the loan origination fee is capped at 1%, and there is no fee for early repayment. So far, approximately

53 Abanca, Bancopueyo, Bankia, BBVA, Caixabank, Caixa Rural de Salamanca, Caja Rural de Soria, Caja Rural de Zamora, Cajamar, Cajaviva, Eurocaja Rural and Unicaja located in Castilla y León.

54 At the moment of preparing the report, the planned allocation from the regional managing authority is EUR 1.5 million EAFRD resources under sub-measure 8.6.

100 final recipients have benefitted from the guaranteed loan, to a total value of approximately EUR 15 million (based on feedback from interviews).

The total budget from the EAFRD available for the financial instrument in Castilla y León is EUR 24.9 million, of which EUR 24.6 million is dedicated to the agriculture and agri-food sector. The total public expenditures foreseen for the financial instrument (including national/regional co-financing) is EUR 37.4 million, of which EUR 37 million is for the agriculture and agri-food sector[55].

Extremadura will be the next region to launch the implementation of the financial instrument, as it signed an agreement with the Ministry of Agriculture in February 2019 and is currently working on making the instrument operational. The structure for implementation foreseen is similar to that of Castilla y León, whereby the final recipients will be those benefitting from sub-measure 4.1, 4.2, 6.1 and 8.6 of the RDP. A special focus will be given to the bovine sector. EUR 2.3 million of the EAFRD is foreseen to be spent on financial instrument accompanying measure 4 (EUR 3.1 million including co-financing), EUR 1 million on the financial instrument accompanying sub-measure 6.1 (EUR 1.3 million including co-financing), and EUR 500 000 on sub-measure 8.6 (EUR 667 000 including co-financing)[56].

The region of Andalucía joined the EAFRD-EFSI Initiative launched by DG AGRI and the EIB Group, under which a specific regional feasibility study on the needs of financing for agriculture and agri-food sectors was carried out by EIB in the framework of *fi-compass*. The region is also looking forward to setting up a specific financial instrument for its territory, combining the EAFRD with the Juncker plan's resources[57], with a programme modification on the horizon at the time of preparing this report, with initial intentions to introduce EUR 30 million of EAFRD resources for agriculture and agri-food support. Finally, the Basque Country intents to develop its own regional financial instrument.

Importantly, the above regions (the central managing authority, Andalucía, and the Basque Country) benefitted from the specific targeted coaching on financial instruments offered under *fi-compass* with the participation of DG AGRI and EIB experts.

2.3.1.3 Description of the financing market

After years of limited interest in investments in the primary sector, the agriculture sector is now recording increasing attention from financial providers. For years, Spanish agriculture was not regarded as an attractive sector for investment according to financial institutions (as opposed to residential housing or the tourism sector) and the typical family structure of the farms favoured a low recourse to bank credit. In addition, after the financial crisis, the credit market decreased drastically, and caused the entire economy to reduce its overall debts exposure.

However, recently, a growing interest in the primary sector is visible. The share of primary sector credit in the total economic activities in Spain has been growing from 2.2% in June 2012 to 3.9% in December 2018 (Figure 19). In parallel, Spanish agri-food exports were growing rapidly (see section 2.2.1 and Figure 6). The increasing export is the primary reason for the increase in investment in agriculture, which has attracted financial and human capital to the sector. This is accompanied by the collapse of other economic activities, whereby the relative importance of credit to the agriculture sector has increased[58].

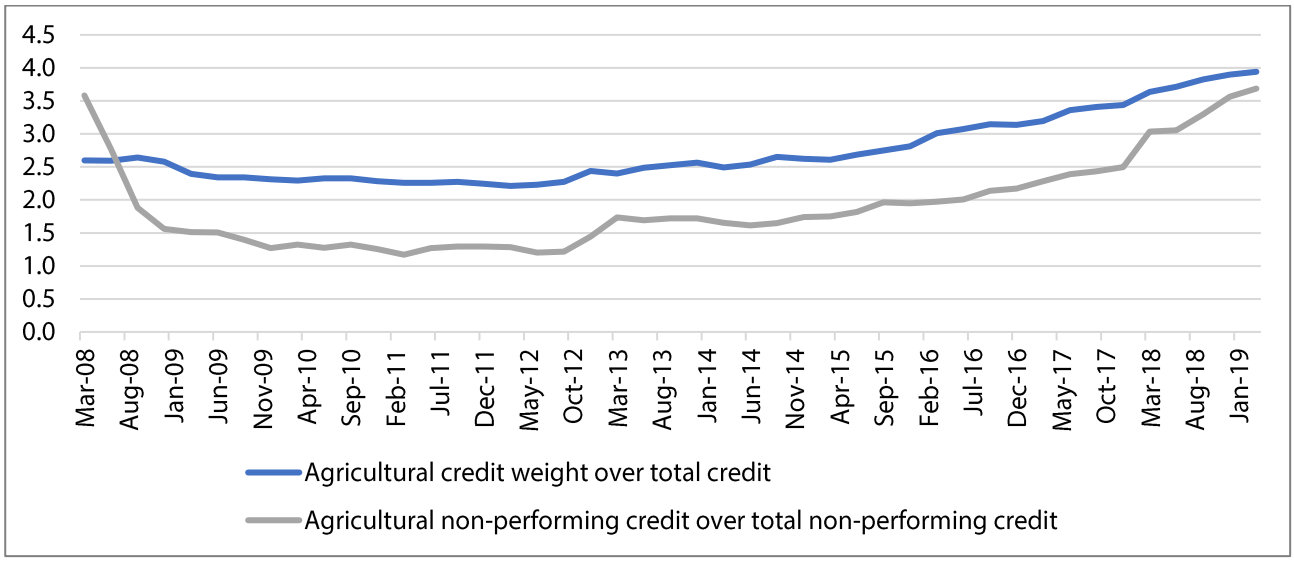
55 Boletín Oficial del Estado, 29 de noviembre de 2017, https://www.mapa.gob.es/es/desarrollo-rural/temas/programas-ue/acuerdofinanciacioncastillayLeón_boe_tcm30-512086.pdf.

56 Boletín Oficial del Estado, 22 de febrero de 2019, https://www.mapa.gob.es/es/desarrollo-rural/temas/programas-ue/acuerdofinaciacionextremadura_tcm30-512146.pdf.

57 *fi-compass*, 2018, Estudio de viabilidad sobre el uso potencial de Instrumentos Financieros en el sector agroalimentario de Andalucía en el periodo de programación para 2014-2020, Final report.

58 Uclés, D, 2017, El comportamiento del crédito agroalimentario en España en: https://www.capeandoeltemporal.com/2017/03/el-comportamiento-del-credito.html.

Figure 19: Spanish agricultural credit weight over total credit, and agricultural non-performing credit over total non-performing credit, 2008-2019, in %

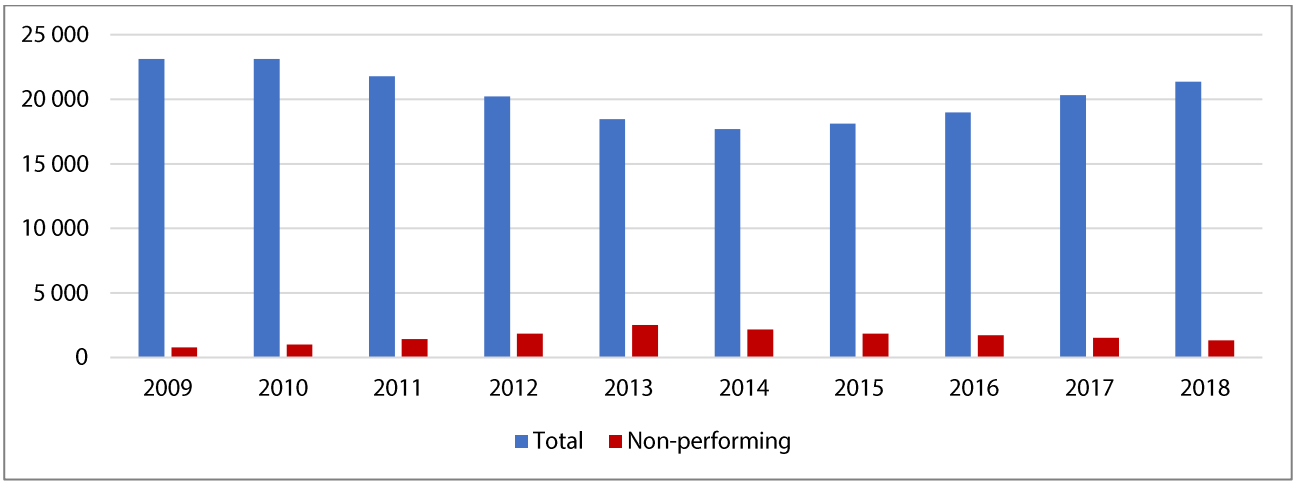


Source: Bank of Spain, 2019.

Credit to the agriculture sector is growing, whereas credit to other economic sectors is decreasing. The Spanish economy is still immersed in the process of deleveraging, the total outstanding loan volumes for all economic activities is decreasing year by year, but the outstanding loan volume to the agriculture and agri-food sectors have been growing since 2015 (Figure 20). At the end of 2018, the credit balance (i.e. the total outstanding loan volume) was EUR 21.3 billion for the primary sector[59] (an increase of 5.1% over 2017, compared to a decrease of 7.3% for all economic activities). MAPA estimated the balance of loans for agriculture, livestock and forestry (Table 5). In this case, for the same time period, the outstanding loan volume was EUR 20.4 billion corresponding to an increase of 5.9% compared to the previous year.

59 Primary sector also includes fishery sector.

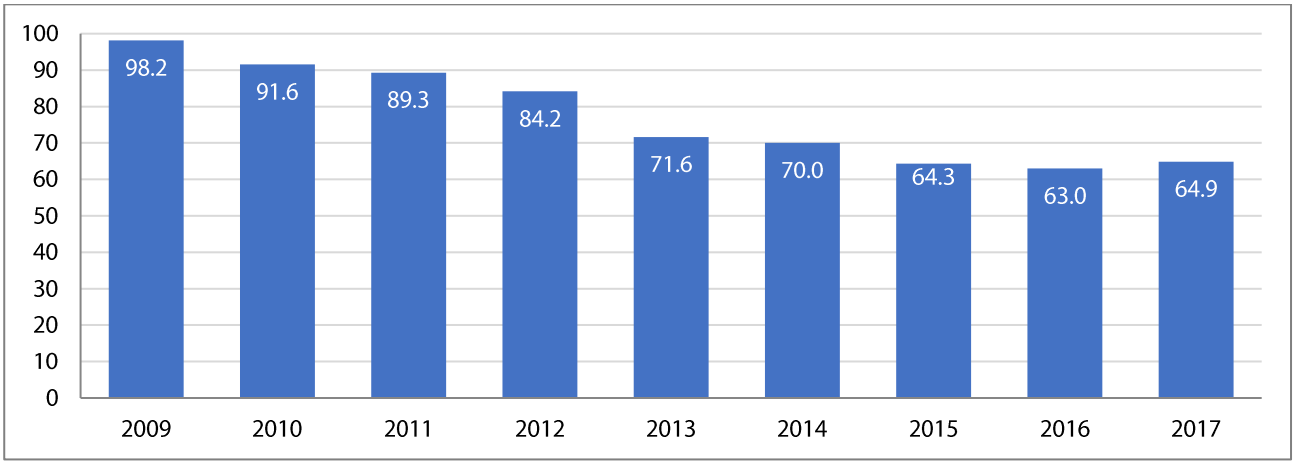
Figure 20: Private credit to the primary sector (agriculture, fishery and forestry) in Spain in 2009-2018, EUR million



Source: Bank of Spain database 2019.

Despite the increase in agriculture lending, the sector's solvency is improving. The relationship between the credit balance in the primary sector and its gross domestic product (GDP) shows a clear downward trend. In other words, despite the fact that credit is increasing, production is increasing at a faster pace (Figure 21). In 2017, the GDP of primary sector was EUR 31.3 billion and the credit balance at the end of the year was EUR 20.3 billion (64.9% of GDP).

Figure 21: Weight of credit to primary sector over primary GDP in Spain, 2009-2017 in %



Source: Bank of Spain and Spanish National Accounts, 2019.

The overall supply trend in Spain means that the agriculture sector is attracting increasing investment capital. Commercial banking is contributing to the expansion of the sector, providing additional finance to it. In addition, over the last year, several investment funds are buying stocks in companies from the sector[60]. However, as the value-added of the sector is growing faster than credit, the sector is improving its solvency position.

Access to finance seems to be a decreasing problem for the agriculture sector, for all activities, besides these considered as being 'entrepreneurial'. The lending provided by the ICO can be considered as a measurement of the

60 La Huerta Digital, 2019, Los fondos de capital riesgo salen de compras la agricultura española, https://lahuertadigital.es/los-fondos-capital-riesgo-salen-compras-la-agricultura-espan%CC%83ola/.

difficulties the various economic sectors face in accessing finance, i.e. a substitute mechanism for commercial banking. According to the MAPA, and the *Informe de financiación en el sector agrario*[61], in 2017, private financial entities continued to normalise their credit offer, which has reduced the overall credit activity of the ICO by 6.7% compared to 2016. This has also affected the agri-food sector" (including the agriculture sector in this case).

In 2017, ICO lending allocated to the agriculture sector was EUR 251.5 million (about 4.9% of the new credit for the year 2017). The majority of the lending was provided for the credit line 'Business and entrepreneurs' (empresas y emprendedores), 91.1% of total credits to the sector. This includes entrepreneurs that are new entrants to the sector as well as entrepreneurs that already have an active business but who changed or expanded their business. Compared to the previous year, total loans for ICO increased by 13.8%. However, the growth only occurred for one of their products, the 'ICO-empresas y emprendedores' (business and entrepreneurs), which grew 23.6%. Credit provided for the other products decreased (Table 5). Unfortunately, it was not possible to differentiate from the data related to the credit provided to new entrants from the credit provide to existing businesses. However, this is still a good indicator that those undertaking innovative activities in the agriculture sector have the most difficulties in accessing finance.

Table 5: Loans and guarantees from ICO credit lines in 2016 and 2017, EUR

	2016			2017			
	Agriculture and livestock	Forestry	Total	Agriculture and livestock	Forestry	Total	Variation %
Business and entrepreneurs	178 577 142	6 801 192	185 378 334	219 279 739	9 928 409	229 208 148	23.6
International	4 644 333		4 644 333	712 000		712 000	-84.7
Exporters	28 099 991	242 263	28 342 254	19 997 056		19 997 056	-29.4
Factoring internal market	1 063 168	1 025 363	2 088 531	740 258	641 256	1 381 514	-33.9
Guarantee	518 978	160 000	678 978	208 000		208 000	-69.4
Total	**212 903 612**	**8 068 818**	**220 972 430**	**240 937 053**	**10 569 665**	**251 506 718**	**13.8**

Source: MAPA and own elaboration, 2019.

The ICO loan distribution by region shows that Andalusia, Catalonia, Castilla y León and Galicia are the regions with the highest credit usage rates for the business and entrepreneurs product line, with a total of 91% of all loans being disbursed to these regions.

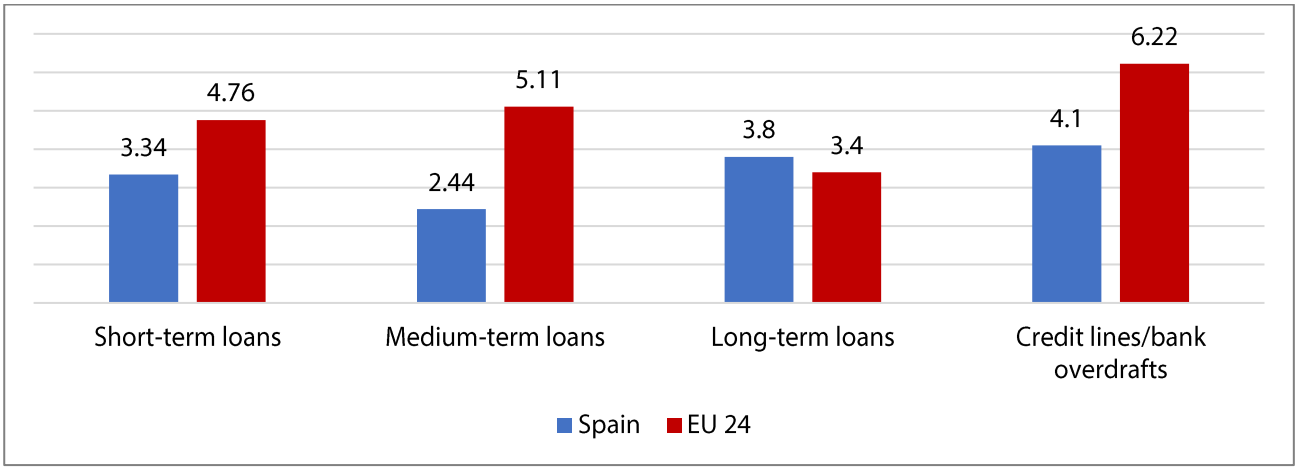
2.3.2 Analysis of the supply of finance

Overall, there is high competition on the Spanish agricultural financial market, and farmers seem to take advantage of this in order to get better conditions for their loans. A growing agricultural output, combined with a

61 MAPA, 2019, Informes sobre financiación agraria en España, https://www.mapa.gob.es/es/ministerio/servicios/analisis-y-prospectiva/Informe.aspx.

large network of commercial banking and other financial intermediaries, results in a competitive market where the interest rates are low. Spanish farmers are aware of this and act accordingly. Half of them (51%) went to more than one bank in order to apply for a loan, compared to 35% for the EU 24. According to the survey, more farmers could negotiate the interest rate for their loans and the repayment period, compared to their EU 24 peers[62]. The Spanish market offers better results for farmers than the European average with regards to interest rates. The interest differentials for every credit term are favourable for Spain, except for long-term loans where the difference is -0.4%, according to the *fi-compass* survey (Figure **22**).

Figure 22: Interest rates paid for credits in Spain in 2017 in %



Source: fi-compass survey.

There are reasons to believe that the collateralisation required from the agriculture sector is higher than that required for other economic sectors. Despite the competition on the agriculture financing market, there are reasons to believe that the collateral requirements are higher for the agriculture sector than for other sectors. The Spanish ex-ante assessment[63] found that the riskier investments, i.e. those involving a greater degree of innovation, have more difficulties in accessing finance than 'regular' investments. This is linked to risk aversion from banks in the aftermath of the economic crisis. In order to finance this type of investment, banks require a higher level of collateral to secure loans. In fact, the ex-ante assessment found that the collateral requirement was in general higher for the agriculture sector than for all other sectors within the economy, both for short and long-term loans. For short-term loans, it was found that the crop sector had 25% less guarantee-free financing compared to the livestock sector, 68% less than the forestry sector, and 84% less than the agri-food industry, including food and beverages. The livestock sub-sector is the second sub-sector with the most collateralisation needed to access financing. It would obtain 58% less unsecured financing than forestry and 79% less than the agri-food industry. With regards to long-term loans, the same risk-based preferences for financiers are maintained, although the gap across sub-sectors is less pronounced. The crop sub-sector still requires a higher degree of collateralisation than the rest, and the risk-free financing guarantees it obtains is 20% lower than in livestock, 46% lower than in forestry, and 55% lower than in the agri-food industry. The livestock sub-sector would get 43% less guarantee-free financing than the forestry sub-sector and 44% less than the agri-food industry.

Over the last few years, the Spanish banking market has significantly changed. On the one hand, the number of entities has been reduced through mergers and takeovers (between March 2009 and June 2019 the number of banks has been reduced by 29.5%) and, on the other hand, the formerly extensive office networks have been adjusting to a new model of fewer but larger offices (number of offices have decreased by 43.9% over the same period).This has also

62 *fi-compass* survey.

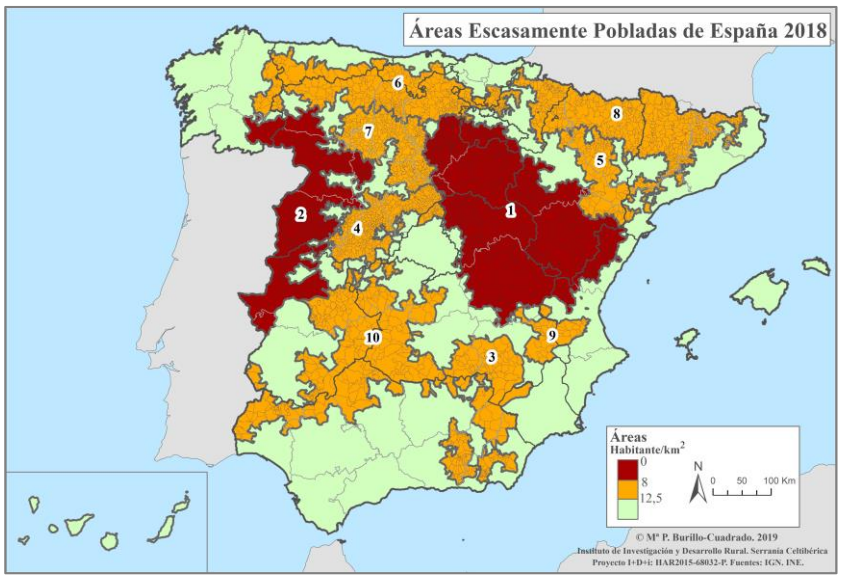
63 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

impacted on the number of employees, which decreased between 2009 and 2018 by 33%[64]. Rural areas have been severely affected by point of service reductions, as in these areas there is not enough population or economic activity to justify maintaining the banks' commercial infrastructure.

Agricultural producers' access to financing may be reduced due to the restructuring of the Spanish banking sector. Spain has traditionally had an extensive network of bank branches. This characteristic of the financial system helped maintaining low levels of financial exclusion and a highly competitive banking market even in rural areas. However, after the 2008/2009 financial crisis, the supply side has been contracting, with fewer banks and fewer branches. Rural areas are now less attractive for large banks and the financial exclusion is growing[65]. This could be a driver of the financing gap in the near future[66].

Thus, a growing problem is taking shape through financial exclusion of the population in rural areas, as the direct access to financial services decreases (except digital applications, but especially among older farmers, this is not widely used), especially for those areas characterised by low economic development. This is a problem for all of Spain, but there are two regions particularly affected by depopulation, one known as the Serranía Celtibérica and which extends over large areas of Castilla y León and Aragon, and the other in the strip next to Portugal, along Extremadura, Castilla-La Mancha and Galicia, see the two red zones in (Figure 23). Naturally, potential financial exclusion is expected to affect mainly entrepreneurs with no possibility of relocating, such as farmers, who are tied to the land they are farming.

Figure 23: Sparsely populated areas of Spain



Source: Celtiberica[67].

Young farmers are a segment that faces particular problems in accessing finance. The first problem is related to the demographics of many Spanish rural areas, especially in the areas identified above as they are scarcely populated. In general, there are not many young people in these areas, as young people migrate to urban areas looking for employment, education and opportunities. This triggers a vicious cycle as less population leads to fewer public and

64 Data from the Statistical Bulletin of the Bank of Spain, 2019.

65 IVIE, 2019, https://www.ivie.es/es_ES/la-poblacion-sin-acceso-una-sucursal-bancaria-municipio-aumenta-34-desde-2008/.

66 Interviews, 2019.

67 Serrania Celtibérica, Las 10 areas escasamente pobladas de la España abandonada deben tener ventajas fiscales, http://www.celtiberica.es/las-10-areas-escasamente-pobladas-de-la-espana-abandonada-deben-tener-ventajas-fiscales/.

private services, and this leads to a diminishing and ageing population left behind. As a consequence, in rural areas where there should be demand for finance from young farmers, there are simply no young farmers asking for financing, leading to a potential under-development of certain rural areas[68].

Several stakeholders interviewed, both from banks and farmers organisations, have pointed out the precarious situation for young farmers trying to obtain financing. As discussed in section 2.2.2, the banks are risk averse after the economic crisis, and this leads them to avoid financing risky investments. Young farmers, often without credit history, and without a proven track record of managing farms, are considered riskier than their older peers. Therefore, banks are sometimes more hesitant to finance this segment, particularly if the farmer has difficulties in providing collateral for a guarantee. Nevertheless, some financial intermediaries offer specialised loan programmes for young people, usually aimed at consumption.

Several banks also propose specific loans for young farmers and for the incorporation of young people into an agricultural activity[69]. There are national and regional programmes which complement EU support for young farmers (see section 2.2.1 for more information).

68 Interviews 2019.

69 These products are announced as a financing for the beginning of the activity, but there are loans that also consider the extension or renewal of an operation. When these loans are offered, the borrower must be between 18 and 40 years old. Some banks sell the possibility of an interest rate subsidy. Sometimes the loans are linked to the existence of a mortgage guarantee, but they are also granted with a personal guarantee. Sometimes the loans are linked to the aid for the installation of young farmers granted under rural development programmes.
Ibercaja: https://www.ibercaja.es/empresas/sectores/sector-agricola/prestamo-jovenes-agricultores/;
Sabadell: https://www.bancsabadell.com/cs/Satellite/SabAtl/Prestamo-Joven-Agricultor/6000026545202/es/;
Liberbank: https://www.liberbank.es/empresas-y-negocios-old/financiacion-y-avales/convenios/prestamo-primera-instalacion-jovenes-agricultores;
Caja Rural del Sur:
https://www.cajaruraldelsur.es/cms/estatico/rvia/crdelsur/ruralvia/es/agrosur/productos/prestamos/jovenes/index.html.

2.4 Financing gap in the agriculture sector

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

Key elements of the financing gap in the Spanish agriculture sector

- The total financing gap of Spanish agriculture for 2017 is estimated to be between EUR 3 billion and EUR 6.4 billion. According to feedback from interviews, the lower boundary estimate might be a good start for discussions.
- About 35% of the overall gap might be attributed to young farmers.
- The largest financing gap is identified for long-term financing (>five years maturity).
- Small-sized farms make up a large share of the overall gap.
- The key constraint in access to finance are: (i) lack of collateral; (ii) lack of credit history; and (iii) an insufficient level of financial literacy amongst farmers.
- Banks risk aversion lead them to be less willing to finance riskier investments, such as those with a high degree of innovation, or those undertaken by young farmers. The effects of the economic crisis cause the Spanish financial institutions to look at the availability of guarantees and the solvency of borrowers.
- Other factors partially explaining the overall gap, are: (i) banking policy capping the amount borrowed to a sector; (ii) lack of water rights by the potential borrower; (iii) and the exclusion from financial services starting to take place in less populated rural areas.
- The segments of the sector with most difficulties in accessing finance are young farmers, in particular new entrants to the sector without access to a family farm or land (which can serve as collateral for loans), and with lack of credit history.

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 financially viable farms with unmet demand X average loan volume

All the calculations are based on the results of the *fi-compass* survey for Spanish 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[70]**.** The unmet demand for finance includes:

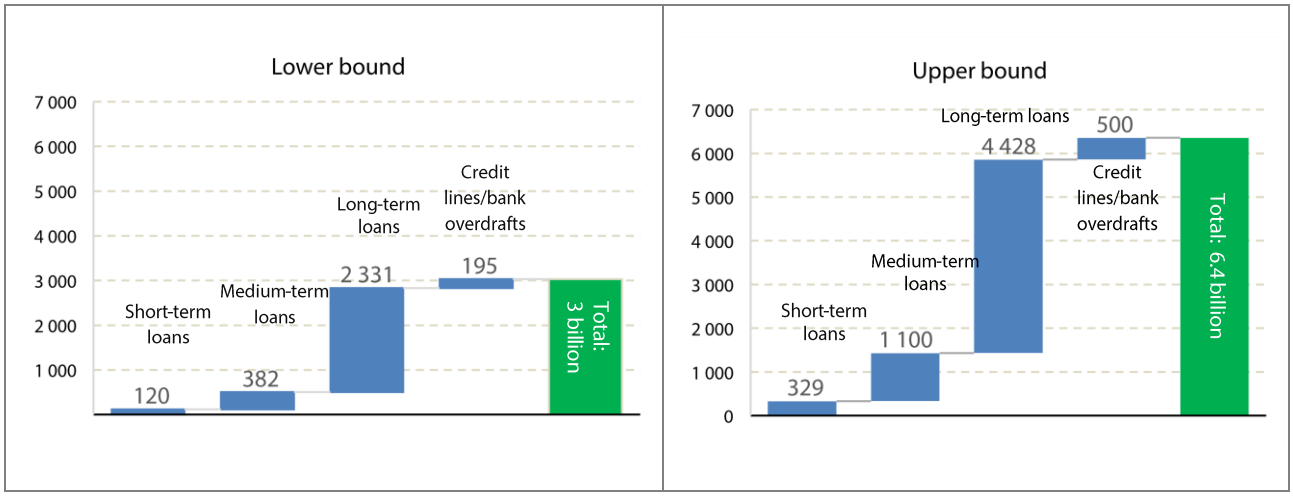
(i) lending applied for but not obtained or
(ii) a lending offer refused by the potential borrower, as well as
(iii) lending not applied for due to expected rejection.

70 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.

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

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

Figure 24: Financing gap by product in the agriculture sector, 2017, EUR million



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

The financing gap for the Spanish primary agriculture sector is estimated to be between EUR 3 billion and EUR 6.4 billion (Table 6). However, the unmet financing needs are concentrated to specific segments of the sector. The financing gap mainly concerns small-sized farms, which is by far the most common farm size in Spain. However, also medium and large-sized farms are found to have important gaps. The type of loans for which the gap is the largest are long-term loans, followed by medium-term loans.

This coincides with the type of loans where high levels of collateralisation are most often requested. The total Spanish financing gap is high compared to that of other Member States (MS), partly explained by the high number of farms in Spain compared to other EU Member States[71].

The Spanish ex-ante assessment for the use of EAFRD financial instruments found an equivalent financing gap between EUR 3.8 billion and EUR 7.6 billion for rural entrepreneurs, including the agriculture, agri-food and forestry sector[72] for the years during the financial crisis (until 2015).

The EAFRD implementation data from 2014 until the end of 2019, as analysed in section 2.2.1, provides evidence on the unmet demand from the agriculture sector for grants finance. In total, farmers have requested support of over EUR 3.5 billion for the two most prominent investment and development sub-measures (4.1 and 6.1), of which EUR 1.55 billion could not be met with the existing budget. This is a clear signal for the existing need of more resources and justifies any future increase of budgets and/or setting up of financial instruments to cover at least part of the unsatisfied and significant demand.

71 A total of 559 160 farms over 2 ha according to Eurostat 2016. Several stakeholders pointed out that the lower boundary might be closer to the actual gap.

72 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

Table 6: Financing gap by farm size and product, 2017, EUR million

		Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Upper bound	Small-sized farms	3 742.6	169.3	662.2	2 680.1	231.0
	Medium-sized farms	1 490.2	79.7	233.9	1 081.4	95.2
	Large-sized farms	1 123.9	80.4	203..6	666.3	173.6
	Total	6 356.7	329.4	1 099.7	4 427.8	499.9
Lower bound	Small-sized farms	1 792.3	61.5	230.1	1 410.8	89.9
	Medium-sized farms	716.5	28.9	81.3	569.2	37.1
	Large-sized farms	518.2	29.2	70.8	350.7	67.6
	Total	3 027.1	119.6	382.2	2 330.8	194.6

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

Even though the agriculture sector is performing well overall, the rejection rate and the share of discouraged farmers are significant. The agriculture sector is performing well overall and investments are growing, mostly due to improved export performance causing firms to invest in expanding production, but also in order to improve productivity and thus reduce production costs. Therefore, the financial needs of the agriculture sector are growing. Also, lending to the sector, and banks' interest in the sector is growing. In addition, low interest rates favour the expansion of the demand for finance. Even so, some elements can explain the existence of a financing gap for the agriculture sector in Spain:

- The rejection rate is still significant, although below the EU 24 average, (confirmed both by the *fi-compass* survey and by the interviews).
- The share of discouraged enterprises is relevant, further aggravated by the high share of farmers seeking financing from friends and family rather than from banks, and it seems to be motivated by a low level of financial literacy in the sector.

The drivers of the financing gap can be identified as the following:

- **The lack of collateral** due to the small size and fragmentation of Spanish farm enterprises. This is a problem for all farms, but particularly for new entrants and young farmers without prior experience and family relationships in the sector to support them, and often with poor access to land. As the effects of the 2008/2009 financial crisis are still being assimilated by the banking system, the Spanish financial institutions give strong importance to the availability of guarantees and the solvency of borrowers.
- **The lack of credit history**, which particularly impacts new entrants. Banks' risk appetite to finance new investments may still be limited as a consequence of the financial crisis.
- **Insufficient level of farmers' knowledge** may also be a problem, especially the lack of knowledge of business management and finance. However, occasionally the lack of professional training is an obstacle for obtaining finance.

Other explaining factors, although probably of more limited relevance for the overall gap, is the banking policy of capping the amount borrowed to a sector, the lack of water rights[73] by the potential borrower, and the financial exclusion starting to take place in rural areas with low population density.

The existence of a gap should not necessarily be understood as a result of a dysfunctional market. In the case of Spain, it is likely to be due to a potential for further expansion, considering the growth of the agriculture sector and the

73 In Spain, the water is property of the state, whereby individuals and businesses obtain rights for the use of water.

positive attitude towards investment shown in recent years. Financial instruments could help the financial sector keep up with the growing demand for finance due to a high investment appetite of the sector.

Approximately 35% of the overall gap could be attributed to young farmers. Between 55% and 76% (depending on the maturity of the loan applied for) of the rejected and viable loan applications came from applicants below the age of 41. Similarly, between 20% and 24% of the discouraged applications were from young farmers. Using this information to provide a different break down of farms with constrained access to finance, the financing gap for young farmers is estimated to be between EUR 1.3 billion and 2 billion. The fact that young farmers represent a large part of the gap can be explained by the high entry barriers for young farmers and new entrants, as described in previous sections.

Several interviewees pointed out that there is a perceived problem of access to finance for young farmers who enter farming without land. The high investment needed for a farm with a commercial future and the problems of access to land and guarantees are pointed out as the main barriers. Furthermore, the lack of credit history constitutes an obstacle.

Over the coming years, the evolution of the financing gap is expected to depend on various forces. There may be an increase of demand due to the ongoing farm and land market consolidation process. Spain is dominated by small-sized farms which are going through structural changes, leading to an increased demand for investment. At the same time, the strong export growth, which has fuelled investment and demand for finance in recent years, seems to be slowing down. Therefore, financing demand linked to export growth may decrease in the coming years. At the same time, the demand for grants finances for investments remains much above what is available. Furthermore, it is possible that the agriculture sector decreases its level of attraction to financial institutions in the future as other economic sectors from the Spanish economy are recovering, and thus, attracting more resources from the financial market, at the expense of the agriculture sector. Also, the impacts from the COVID-19 pandemic on both the agriculture sector and the bank sector will be significant, although at the time of writing it is too early to draw conclusions on the exact impact on the access to financing for the agriculture sector. In any case, the available finance on the market is not enough to cover the current needs.

2.5 Conclusions

The agriculture sector in Spain benefit from a growing investment trend. The agriculture sector is Spain is performing well overall and investments are growing, mostly due to improved export performance causing firms to invest in expanding their production, but also in order to improve productivity and thus reduce production costs. Furthermore, lending to the sector and banks' interest in the sector is growing. In addition, low interest rates favour the expansion of the demand for finance.

Even so, a financing gap for the agriculture sector in Spain was estimated to be between EUR 3 billion and EUR 6.4 billion. According to interviews, the gap might be overestimated, and the lower boundary gap might be closer to the current market situation. However, no interviewed stakeholder questioned the existence of a financing gap.

Most of the gap is due to the constraints in access to finance for small-sized farms. The largest part of the gap is for long-term financing. Also, young farmers and new entrants to the sector are considered to have difficulties in accessing finance.

The lack of access to collateral, particularly land, lack of credit history, and a low level of financial literacy, as well as professional agricultural training, are the main drivers of the gap. The lack of collateral particularly affects small-sized farms, with low levels of assets, and young farmers/new entrants with limited access to collateral or who depend on their parents to act as guarantors. The poor access to land by new entrants also explains the lack of access to collateral. Furthermore, the lack of credit history further complicates the access to finance of new entrants. In addition, the level of financial literacy amongst the agriculture sector in Spain is generally considered to be low, leading both to problems in preparing adequate business plans when applying for a loan and potentially discourages some farmers from applying from bank financing altogether. The level of private financing from family and friends of the agriculture sector in Spain is high compared to the EU 24. Potentially, this is a further signal of the lack of financial knowledge amongst the agriculture sector, and that the additional demand for bank finance could be high.

Other factors affecting the overall gap only to limited extent include: **banking policy with sub-sector lending caps, the lack of water rights by the potential borrower, and the financial exclusion** starting to take place.

The EAFRD implementation in 2014-2019 shows that the investment demand by farmers significantly overtakes the available grant budgets. By the end of 2019, farmers and young farmers had requested grants of a total amount of more than EUR 3.2 billion for on-farm investments and start-up activities of young farmers, of which EUR 1.5 billion was beyond what the regional RDPs' budgets could offer. Demand for investment grants is very high and cannot be satisfied only by the available grant resources under the regional rural development programmes.

A guarantee instrument was set-up in a centralised manner by the Ministry of Agriculture, financed through the EAFRD. It is available to all regional administrations. So far Castilla y León and Extremadura have signed agreements with the ministry, and the former has already launched the instrument to its agriculture and agri-food sectors. Other regions are currently modifying their RDPs in order to join and the ex-ante assessment has been extended to cover 8 regions in total.

Additional implementation of financial instruments throughout the country could help the financial sector to keep up with the growing demand for finance due to a high investment appetite of the sector.

The following recommendations could be considered for the planning of new financial instruments:

- The main constraints to access to credit relate to risk management and asymmetrical information (lack of collateral and lack of credit history). These elements are the focus of the recently set-up guarantee financial instrument to support the sector. Considering the high level of liquidity and the low interest rates in the market, for potential new instruments, guarantee instruments should be preferred over loan instruments.
- Efforts could be focused on facilitating access to finance for small-sized farms and young farmers/new entrants. Although the potential focus on small-sized farms should not lose sight of the fact that the trend towards large-sized farms continues.

- Considering the high share of farmers requesting finance from private individuals, a specific instrument for micro-finance (under the EAFRD) might be considered.
- More assessments of needs at regional level are needed to ensure a greater outreach of any new centralised financial instrument supported by the EAFRD. The new post-2020 legal basis will allow the set-up of diverse schemes that can benefit the aforementioned target groups (young farmers, start-ups, small farmers). These could cover working capital finance, counter-guarantees, combinations between financial instruments, grants and/or interest rate subsidies, including through a single operation.
- To further enrich the knowledge on the potential from using EAFRD financial instruments, analyses on the usefulness of equity funding for specific sub-sectors could be undertaken, in particular areas where digitisation and innovation are growing alongside green investment finance.
- Financial exclusion is a growing problem affecting rural areas where there is a risk of depopulation. Promoting banking activity and presence in the most remote rural areas could be one of the objectives of the financial instruments.
- Since lack of knowledge and financial literacy amongst farmers seems to be a major constraint, financial instruments could be combined or complemented by training in business management and finance for farmers, including help with the completion of loan application forms, creation of business plans etc., especially in view of the trend towards larger, more professional farms.
- Given that access to land is complicated in some territories due to its fragmentation, it may be relevant, within the framework allowed by the EU legislation, to allow land purchase and land renting as eligible actions within the focus of financial instruments.
- Spain is going to be one of the countries hardest hit by climate change, or one that will cause rain fed production to suffer high rates of abandonment. Spain's agriculture future depends on irrigation, but it will only be sustainable with the following production conditions; extension, efficiency and the improved use of technologies, which will require strong investments in the transformation of current irrigation systems. This needs to be taken into consideration when developing tools to further facilitate access to finance.

3. PART II: AGRI-FOOD SECTOR

3.1 Market analysis

Key elements on the Spanish agri-food sector
• In 2017, the agri-food sector accounted for 2.9% of the Spanish GVA, equivalent to EUR 30.3 billion. • Meat processing and beverages are the main sub-sectors in terms of turnover and exports. • More than 55% of the turnover for the agri-food sector stems from only four regions: Catalonia, Andalusia, Castilla y León, and Comunidad Valenciana. • There are 31 393 companies in the Spanish agri-food sector, employing almost half a million people. The economic crisis before 2015 led to a reduction of the number of enterprises. • More than 99% of the sector is made up of small-sized companies (< 50 employees), only 0.2% of the agri-food businesses are classified as large (> 250 employees). • The average turnover by establishment is EUR 4 million. • The trade surplus of the Spanish agri-food sector is EUR 6.6 billion, Catalonia being the leader of the Spanish agri-food exports.

The agri-food sector is the biggest manufacturing sector in Spain. In 2017, the agri-food sector accounted for 2.9% of the Spanish GVA, being the leading manufacturing sector ahead of the automotive sector (1.1%). The value added of the production for the same year was EUR 30.3 billion, and the sector is responsible for almost half a million jobs. In real value, the production has grown significantly over the last years, by 3.2% between 2016 and 2017, but has not yet reached the 2010 level, which was the peak of the previous expansive phase[74]. In 2016, the productivity of the sector, measured in value added per hour worked, was practically the same as the European average (32.7 EUR/hour and 99.4% of EU 28 average), very close to that of Italy, but also well below that of Ireland (249%) or the Netherlands (223.1%)[75]. More than 99% of the sector is made up of SMEs, only 0.2% of agri-food businesses are classified as large.

Production is driven by the sub-sectors of meat processing and beverages. Meat processing, preservation and the preparation of meat products is the most important sub-sector in terms of turnover. Together with beverages, they accounted for 36% of the total turnover of the agri-food sector. In terms of gross margin, however, it is the beverage industry that contributes the most at 25.4%, followed by the meat branch at 16.2%[76]. Other important sub-sectors are manufacture of other food products at 10.9% of the turnover, the manufacture of animal feed products at 10.5%, and manufacture of vegetable and animal oil and fats, mostly olive oils at 10.3%.

More than 55% of the turnover is accounted for by only four regions. Catalonia, Andalusia, Castilla y León and Comunidad Valenciana are responsible for 48.8% of the number of establishments, 55.6% of the turnover, 53.3% of the employment and 53.8% of the investments in fixed assets. The average turnover by establishment is EUR 4 million, but there are three regions that stand out for having much larger-than-average companies: Catalonia, Navarre and Murcia[77]. On the other hand, the regions in which the agri-food sector is most relevant in relation to its weight in the total industrial sector are Castilla y León, Galicia, Castilla La Mancha, Comunidad Valenciana and Andalusia.

The number of companies has grown quickly over the past two years. In 2018 there were 31 393 companies in the agri-food sector in Spain, of which 82% belonged to the food industry, 17.8% to the beverage industry and 0.2% to the tobacco industry. The main sub-sectors in terms of employment are the manufacture of bakery wares and pasta

74 INE, 2019, Spain National Accounts.
75 Eurostat, 2019, Structural business statistics.
76 INE, 2019, Structural business statistics.
77 INE, 2019, Structural business statistics.

at 18.8% of the total agri-food companies, followed by the manufacture of beverages at 8.9% and by processing and preserving of meat at 6.2%[78]. The number of companies is lower than the 2008 figure, as the Spanish economic crisis had a strong impact on the agri-food industry, stronger than for other sectors of the economy. 10% of the companies went bankrupt due to the crisis. However, the sector has now almost recovered, showing a significant increase in the number of enterprises in the last few years.

In 2018, the trade surplus of the Spanish food and beverage industry was EUR 6.6 billion, EUR 30.6 billion for exports compared to EUR 24.1 billion for imports, with a growing trend since the beginning of this decade. Processing and preserving of meat products was the main exporting sub-sector at 22.2% of exports in 2018, followed by manufacture of vegetal and animal oils and fats at 14% and manufacture of beverages at 13.9%. By regions, Catalonia is the main exporter with 26.8% of Spanish international sales. Together with Andalusia at 16.3% and Galicia at 8.8%, these three regions accounted for 52% of the exports of the Spanish food, beverages and tobacco industry in 2018.

78 INE, 2019, Central Directory of Companies.

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

This section describes the drivers of demand for finance in the agri-food sector and analyses the met and unmet demand. It seeks to identify the main reasons for agri-food enterprises to request financing and the agri-food sub-sectors showing the largest need for finance. The section also provides an analysis of the type of enterprises which face more constraints in accessing credit. The examination of the demand for agri-food finance is based on the findings from Agri-food survey results of 197 Spanish enterprises, as well as interviews with key stakeholders in the agri-food sector combined with national statistics.

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

- Since 2013, investments have been increasing, the GFCF was EUR 11.0 billion for year 2017.
- The increase in sales (mostly driven by exports) of the food and beverage industry may partly explain the investments undertaken and the demand for credit.
- In 2018, 64% of Spanish agri-food firms applied for loans, the highest share of all EU 24 countries, and 18% higher than the EU 24 average.
- The Spanish agri-food sector borrowed mainly to invest in the expansion of installed capacity (63%), in working capital (48%) and to develop new products (22%).
- The manufacturing of beverages and the processing of meat are the sub-sectors with the highest estimated financial needs according to the current level of liabilities.
- The manufacture of beverages and manufacture of grain mills are the least indebted sub-sectors, whilst olive oil production has the highest level of indebtedness (based on liability to asset ratio).
- The unmet demand for the Spanish agri-food sector is estimated at EUR 805.5 million.
- The EAFRD grant support provided for agri-food processing amounts to EUR 1.2 billion for the period 2014-2019, while the total support requested by processors amounted to more than EUR 2.4 billion.
- According to the Agri-food survey, the rejection rate for loan applications is 10% higher than the rejection rate of SMEs from other economic sectors.
- 4% of the companies did not apply for a loan due to the fear of being rejected.
- The main reasons for rejection of loan applications are: (i) lack of collateral; (ii) existence of other debts that increase the company's risk; and (iii) lack of credit history, particularly affecting young entrepreneurs and start-ups.
- Banks' lending conditions, their lengthy assessment and approval procedures, as well as lack of knowledge may explain why agri-food enterprises are discouraged from applying for credit.
- In general, banks are reluctant to finance start-ups due to risk considerations.
- The supply of credit for R&D in the agri-food sector is considered insufficient, because it is associated with high risks.

3.2.1 Drivers of the demand for finance

Since 2013, investments in the agri-food sector have increased significantly. As could be seen for the agriculture sector, the economic crisis had a severe impact on the investments undertook by the sector, causing a sharp decrease of investments between 2008 and 2009, and it took until 2013 until the investment levels started increasing. By 2017, the GFCF was EUR 11 billion. Investments in machinery and equipment and in tangible assets made up the lion-share of the total investments (Table 7).

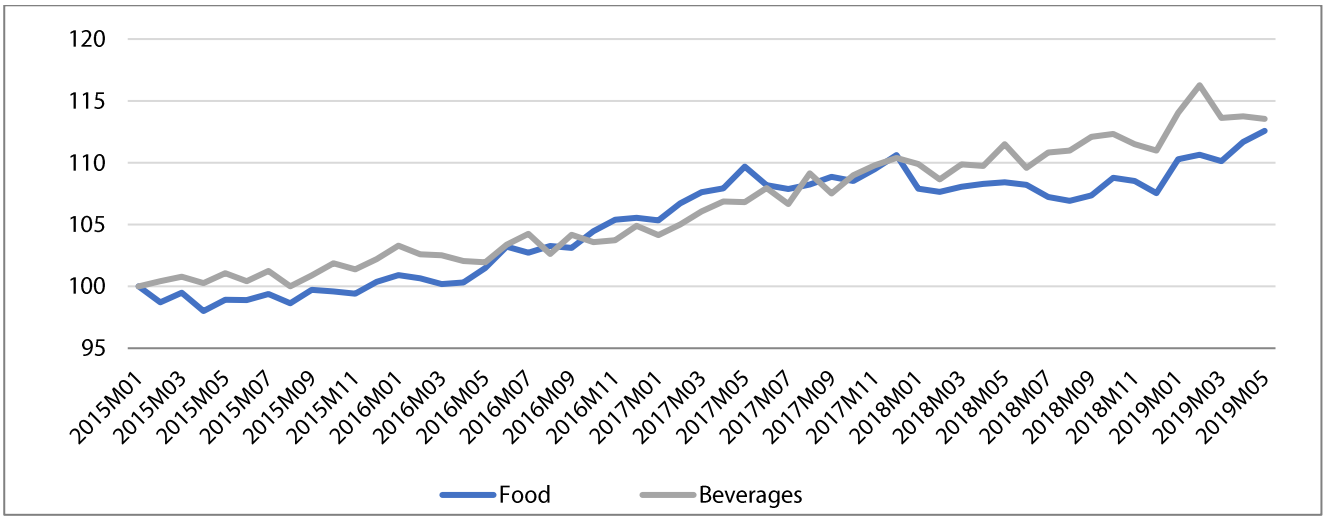
Table 7: Gross Investment in the Spanish agri-food sector, 2008-2017, EUR million

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gross investment in construction and alteration of buildings	1 209	730	713	711	533	525	631	513	561	654
Gross investment in existing buildings and structures	182	53	71	90	88	84	54	156	202	254
Gross investment in land	272	213	209	145	203	224	248	202	251	231
Gross investment in machinery and equipment	4 718	3 340	3 329	3 640	3 226	2 909	3 247	3 809	3 851	4 381
Gross investment in tangible goods	6 381	4 335	4 321	4 065	4 049	3 742	4 180	4 680	4 865	5 521
Total	**12 761**	**8 671**	**8 642**	**8 651**	**8 098**	**7 484**	**8 359**	**9 360**	**9 730**	**11 042**

Source: Eurostat, Structural Business Statistics, 2019.

Increasing sales as an explaining factor to the increase of demand for finance. The increase in sales of the food and beverage industry may partly explain the increase of demand for credit by the sector as a whole, as the sector has been looking to expand to capitalise on potential increasing market shares. Over the last few years, the turnover index calculated by the Statistic National Institute (INE) has maintained an upward trend (Figure 25), and has grown by more than 13% since 2015. The food industry had a period of stagnation during 2018, but quickly moved on in the early months of 2019. The beverage industry on the other hand, has maintained a more stable pace of growth throughout the post-crisis period.

Figure 25: Turnover index by food industry and beverage industry in Spain, 2015-2019. Index, January 2015=100

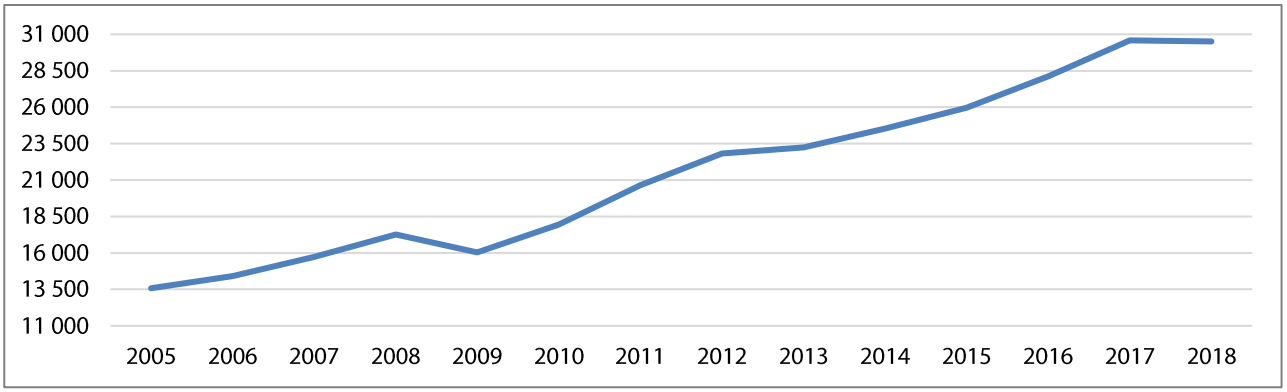


Source: INE, 2019.

Increasing exports has been an important driver of the credit demand growth by the agri-food sector. Total sales and exports are naturally interlinked concepts but increasing the sales on export markets require more investments by the company in order to analyse the market and adapt the products to new markets, compared to expanding sales on the domestic market. It may also require additional costs linked to personnel with a specific expertise in the new

market. Therefore, the increasing exports of the sector is an important explanatory factor behind the increasing investments undertaken by the sector over the last few years (Figure 26: Evolution of exports by Spanish companies in the food and beverage industry, EUR million.

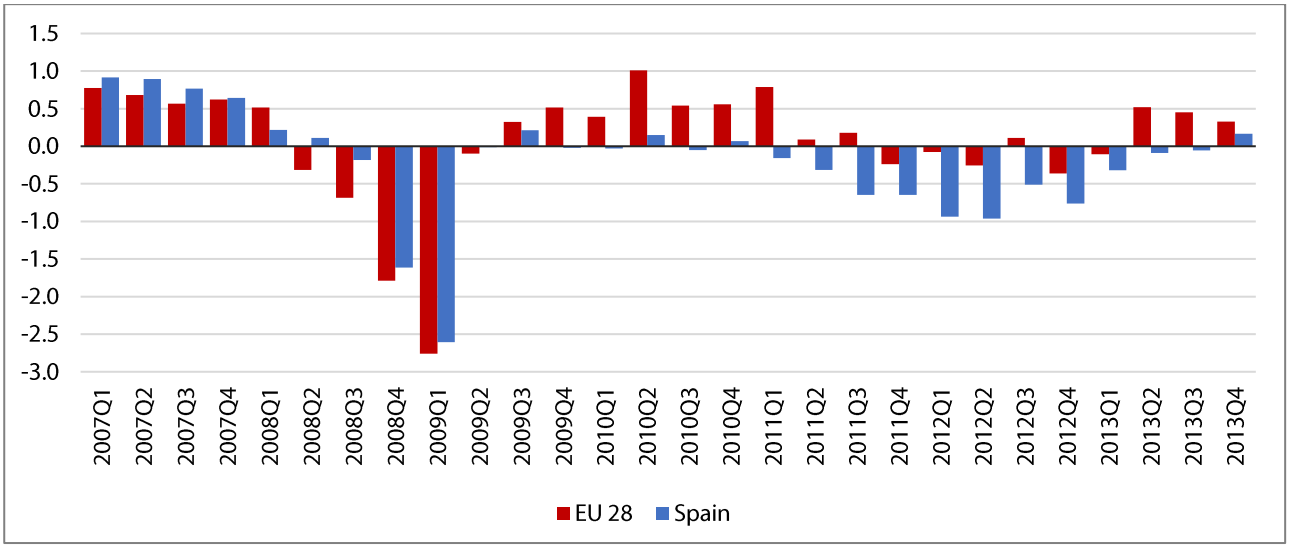
Figure 26: Evolution of exports by Spanish companies in the food and beverage industry, EUR million



Source: DATACOMEX, 2019.

As already discussed, the Spanish economic crisis lasted longer than anticipated and affected the economy in a more profound manner than in the case for most other European countries (Figure 27)[79]. Domestic demand suffered a sharp decline and the price attribute became essential when completing the household shopping basket. This led all agents in the food production and distribution chain to reduce their margins. Therefore, the export route became an outlet for production surpluses and a source for improving profits. This explains the increase in Spanish food exports after 2009[80].

Figure 27: Evolution of the GDP of Spain and the EU 28 during the past crisis (quarterly variation rates)



Source: Eurostat, 2019.

79 The Spanish economy was in recession for 16 quarters, whilst that of the EU 28 was in recession for 10 quarters. The unemployment rate in Spain reached 26.9%, whilst that of the European Union did not exceed 11.5%.

80 Maudos, J., 2018.

According to feedback from the interviews, the food, beverage and tobacco industry in Spain seek export credit, insurance and export and investment guarantees. The Spanish meat sector, which is the most important sub-sector both in terms of sales and exports, carries out a bi-annual survey whereby information is asked about the exports[81]. According to the latest reports from early 2019, 79.7% of the meat processing establishments are currently exporters and of these, 60% advised they would continue to increase their international sales in 2019.

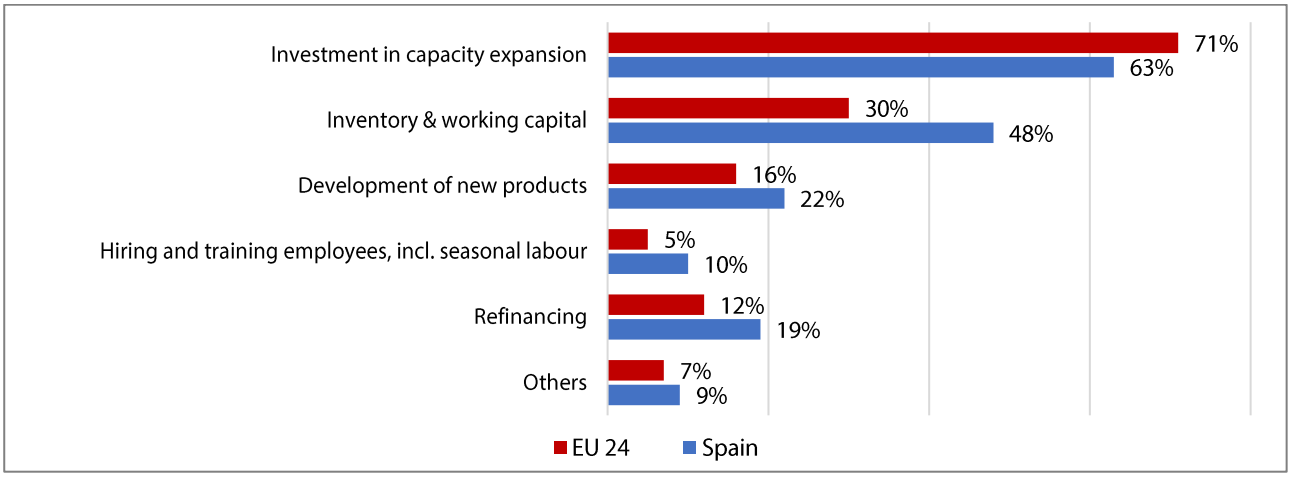
In the medium-term, exports as a driver for credit demand will continue to be important. Despite the uncertainty that Brexit represents for the Spanish agri-food sector as a whole, the food, beverage and tobacco industry is diversifying its markets and will therefore need financing for these operations. Furthermore, in the specific case of pork processing, Spain can take advantage of the problem of the spread of African Swine Fever affecting Southeast Asia and Eastern Europe to increase its sales in that part of the world.

The growth and development of the sector is also reflected in the purpose of the financing requested. According to the Agri-food survey (Figure 28), the Spanish agri-food sector borrowed mainly to invest:

- in the expansion of installed capacity, 63%, although below the EU 24 average;
- in working capital and inventories, 48%, above the EU 24 average;
- additionally, 22% of the ones applying for credit did so for the purpose of developing new products; and
- 10% for the purpose of hiring and training employees.

Overall, this points to a demand for modernising and developing the sector, and for adapting products to the export markets. The preferential interest rate environment, with low interest rates for the time being, has led 19% of the respondents to ask for refinancing of existing loans.

Figure 28: Purpose of bank loans in the agri-food sector in 2018



Source: Agri-food survey.

The Spanish agri-food sector is investing strongly, and further investments in fixed assets can be expected to continue, thus sparking additional demand for credit. Although the 'cooling' of the European economy seems to be more intense than initially expected, comparing year 2019 to year 2018, the agri-food companies continue to have a high investment rate. This is reflected both in the growth of banks' lending and by the Agri-food survey results, according to which Spanish' agri-food companies are the most frequent borrowers in the EU 24 (see Figure 29 and the analysis in section 2.2.2). Data does not exist to foresee potential changes for the future for the sector as a whole. However, if using the meat sector survey as a reference for the full sector[82], significant investments in fixed assets over

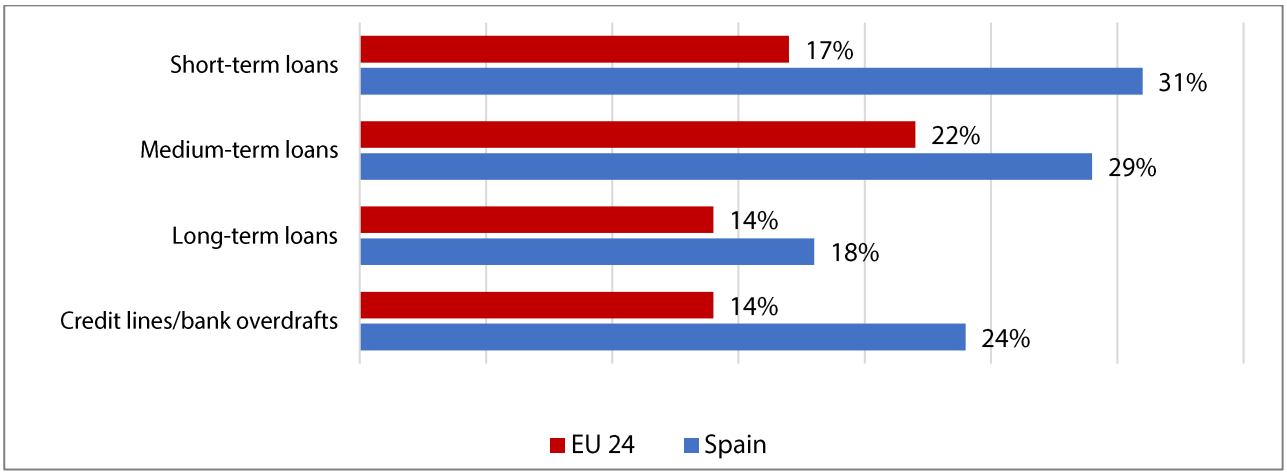
81 ANICE-Cajamar Barometer of the Spanish Meat Industry.

82 Again referring to the ANICE-Cajamar Barometer of the Spanish Meat Industry.

the coming years can be expected. According to this survey, the percentage of use of the installed capacity of the sub-sector stands at 76.8%, with 19.5% of companies with an occupancy level of between 91% and 100%. This means that if the growth expectations of the companies are met, many of them will be forced to invest in their fixed assets in order to increase their productive capacity.

The competitive pressure of the agri-food sector in Spain will likely cause companies to continue demanding short-term financing. It is very likely that the demand for working capital or short-term financing will continue its upward trend in Spain. The demand for credit lines and for short and medium-term financing is already higher for Spain than for the EU 24 average (see Figure 29 and the analysis in section 2.2.2).

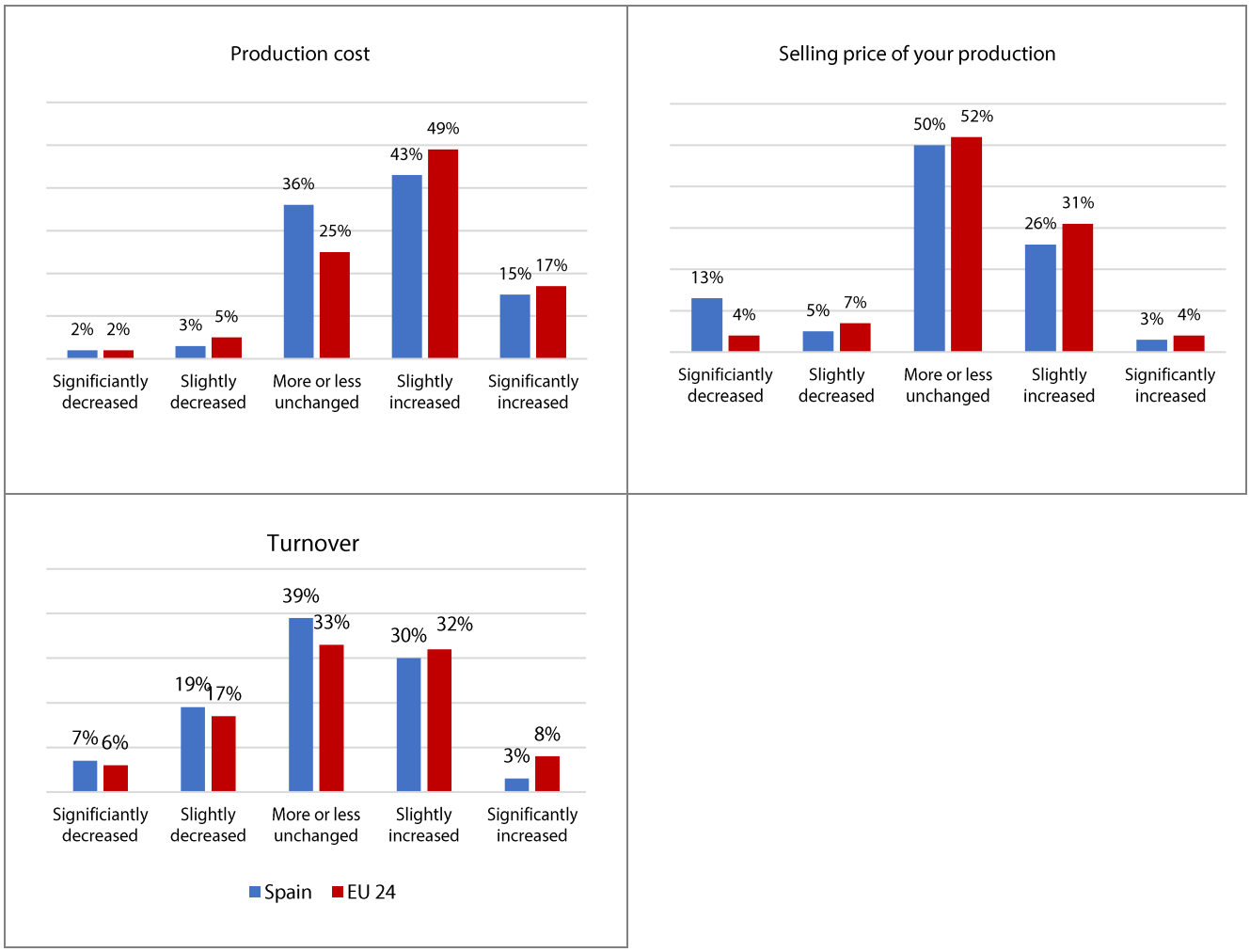
Figure 29: Spanish agri-food enterprises applying for finance in 2018, by financing product



Source: Agri-food survey.

Additionally, according to the Agri-food survey, companies are under strong competitive pressure on the domestic market. In Spain, only 29% of companies were able to increase their sales prices, whilst production costs increased for 58% of them, which implies an increasing pressure on profit margins, hence potentially leading to additional demand for short-term financing (Figure 30).

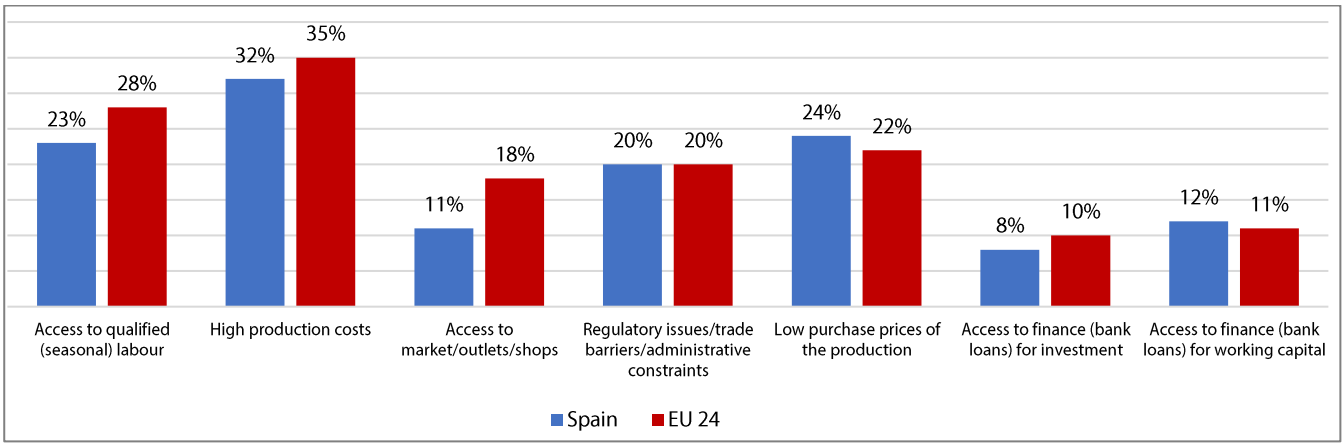
Figure 30: Changes in key economic indicators of agri-food enterprises in 2018



Source: Agri-food survey.

The high cost of production and the low sales prices are also indicated as the most significant difficulties experienced in 2018 (Figure 31). Difficulties related to access to finance for investment (8%) and working capital (12%) are generally in line with the EU 24 average, see discussion under section 2.2.2 on this topic.

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



Source: Agri-food survey.

CAP, and in particular EAFRD support, plays a positive role for the agri-food sector. In this context, the sector-specific RDP sub-measure 4.2 Support for investment in processing/marketing and or development of agricultural products, which has been programmed by all Spanish regions, is key. For the period 2014-2019, in total EUR 1.2 billion was provided under the 70 grant calls for applications under all regional rural development programmes including the National framework programme (see Table 8). In total, 6 879 grant applications were submitted for support, of which budget was only available for 3 550 of them. A total financial demand of at least EUR 2.4 billion has been registered under the sub-measure, of which at least EUR 1.2 billion has not been satisfied. In the next four years more resources under the sub-measure will be further distributed across all of Spain, as the programmes are not yet financially exhausted.

Table 8: Data on the implementation of sub-measure 4.2 in the Spanish 17 regional RDPs and National framework programme under the EAFRD, 2019

Regions	Number. of calls for applications	Total budget under all calls for applications (EUR million)	Number of received applications	Total budget requested by all submitted applications (EUR million)	Number of approved and supported applications	Total budget committed (EUR million)	Total requested budget not being supported (EUR million)
Sub-measure 4.2							
Spain – National Framework Programme	4	146.9	158	211.4	29	100.6	64.5
Spain – 14 regions	53	968.0	6 017	2 080.4	2 942	762.2	1 112.5
Spain – 3 regions*	13	94.6	704	n.a.	579	68.6	n.a.
Spain – 17 regions and National	70	1 209.5	6 879	n.a.	3 550	931.3	n.a.

Source: Spanish regional managing authorities, 2020.

** Includes the regions of Asturias, Canarias and Valencia.*

*Note: The total amount requested is calculated based on all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not allowing their evaluation, and/or with insufficient value-added, and/or ranked at a place for which budget under the call has not been anymore available*Analysis of demand for finance.

3.2.2 Analysis of the demand for finance

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

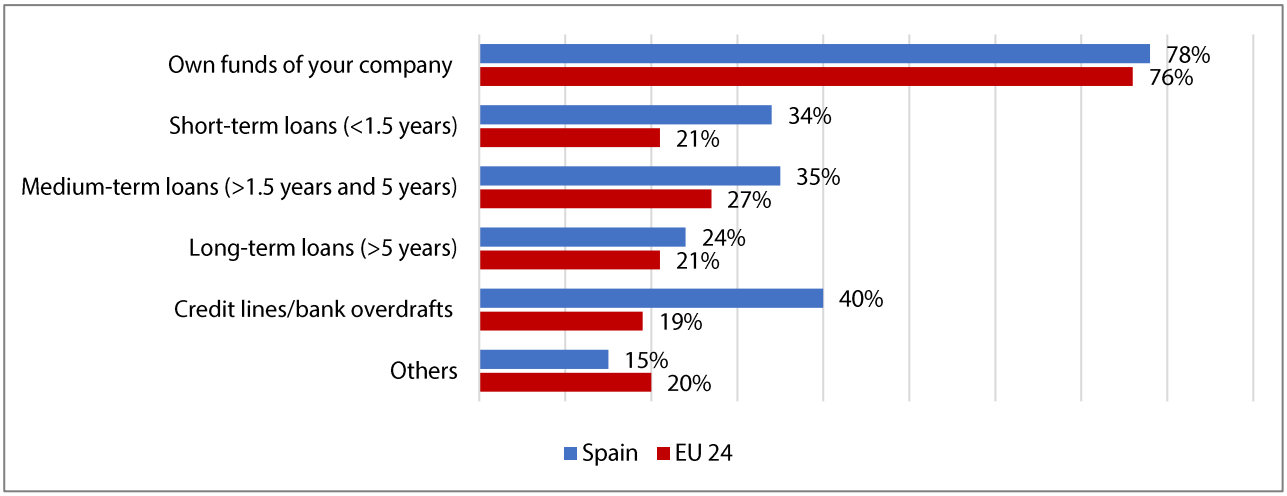
Based on the Agri-food survey, the unmet demand for the agri-food sector in Spain is estimated at EUR 805.5 million.

Own sources are the most important source of financing for the agri-food sector. The Agri-food survey data shows that own funds are indicated as the most important source of finance by 78% of agri-food enterprises, in line with the EU 24 average (Figure 29).

Even so, the Spanish agri-food sector has the highest share of applicants for credit amongst the EU 24 countries. According to the Agri-food survey, in 2018, 64% of the surveyed companies asked for a loan in the year prior to the interview, which is the highest figure amongst the 24 countries who took part in the survey, and significantly higher than the EU 24 average of 46%.

From the bank products, demand for medium-term loans was the highest, but the relative importance of all loan maturities was fairly evenly distributed (Figure 32). According to the ex-ante assessment, the uptake of loan products according to the survey carried out was; 36% of the firms held loans with a maturity of less than one year; 29% of the loans held had a maturity of one-five years; 35% of the loans held had maturities of more than five years. These figures relate to the food industry, the beverage industry had a higher share of long-term loans at 50%. Overall, the ex-ante assessment for the use of EAFRD financial instruments noted that the long-term lending had decreased since 2014[83].

Figure 32: Most important financing instruments to agri-food enetrprises in 2018



Source: Agri-food survey.

Average debt levels of Spanish agri-food companies range between EUR 1.3 million for small-sized firms and EUR 119 million for large-sized firms[84]. In 2017, according to Iberian Balance Sheet Analysis System (SABI)[85], the average debt for an agri-food company was EUR 4.1 million. However, there are variations depending on the size of the companies. Large-sized companies (250 or more employees), had an average debt of EUR 119.1 million; medium-size companies, from 50 to 249 employees, had an average debt of EUR 17.9 million, and small-sized companies, of less than 50 employees, had an average debt of EUR 1.4 million (Table 9). 32% of the debts has a maturity of more than one year (considered as long-term according to the dataset of SABI). The remainder of 68% are for short-term maturities, including 30% of credit from suppliers.

83 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

84 For the analysis of the met demand for financing of companies in the food, beverage and tobacco industry, data has been used from the SABI (Iberian Balance Sheet Analysis System) database. This is a sample of 12 909 companies that present their accounts in the Spanish trade registers, whose main activity belongs to divisions 10, 11 or 12 of the CNAE-2009 (National Code of Economic Activities). This information has the limitation that it does not consider the data of companies that do not have the obligation to present their balance sheets to the Mercantile Registry, although these companies are usually small and in the legal form of an individual entrepreneur.

85 Iberian Balance Sheet Analysis System (SABI).

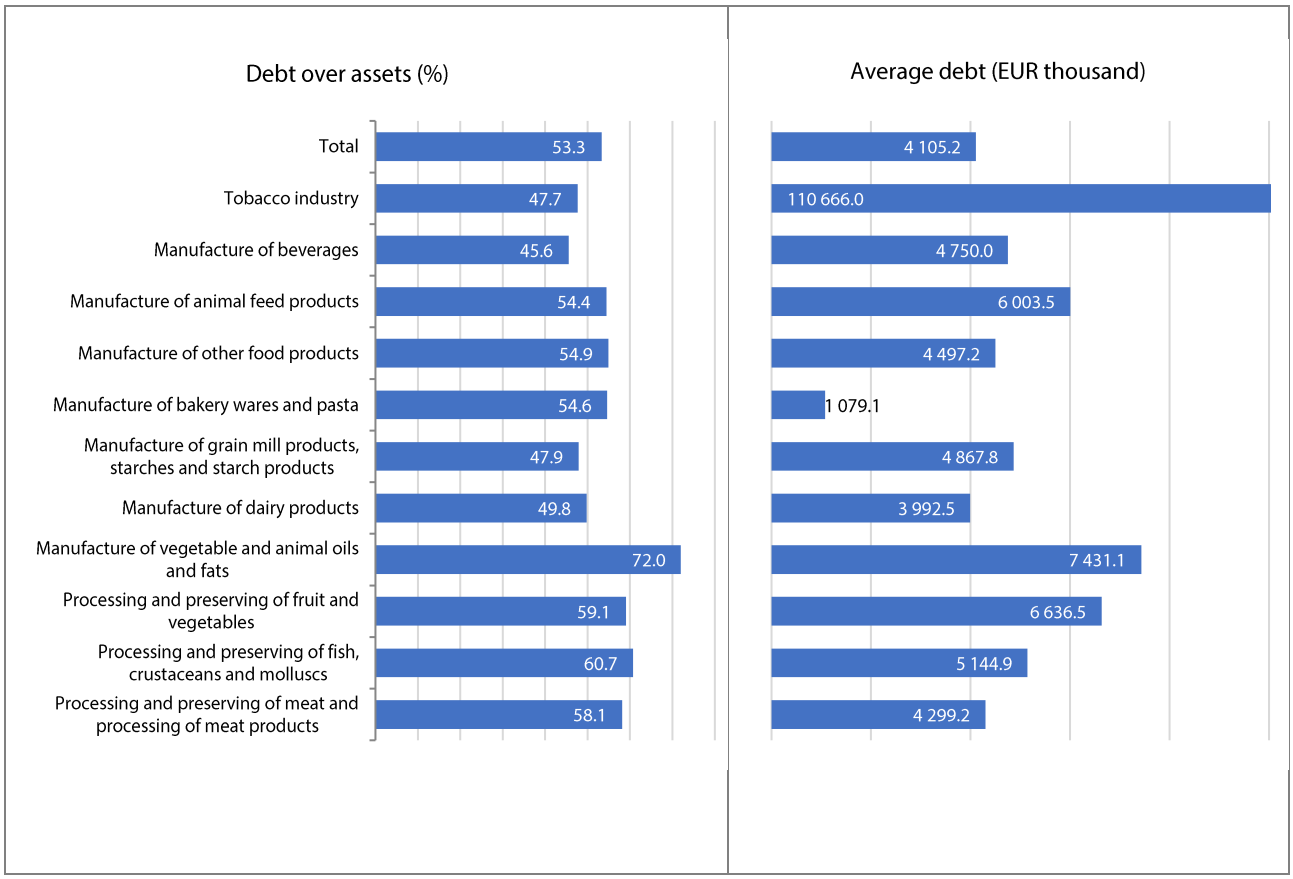
Table 9: Average debt in 2017 by Spanish agri-food company, EUR million

Type of debt	Total	Large-sized companies	Medium-sized companies	Small-sized companies
Long-term	1.31	31.36	6.08	0.51
Short-term non-commercial	1.97	64.82	8.35	0.54
Short-term commercial	0.83	22.98	3.51	0.30
Total debt	**4.11**	**119.15**	**17.94**	**1.35**

Source: SABI, 2019.

The manufacture of beverages and the manufacture of grain mills are the least indebted sub-sectors and olive oil production has the highest level of indebtedness. By sub-sectors, average indebtedness (debt over total assets) varies between 45.6% of beverage production and 72% of the production of fats of animal or vegetable origin. The high indebtedness of the latter sub-sector is related to the high cost for the supply of raw materials (olives) during the last few years. In fact, in 2017, the losses were significant in the profit and loss accounts of this industry (Figure 33).

Figure 33: Debt over total assets and average debt by sub-sector in 2017



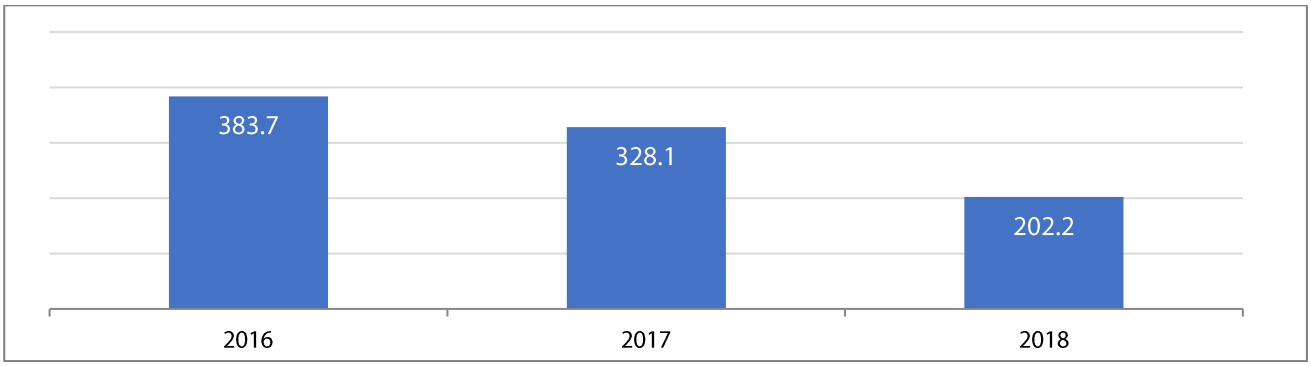
Source: SABI, 2019.

Demand for finance, as well as the provision of finance, is linked to the activities of sub-sectors, rather than to geographical location. At present, the most indebted industries are the olive oil bottlers, and this is universal throughout the country. The same is true for sausage processors, the vast majority of whom currently have liquidity problems, regardless of where they are located. Hence, there may be an effect related to regional variation, but this affect is subordinate in relation to the sectoral variable. Furthermore, bank and sectoral representative interviewees confirmed that the specific conditions of each company were more important than the geographical location of the company.

As discussed in section 2.3, on the supply of credit to the agriculture sector, the ICO[86] also supplies credit to the agri-food sector. The decreasing demand for credit from the agency is a sign that access to regular bank credit has become easier some years after the financial crisis.

86 A public credit institute.

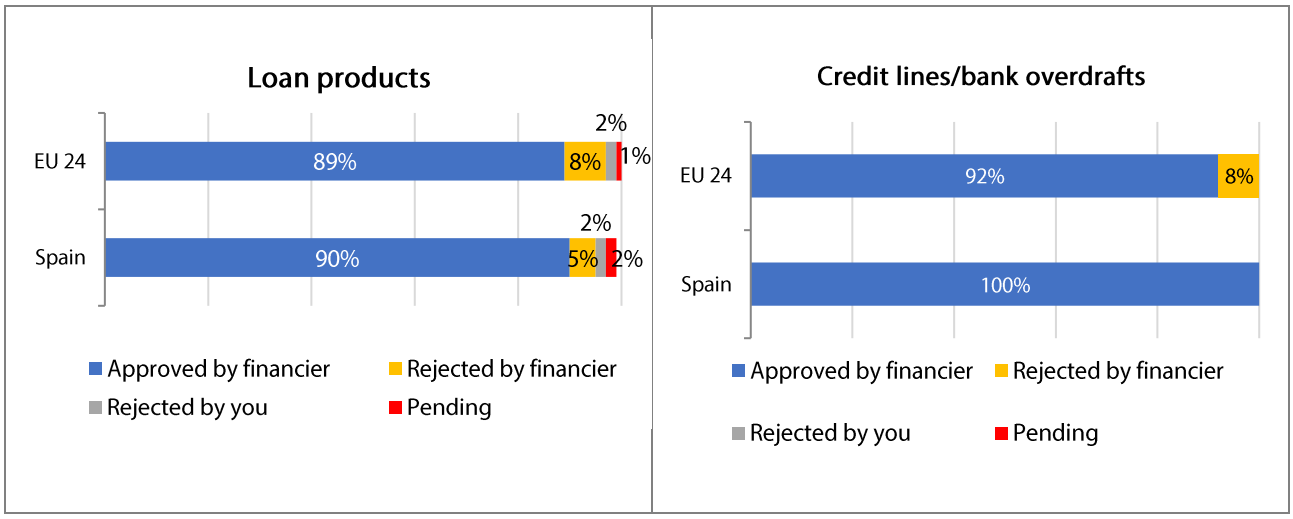
Figure 34: Total credit granted by the ICO to the food and beverage industry, 2016-2018, EUR million



Source: ICO, 2019.

Around 10% of the loan applications from agri-food companies are rejected; higher than that for other sectors of the economy, according to the Agri-food survey (Figure 35). The rejection rates reported by the SAFE survey (survey on the access to finance of enterprises) from 2018, were 6% for SMEs for all economic sectors for all loan products over six months[87]. In 2016, the survey carried out within the remits of the ex-ante assessment noted a rejection rate of 17% for Spanish agri-food companies.[88] Banks' interviewed have not been in a position to share information on the share of applicants that are rejected.

Figure 35: Results from loans' applications in the agri-food sector in 2018



Source: Agri-food survey.

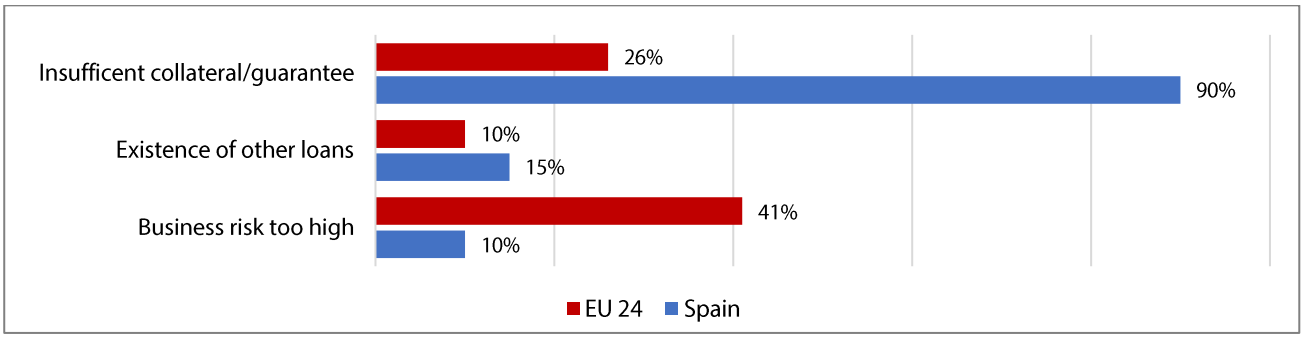
Note: Total might not sum to 100% due to "do not know" answers.

The main reason for rejection is insufficient collateral or guarantee (Figure 36). Indebtedness and high business risk are other factors mentioned in the Agri-food survey as important reasons for rejecting loan applications from agri-food companies.

87 European Commission, 2018, Results by country, https://ec.europa.eu/docsroom/documents/32767.

88 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

Figure 36: Reasons for loans' rejection in the agri-food sector in 2018



Source: Agri-food survey.

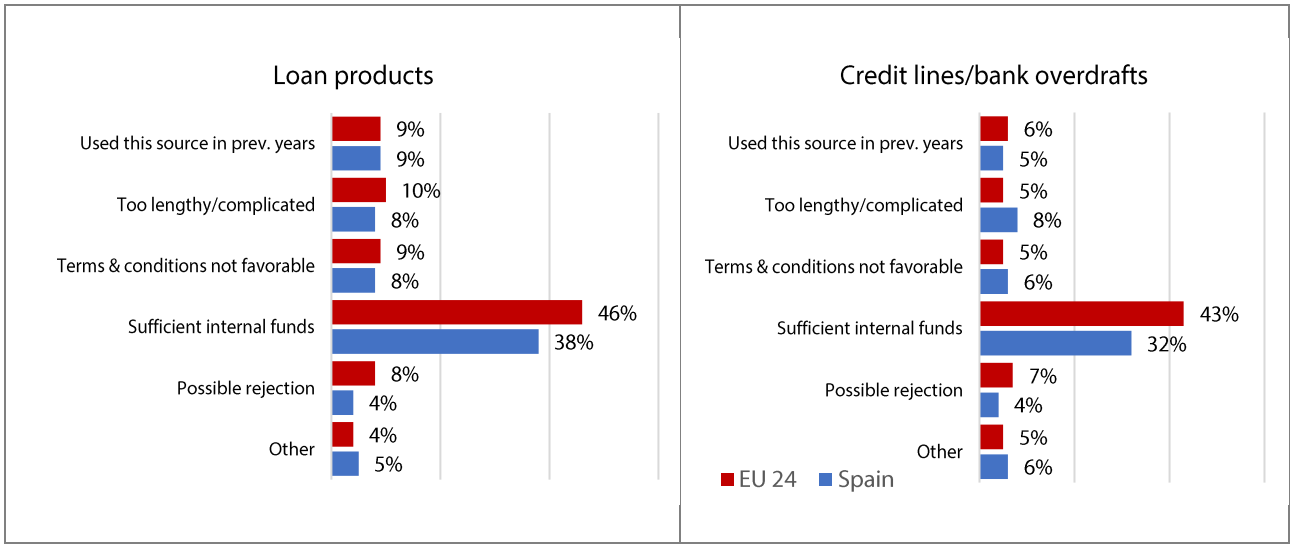
Bank interviewees underlined that lack of collateral is one of the main reasons for rejecting loan applications from the agri-food sector. This was further evidenced by the ex-ante assessment, whereby the problem seems to be persisting. As discussed for the agriculture sector, the risk aversion of banks after the economic crisis, leads them to avoid financing riskier projects. The agri-food sector has, in general, low profits, whereby it is potentially considered a riskier sector. As a result, higher collateral is required by banks than for other economic actors, although not as high as for the agriculture, particularly for investments with a degree of innovation, or investments undertaken by start-ups.

Additionally, banks have pointed out the following factors as being important reasons for rejections:

- Existence of other debts that increase the company's risk and therefore exceeds the credit risk limit of the bank.
- Lack of credit history, particularly affecting young entrepreneurs and start-ups.
- With regard to start-ups, banks commented during the interviews that their needs for finance and the risks that they represent are making these companies unfit for the banking market. They have suggested that the venture capital market might be more appropriate to finance their investments.

4% of the agri-food firms did not apply for a loan due to the fear of being rejected. 38% advised that the main reason for not applying for a loan was the existence of sufficient own funds (Figure 37). During interviews, banks pointed out that enterprises might not apply for a loan because they fear they will not be able to meet the repayment requirements, rather than for actual fear of their applications being rejected.

Figure 37: Reasons for not applying for loans in the agri-food sector in 2018



Source: Agri-food survey.

Unfavourable terms and conditions, as well as lengthy and complicated procedures may also lead to firms not applying for loans. The Agri-food survey found that the share of Spanish agri-food firms that did not apply for loans because the terms and conditions were not considered favourable, represents between 8% and 6% of the survey respondents. Lengthy and complicated procedures were also indicated as a reason for not applying, by 8% of the surveyed enterprises.

Lack of knowledge on existing opportunities is also one of the reasons for not applying for loans. The share of Spanish firms indicating that they did not apply for credit lines and long-term loans due to the lack of knowledge of such opportunities is higher than for the EU 24. According to interviewees representing the agri-food sector and banks, a low level of financial knowledge may be a problem for the very small-sized companies of below ten employees. In the ex-ante assessment, this was identified as one of the main problems for firms to access finance[89].

Constrained access to credit for R&D. In addition, it was further pointed out during interviews, that the supply of credit for R&D by the agri-food sector is inadequate, and associated with high risks, which can be linked to the lack of knowledge from the supply side on those specific investments. Hence, potentially agri-food firms refrain from applying for finance for R&D activities, knowing that these are associated with high risks, whereby they choose not to go through 'the hassle' associated with applying for bank loans, particularly, if they are small-sized companies.

Main findings of the centralised ex-ante assessment of financial instruments in Spain for the agri-food sector

- Investment drivers identified: Investments in machinery and equipment, expansion of business.
- Difficulties in accessing finance: 62% of surveyed companies. Rejection rate for bank loans: 17%.
- Groups with more difficulties accessing finance: After crisis, access to finance for SMEs in general has been more difficult. 94% of the agri-food sector is SMEs. Firms with a higher degree of innovation in their activity are found to have the most difficulties.
- When a firm also lacks credit history (often the case for small-sized businesses) access to finance is even more difficult.

Reasons for difficulties in accessing finance:

- On the one hand, financial institutions do not always manage to estimate the risk of investments in rural areas, especially in the case of investments for very innovative or very small-sized activities, so they opt for a conservative approach and assign those investments a greater risk than they actually have.
- On the other hand, the relevant holdings and SMEs in the sector do not have the means or knowledge to correctly transfer the real risk information of their investments, so that they are unable to show financial institutions viability and sustainability.

Main conclusion:

- a market failure exists on the Spanish market, which motivates the provision of public guarantees to financial institutions for the financing of investments in the agricultural, forestry and agri-food sectors.
- Financing gap in rural areas (agriculture, agri-food and forestry sector): EUR 3.8-7.6 billion.

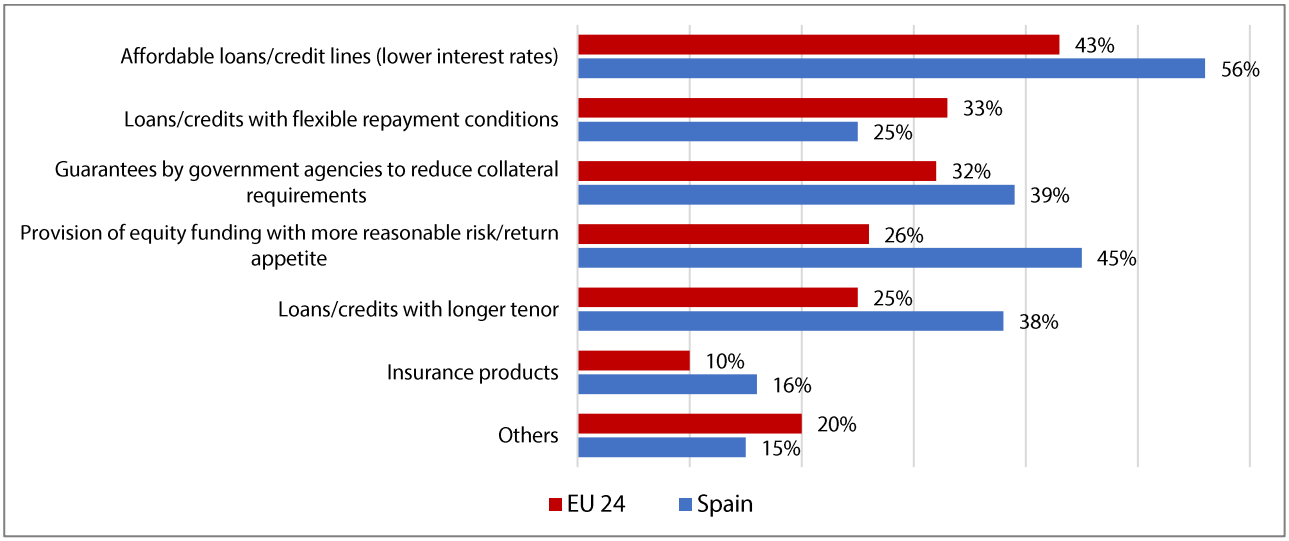
Recommendation:

- Introduction of a capped portfolio guarantee financed through the EAFRD, implemented for sub-measures: 4.1, 4.2, 6.1, and 8.6, with the aim to decrease the risk for financing the agricultural, forestry and agri-food sectors, and hence favour their access to finance. Loans with longer repayment period are to be facilitated. Main target groups: young farmers, agricultural cooperatives and the agri-food industry (foremost microbusinesses, less than ten employees), and natural persons within the sectors with a lack of credit history.

89 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

More favourable loan conditions would increase Spanish agri-food firms' access to finance. When asked which solutions may facilitate agri-food companies' access to finance, the firms surveyed showed interest in taking up additional loans if loan conditions were to change. Lower interest rate, provision of equity funding with more reasonable risk, guarantees offered by Government agencies in order to reduce collateral requirements, and loans with longer tenor, were all options considered as attractive by up to 40% of respondents (Figure 38).

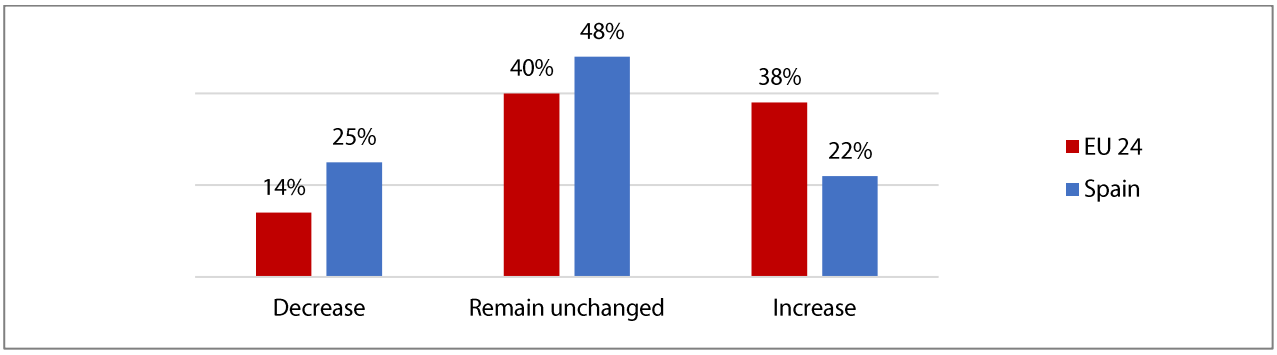
Figure 38: Solutions to reduce difficulties experienced in accessing finance, 2018



Source: Agri-food survey.

The financing needs of the agri-food companies are expected to remain stable in the coming two-three years. According to the results of the Agri-food survey (Figure 39), almost half of the enterprises expected their financial needs to remain stable and 22% expected them to increase (below the EU 24 average of 38%), whereas 25% expected their needs to decrease. This is likely due to a recent a slowdown of the export growth, linked both to Brexit and to the unstable global trade environment.

Figure 39: Agri-food companies' expectations on future financing needs, 2018



Source: Agri-food survey.

Technical support for the smallest companies would be useful to provide support in the design of business plans, as most of the small-sized companies do not have the physical capacity on site and the skills to do it themselves. In addition, they do not have an overview of potential firms that could assist them in developing their business plan, as the primary companies with whom they relate are professional firms mainly in charge of fulfilling their fiscal and legal obligations. The ex-ante assessment, concluded that 'the relevant holdings and SMEs in the sector do not have the means or knowledge to correctly transfer the real risk information of their investments, so that they are unable to show financial institutions viability and sustainability'[90].

90 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

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

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

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

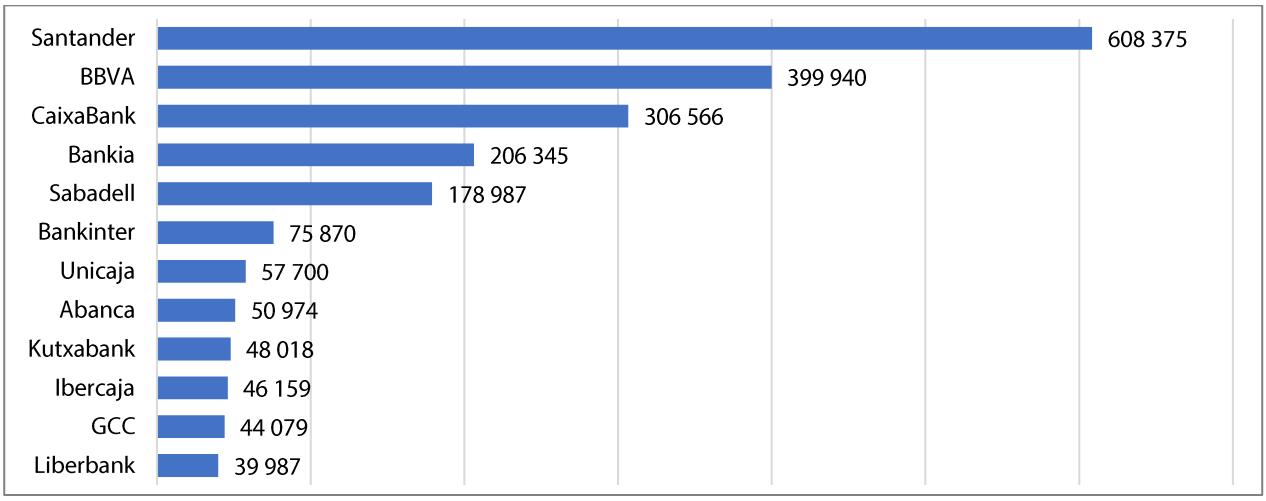
- Besides the traditional banks serving the agri-food sector (see section 2.3.1 for more information), there is a growing network of business nurseries, accelerators and business incubators providing finance to the agri-food sector, mostly located around the Mediterranean axis, Madrid and the Basque Country.
- On 31 December 2018, the total outstanding loan volume to the Spanish agri-food sector was EUR 22.7 billion.
- The balance of credit to the agri-food sector is growing, whilst the overall economy is still in the process of debt reduction.
- Since 2015, the number of banks has decreased by 29.5%, the number of offices by 43.9% and the number of employees by 33%, hence, there is a growing problem relating to financial exclusion and the lack of population and economic pulse in large rural areas.
- Despite the reduction in the number of banking institutions, the interest rate on new loans is on a decreasing trend.
- The number of large loans, over EUR 1 million, are decreasing, whilst those below EUR 250 000 are on a growing trend.
- Overall, few constraints to the supply of finance to the agri-food sector have been identified. However, the banks still being risk averse after the economic crisis, may cause them to be more cautious in financing investment projects with a high degree of innovation. It may also lead banks to ask for higher guarantees. Furthermore, a potential financial exclusion may limit some firms' access to finance.

3.3.1 Description of finance environment and funding availability

3.3.1.1 Finance providers

Agri-food businesses benefit from the same financial providers as the agriculture sector. The finance providers serving the agri-food sector are identical to those serving the agriculture sector. For a full explanation, see section 2.3.1.1. What differs in the supply between the two sectors is that, except in the case of small-sized agri-food enterprises, the weight of financing of banks operating across the full national territory is much more important than for the agriculture sector. For the agri-food sector, the credit sections within the agriculture cooperatives are negligible. Hence, it can be assumed that the market share is correlated with the size of the balance sheet of the banks, implying that Banco Santander, BBVA, and Caixa Bank would have the largest market shares also for the agri-food sector (Figure 40). The banks with national coverage and with a particular expertise of the sector are Cajamar and Caixa Bank.

Figure 40: Banks ranking by assets in Spain (individual balance sheets) as of December 2018, EUR million



Source: Expansión, 2019.

Business accelerators and business incubators play an increasing role in financing the agri-food sector. Over the past few years, the traditional fabric of bank credit has been complemented by a series of bodies and organisations whose aims converge in helping business projects in their earliest stages, these are business nurseries, accelerators and business incubators. They provide various forms of support such as training, advice, seed and venture capital and helping to find capital. Although these organisations have been set-up throughout Spain, those directly or indirectly related to the agri-food sector are located mainly in the Mediterranean axis, Madrid and the Basque Country, which means the chances for start-ups are greater in these locations. Table 10 provides an overview of bodies related to the agri-food sector in Spain.

Table 10: Business nurseries, accelerators and business incubators related to agri-food sector in Spain

Name	Headquarters	Sector
Barlab	Madrid (Madrid)	Hotels
BBVA Momentum	Online	Social economy
Berriup	San Sebastián (Basque Country)	Agricultural innovation
Ca! Aceleradora	San Sebastián (Basque Country)	Agri-food and gastronomic sector
Climate kic	Valencia (C. Valenciana)	Climate change
Cloud incubator hub	Cartagena (R. Murcia)	Miscellaneous
Cons@lida	Valencia (C. Valenciana)	Various (biotechnology, green technologies)
Eatable Adventures	Madrid (Madrid)	Feeding
Fluidra Accelera	Barcelona (Catalonia)	Sustainable use of water
Groow	Madrid (Madrid)	Environmental sustainability
Init	Bilbao (Basque Country)	Marine environment
Lanzadera	Valencia (C. Valenciana)	Miscellaneous
La Terminal	Zaragoza (Aragón)	Miscellaneous
Orizont	Tudela (Navarra)	Agri-food innovation

Pandorahub	Barcelona (Catalonia)	Rural innovation
Pascual Start-up	Online	Agri-food innovation
Porcinnova	Ejea de los Caballeros (Aragón)	Innovation swine sector
Red de viveros empresariales de la fundación INCYDE	Madrid (Madrid)	Miscellaneous
Red Innprende	Madrid (Madrid)	Hospitality, agri-food sector
Reimagine food	Online	Agri-food industry
UnLtd Spain	Madrid (Madrid)	Agri-food industry

Source: Ecorys, 2019.

3.3.1.2 Financial products

The offer of financial product is tailored to the needs of the Spanish agri-food companies. The Spanish banks, cooperatives and credit sections provide a complete offer of loans to agri-food companies for both investment and working capital financing. The offer is highly tailored to the needs of the companies. Loans, especially working capital loans, are adapted to the characteristics of the sub-sector, e.g. average maturity periods, technologies (Table 11).

In addition to the products offered by the market, the public agency, ICO, offers different products to support the sector (the same lines as for farmers, see section 2.3.1.2 for more details):

- ICO-Empresas y emprendedores: for investment and working capital, established companies and entrepreneurs, including new entrants;
- ICO-Internacional: liquidity facility and investment outside of Spain;
- ICO-Exportadores: factoring for exports;
- ICO-Crédito Comercial: factoring for national market; and
- ICO-Garantía SGR/SAECA: loans with a guarantee from a mutual guarantee company.

Table 11: Overview of financial products offered to agri-food companies by banks

Type of Product	Purpose	Maturity	Interest Rate
Investment Loans (mortgage loan)	Capital investment	Mostly medium and long-term, max. 12 years	EURIBOR 12 months +0.75%
Investment loan (personal guarantee)	Capital investment	Mostly medium and long-term, max. 8-9 years	EURIBOR 12 months +1.75%
Working Capital Loans	Working capital	Short-term credit line adapted to growing season	1.25%
Credit lines	Liquidity and working capital	Short-term, usually 12 months	1.25-1.50%

Source: Summary based on interviews, 2019.

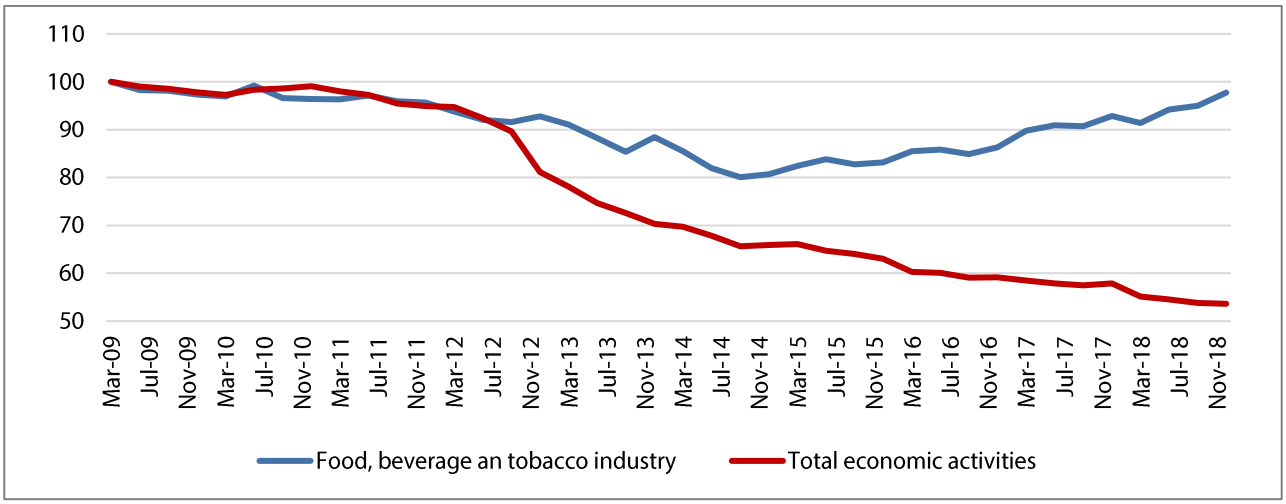
Additionally, as of 2017, a centralised financial instrument, financed through the EAFRD, is now available for the agri-food sector, it is so far only available to beneficiaries in Castilla y León, but potentially soon available to more regional actors (see section 2.3.1.2 for more information).

3.3.1.3 Description of the financing market

The total amount of credit provided to the agri-food sector is on a growing trend, contrary to the rest of the economy. At the same time, the share of non-performing loans is lower than that for the overall economy. The total outstanding loan volume to the food, drink and tobacco industry in Spain on 31 December 2018 was EUR 22.7

billion. This was 4.1% of the total credit for economic activities in Spain, higher than its share of GVA at 2.9%. Interestingly, the trend of the outstanding loan amount is growing, which is in contradiction to the rest of the economy. As of 2014, whilst all other economic sectors continue the process of debt reduction, the Spanish food, beverage and tobacco industry has reversed the trend. Since then, the credit balance has grown again and by the end of 2018 it had almost recovered to its pre-crisis level (Figure 41).

Figure 41: Evolution of credit granted by credit institutions to the food, beverage and tobacco industry and to all economic activities in Spain, 2009-2018



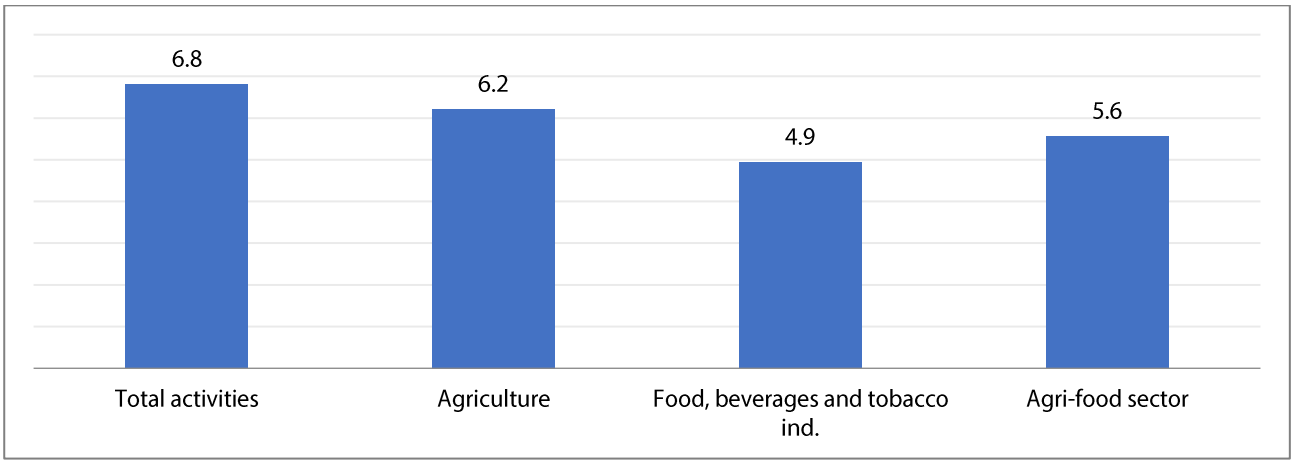
Source: Bank of Spain, 2019.

Index March 2009 = 100

In December 2018, the rate of growth of credit provided stood at 5.3%, whilst that of economic activities as a whole remained negative at -7.1%, and the rate of the primary sector was at 5.1%. The growth of credit to the agri-food sector coincides over time with a reduction in non-performing loans[91]. The non-performing loans percentage over total credit in the food, beverage and tobacco industry is 4.9%, under the 6.8% of the whole economic activities (Figure 42).

91 Measured as the percentage of non-performing loans as a percentage of total credit.

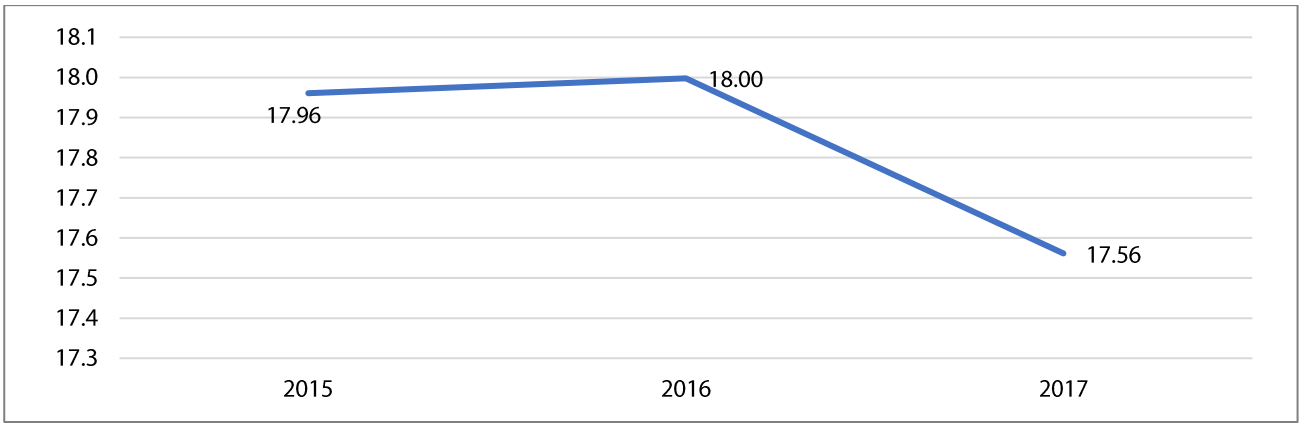
Figure 42: Percentage of non-performing credit on December 2018 in food, beverages and tobacco industry



Source: Bank of Spain, 2019

Overall, the positive figures signal a growing demand for finance from the agri-food sector, a supply side increasingly willing to assume the risks, and an improving solvency of the sector. In a nutshell, the increase of provision of credit in a context of general deleveraging indicates, on one hand, a growing demand and, on the other hand, an offer willing to assume the risk. As for the agriculture sector, turnover growth is higher than the growth of debt, implying that the solvency of enterprises is also improving (Figure 43).

Figure 43: Weight of credit to Spanish agri-food sector over turnover, 2015-2017 in %



Source: Bank of Spain, Structural business statistics (INE), own elaboration, 2019.

3.3.2 Analysis of the supply of finance

The growing financial exclusion may affect parts of the agri-food sector. As discussed in section 2.3.2, the restructuring of the Spanish banking sector might lead to the financial exclusion of some rural areas. The agri-food sector is widely distributed throughout the territory. Large-sized companies have less problems in accessing finance, but to a larger extent, small-sized companies are located in areas subject to abandonment. Hence, due to a diminishing access to finance, as well as to other societal services, these businesses end up closing or moving, contributing to the decline of the rural areas where they were located. Although this may impact the farmers more than the agri-food companies, as it is more complicated for a farmer to relocate or find another suitable buyer for its produce, the impact from financial exclusion on the agri-food sector may still be significant in the long run.

Interest rates are still decreasing. Despite a decreasing number of banking institutions (due to the structural changes taking place, see section 2.3.2), which could have led to a decline in competition in the banking market, interest rates have maintained a downward facing trend over recent years. In August 2019, the average rate signed for new credit lines and overdrafts for companies for all economic sectors in Spain was 1.6% (before commissions). Short-term loans of less than one year were signed at rates of between 1.4% and 2% and long-term loans were between 1.7% and 2.8% (Table 12)[92].

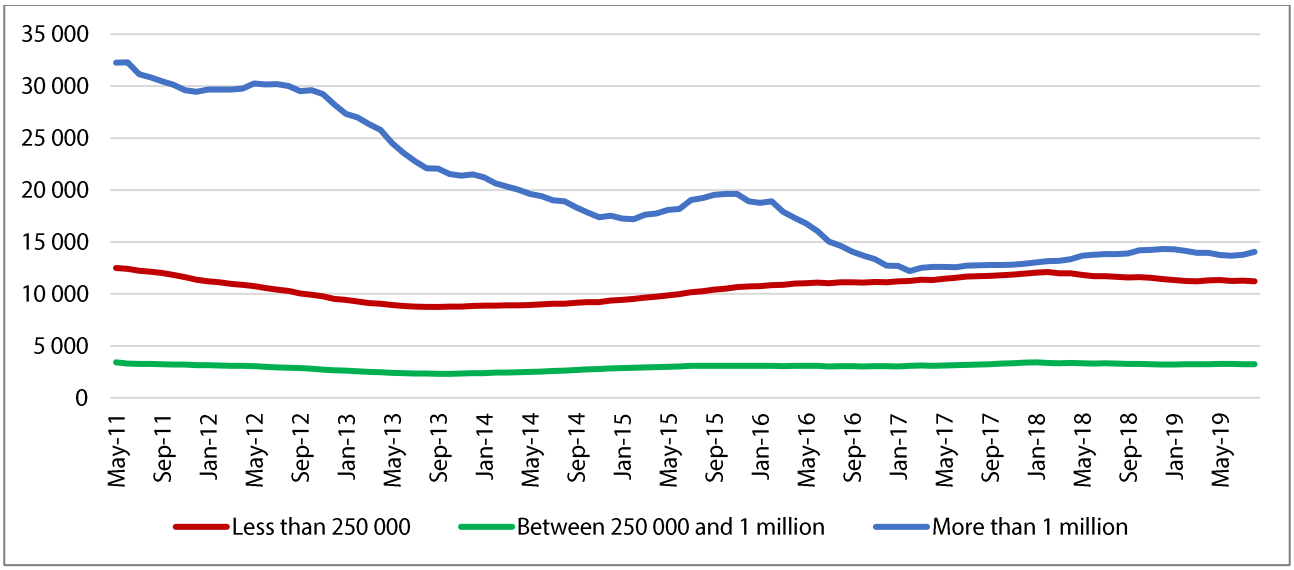
Table 12: Average interest rates on new loans signed by Spanish non-financial companies in August 2019 in %

	Weighted average rate	1 year or less	Between 1 year and 5 years	More than 5 years
Loans up to EUR 250 000	2.0	2.0	2.6	2.8
Loans between EUR 250 000 and 1 million	1.5	1.5	1.4	1.7
Loans over EUR 1 million	1.4	1.4	1.0	1.7
Lines of credit and overdrafts	1.6			
Credit Cards	17.2			

Source: Bank of Spain, 2019.

There is a decreasing trend of large loans provided but an increasing trend of smaller loans. Data on the total volume of new loans signed per month and per interval of amount granted (up to EUR 250 000, between EUR 250 000 and 1 million, and over EUR 1 million) shows a clear trend. Spanish banks' grant fewer loans of more than EUR 1 million, whilst the rest of the intervals are on a growing trend, particularly the smaller loans (Figure 44).

Figure 44: Total loans granted in new loans per volume interval granted, 12-month moving averages, EUR million



Source: Bank of Spain, 2019.

92 The Bank of Spain does not provide information on interest rates and average amounts of new loans broken down by sector. Therefore, the general trends do not necessarily coincide with those of the agri-food sector.

The average loan amounts requested by companies in the agri-food sector are obtained from the Agri-food survey. Table 13 presents the results, which are in line with the information obtained from interviews.

Table 13: Average amount of loans applied for by the Spanish agri-food sector per company size, 2018, EUR

	Small-sized	Medium-sized	Large-sized	Total
Short-term Loans	125 057	1 557 319	6 600 902	223 028
Medium-term Loans	157 887	813 819	3 718 628	207 134
Long-term Loans	460 759	1 972 545	24 780 678	692 859
Credit lines/bank overdraft	169 275	691 398	16 676 355	309 110

Source: Agri-food survey.

The lack of access to collateral may explain companies applying for increasingly smaller loans, which are usually less collateralised. As discussed in section 0, the lack of collateral affects particularly smaller companies and start-ups. The ex-ante assessment carried out in 2016 also underlined the relatively high levels of collateral required from the agri-food sector, constraining their access to finance[93].

Banks' risk aversion may limit the supply of financing to investments linked to a higher degree of innovation, as these investments are generally assumed to have a higher risk. As already pointed out for the agriculture sector, banks in Spain have suffered a severe financial crisis, and are still in a process of deleveraging and cleaning their balance sheets from non-performing loans. Overall, this can affect their risk appetite and their lending policy in some sectors (see section 2.2.2). However, all the interviews conducted were concurred on banks interest and willingness to invest in the agri-food sector. This is confirmed by available statistics, as discussed in this section. Credit to the agri-food sector is growing in a context of general reduction of banks' exposure to the rest of the economy.

In summary, the issue of the financial exclusion may affect a few firms operating in rural areas, and certainly will make it difficult for more companies to establish a new business in these areas. Additionally, as for all sectors, the interviewees pointed out the difficulties of some applicants in complying with legal banking regulations. Paperwork related to loan applications simply turn some potential borrowers away, as they find the needed paperwork too burdensome. Additionally, enterprises may also have difficulties to finance high risk investments, for example those related to investments in R&D and in start-ups.

93 MAPA, 2016, Evaluación ex ante de un nuevo Instrumento financiero plurirregional para los fondos FEADER 2014-2020.

3.4 Financing gap in the agri-food sector

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

Key elements on the financing gap of the Spanish agri-food sector

- The total financing gap of the Spanish agri-food sector is estimated to be EUR 783 million.
- Small-sized agri-food enterprises (under 50 employees) make up the largest part of the gap.
- The largest financing gap is identified for long-term financing, as for the agriculture sector.
- The main drivers of the financing gap are lack of collateral and bureaucratic application processes related to long-term loans. Furthermore, the lack of financial knowledge on the side of the agri-food companies may limit their participation in the financial market.
- In addition, the banks risk averse attitude may limit the supply of financing for higher risk projects, including the supply of financing for start-ups.
- In the near future, demand for short-term credit is expected to grow, whilst it is more unclear how the demand for long-term financing and financing for new investment projects will develop.

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

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

All the calculations are based on the results of the Agri-food survey for Spanish 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[94]. As explained in section 2.2, the unmet demand for finance includes

(i) lending applied for but not obtained or

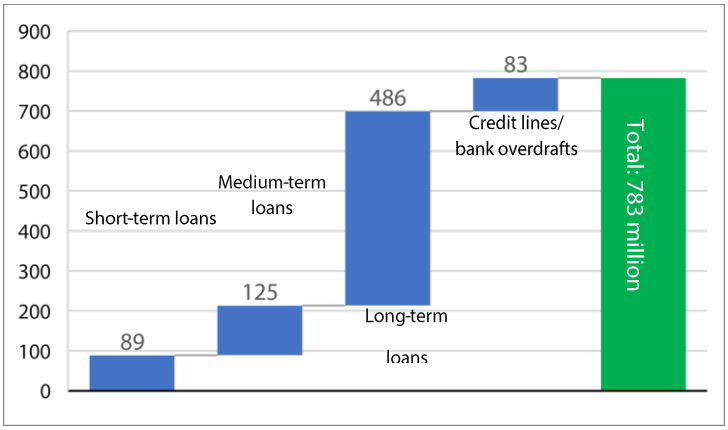
(ii) a lending offer refused by the potential borrower, as well as

(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.

94 The financing gap presented in this section is different from the total unmet demand presented in section 2.2.2. In the quantification of the total unmet demand, all the enterprises in the population applying for finance are considered independent from their economic viability.

Figure 45: Financing gap by product in the agri-food sector, 2018, EUR million



Source: Agri-food survey.

The financing gap for the Spanish agri-food sector is estimated to be EUR 783.3 million (Table 14). However, a majority of this gap is concentrated to small-sized companies, approximately EUR 612 million. 94% of the Spanish agri-food sector consists of small-sized companies. Even so, also medium-sized firms of between 50-249 employees have been found to have a significant gap. With regards to what type of loans for which the gap is the most relevant, the findings presented in section 0 are re-confirmed, thus that access to long-term finance is the most difficult as associated with lengthy and complicated application processes. Furthermore, long-term loans are usually associated with higher collateral requirements. Hence, the largest financing gap relates to long-term loans, followed by medium-term loans.

Table 14: Financing gap by firm size and product, 2018, EUR million

	Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Small-sized firms	**611.3**	65.6	97.7	383.1	64.8
Medium-sized firms	**126.8**	19.1	19.6	75.3	12.7
Large-sized firms	**44.5**	4.0	7.2	27.9	5.4
Total	**783.3**	**88.7**	**124.5**	**486.3**	**82.9**

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

In addition, as described for section 2.3.1, **more than EUR 1.27 billion of grant requests could not be satisfied** under the Spanish regional development programmes during 2014-2019 due to lack of resources. This further indicates that a significant financing gap exists for the agri-food sector.

The general drivers of the financing gap for the agri-food sector in Spain are related to lack of collateral, lack of financial knowledge by small-sized enterprises, and bureaucratic application processes. Based on interviews, small-sized companies have more difficulties obtaining sufficient guarantees and may also encounter difficulties when it comes to complying with the information requirements requested by banks, also due to lack of knowledge and insufficient financial literacy. For the same reason, small-sized companies are the most discouraged from applying for finance.

Lack of credit history, in particular affecting young entrepreneurs and start-ups can also be considered as an important driver. Banks commented during the interviews that start-ups might be regarded as too risky for the banking sector, and that equity Instruments might be more useful to support their development.

It was further pointed out, during interviews, that the **supply of credit for R&D by the agri-food sector is considered insufficient**, and associated with high risks, which can be linked to the lack of knowledge from the supply side on those specific investments.

The recent establishment of the network of support for entrepreneurs could mean a substantial improvement in the success rate of new ventures. As discussed in section 3.3, although this network is geographically concentrated, it could potentially provide support to young entrepreneurs.

Additionally, an increased use of the financial instrument, financed through the EAFRD and centralised through the Ministry of Agriculture, could provide guarantees to the agri-food sector, facilitating access to finance.

Unclear future evolution of the financing gap. Although positive demand trends were identified in section 3.2, recent events may lead to conclude that the evolvement of the demand for finance is uncertain, hence the impact on the gap is also unclear. The cooling of the European economy, the consequences of the ongoing global trade disputes, complemented by the uncertainties of a post-Brexit context, suggest that many investment projects will be frozen. Also, the impacts from the COVID-19 pandemic on both the agri-food sector and the bank sector will be significant, although at the time of writing it is too early to draw conclusions on the exact impact on the access to financing for the agri-food sector stemming from the virus effects. For this reason, the forecasts of an accelerated growth of investment in the Spanish agri-food sector must be revisited. However, for the same reasons, demand for short-term loans and credit lines will likely increase in the coming years, at least until the many uncertainties currently on the table have been cleared up.

3.5 Conclusions

Investments as well as the total amount of credit provided to the agri-food sector is on a growing trend, contrary to the rest of the economy. Increasing sales and exports drives investments. Investments in capacity expansion are the highest, also investments to improve productivity and develop new products are important. The Spanish agri-food sector has the highest share of applicants for credit amongst the EU 24 countries. Overall, positive figures signal a growing demand for finance from the agri-food sector, a supply side willing to assume the risks, and an improving solvency of the sector.

Even so, a financing gap for the agri-food sector in Spain was found, estimated to be in the order of EUR 783 million. A large share of the gap is made up of small-sized companies, and access to long-term financing is the most complicated.

The main driver of the gap is insufficient collateral or guarantee. Start-ups are also turned down due to **lack of credit history** and the high risk associated with the business. Additionally, complicated and lengthy application procedures for long-term loans discourages firms from applying for credit. **Smaller firms to some extent are also discouraged from applying** for loans because they do not trust their ability to meet the repayment requirements or due to lack of knowledge. Finally, investment perceived as risky, as for example **R&D projects might be subject to financial constraints**.

CAP, and in particular the EAFRD support, plays a positive role for the sector. For the period 2014 – 2019, processors requested support equivalent to EUR 1.2 billion more than what was available under all grant calls for applications.

Business nurseries, accelerators and business incubators play an increasing role in financing the agri-food sector, in particular start-ups. Additionally, as of 2017, a centralised financial instrument, financed through the EAFRD, is now available for the agri-food sector, so far only available to beneficiaries in Castilla y León, but potentially soon available to more regional actors, e.g. Extremadura.

Based upon the findings of this study, the following recommendations could be considered to improve the access to finance for the agri-food sector:

- High risk investments, for example those related to investments in R&D, face difficulties in accessing finance. For these investments, the products offered by banks are not well fitted. It is possible that a targeted guarantee policy for this type of activities would contribute to the continued growth of the sector. Furthermore, in order to facilitate investments in environmental sustainability by the agri-food sector, financial instruments facilitating this would be useful.
- Financial instruments could focus in particular on young entrepreneurs and start-ups, which are the groups affected the most by the current financing constraints.
- Equity or quasi-equity financial instruments, e.g. convertible loans might help with addressing the financing constraints affecting start-ups and new entrants in general. Because of this, efforts could be made to explore the possibilities for setting up specific and focused equity fund(s) in agri-food sector, preferably at centralised level to allow economies of scale and ensure better coverage, based on current experience of business angles, equity investors, backed-up by well-founded ex-ante assessments and analyses.
- Considering the role that exports plays for the development of the sector, it could be considered to improve the specific financial instruments offer, e.g. export credit insurance or export guarantee.
- In order to improve the agri-food sectors' access to finance, it would be useful to provide technical support for the smallest companies, with ten employees or less, in the design of business plans and fulfilment of paperwork relating to legal bank requirements.

ANNEX

A.1. References

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A.2. Stakeholders interviewed

Name of institution/organisation	Type of Stakeholder
CSIC	Other
COAG	Farmers organisation
Cooperativas Agroalimentarias de España	Producer organisation
Cajamar	Cooperative bank
FIAB	Food Industry organisation
MAPA. Secretaría de Agricultura y Alimentación	Managing authority
MAPA. Secretaría de Agricultura y Alimentación, Financial Instruments coordinator	Managing Authority
FEGA	Managing authority
DCOOP Large cooperative (olive oil and others)	Agricultural Cooperative
AN (large cooperative, vegetables)	Agricultural Cooperative
Anecoop (large cooperative, citrics and vegetables)	Agricultural Cooperative
Unicaja	Bank
CaixaBank	Bank
UPA	Producer organisation
Generalitat de Catalunya	Managing authority
ANICE	Food industry organisation
Castilla y León	Managing authority
Junta de Andalucía	Managing authority

A.3 Methodology for financing gap calculation

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

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

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

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

The share of *Viable* firms is measured by the share of total firms that have a non-negative turnover growth[95] or a non-negative turnover and that are not in a situation of cost increase (these two criteria might be used to obtain an upper and lower boundary for the calculations).

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

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

Step1: Ratio of viable farms with unmet demand for finance

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

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

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

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

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

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

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

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

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

Step 2: Number of farms rejected or discouraged

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

For TGI, this total population is adjusted by removing farms having a Standard Output (SO) below EUR 8 000 EUR 4 000 or EUR 2 000, depending on the Purchasing Power Parity Index (PPI) of the country. The EUR 8 000 EUR 4 000 or EUR 2 000 SO thresholds are used for countries with their 2017 PPI respectively above the 66th percentile, between the 33rd and 66th percentile, or below the 33rd33rd percentile of the PPI index in the EU. We assume equal rates of rejections amongst small, medium and large-sized farms, and disentangle the share of farms with constrained in obtaining credit by financing product.

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

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

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

for $i = Small, Medium, Large$

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

Step 3: Standard Loan Application Size

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

Step 4: Financial gap across farm size and product type

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

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

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

for $i = Small, Medium, Large$

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

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

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

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

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

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

Rejected: What was the result of your application?

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

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

For Spain, Table 15 and Table 16 report the elements used in the calculation of the financing gap for the agricultural and agri-food sector, respectively.

Table 15: Elements for the calculation of the financing gap in the Spanish 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	0.13%	0.64%	1.66%	0.64%
	Share of respondents that have not applied because of possible rejection	0.82%	0.82%	1.59%	0.89%
	Total (sum of rejected and discouraged)	***0.95%***	***1.46%***	***3.25%***	***1.54%***
Upper bound: farms with a non-negative turnover growth	Share of respondents rejected by creditor or farmer	0.25%	0.69%	2.36%	1.52%
	Share of respondents that have not applied because of possible rejection	2.36%	3.52%	3.82%	2.43%
	Total (sum of rejected and discouraged)	***2.61%***	***4.21%***	***6.18%***	***3.95%***
Total unmet demand: all farms	Share of respondents rejected by creditor or farmer	1.66%	2.11%	2.48%	2.16%
	Share of respondents that have not applied because of possible rejection	3.31%	4.52%	5.21%	3.43%
	Total (sum of rejected and discouraged)	***4.97%***	***6.62%***	***7.70%***	***5.59%***
Farms with constrained access to finance, **lower bound**	Small-sized farms	3 799	5 866	13 040	6 161
	Medium-sized farms	1 412	2 180	4 845	2 289
	Large-sized farms	483	746	1658	783
Farms with constrained access to finance, **upper bound**	Small-sized farms	10 466	16 879	24 771	15 825
	Medium-sized farms	3 889	6 272	9 205	5 881
	Large-sized farms	1 331	2 146	3 150	2 012
Standard loan application size	Small-sized farms	EUR 16 032	EUR 38 891	EUR 107 258	EUR 14 474
	Medium-sized farms	EUR 20 313	EUR 36 965	EUR 116 464	EUR 16 056
	Large-sized farms	EUR 59 911	EUR 94 068	EUR 209 706	EUR 85 510

Source: fi-compass survey.

Table 16: Elements used for the calculation of the financing gap in the Spanish 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 farmer	0.93%	0.93%	0.93%	0.00%
	Share of respondents that have not applied because of possible rejection	2.40%	2.69%	4.08%	2.91%
	Total (sum of rejected and discouraged)	***3.32%***	***3.61%***	***5.00%***	***2.91%***
Total unmet demand: all firms	Share of respondents rejected by creditor or farmer	1.07%	1.07%	1.07%	0.00%
	Share of respondents that have not applied because of possible rejection	2.40%	2.69%	4.08%	2.91%
	Total (sum of rejected and discouraged)	***3.46%***	***3.75%***	***5.14%***	***2.91%***
Farms with constrained access to finance	Small-sized firms	874	950	1315	764
	Medium-sized firms	32	35	48	28
	Large-sized firms	7	7	10	6
Standard loan application size	Small-sized firms	EUR 125 057	EUR 157 887	EUR 460 759	EUR 169 275
	Medium-sized farms	EUR 1 557 319	EUR 813 819	EUR 1 972 545	EUR 691 398
	Large-sized farms	EUR 6 600 902	EUR 3 718 628	EUR 24 780 678	EUR 16 676 355

Source: Agri-food survey.

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

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

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

Overall, the survey consists of 7 659 respondents, of which 73% own the agricultural enterprise, 8% are member owners, 8% are owner's relatives, 7% administrative managers, 3% other employees and 1% human resource managers. Table 17 reports the number of respondents by Member State.

Table 17: *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 and financial aspects. Only 50% of interviewees replied concerning their turnover, 67% gave the specific amount of their loan and 56% the exact interest rate of their loan.

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

A.5 TG II: Agri-food survey

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

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

The survey was conducted targeting the completion of a minimum of 45 questionnaires for each Member State. The minimum sample size obtained varied per country mirroring the differences in the size of the sector. Table 18 reports the sample size per country.

Table 18: Agri-food survey sample size per Member State

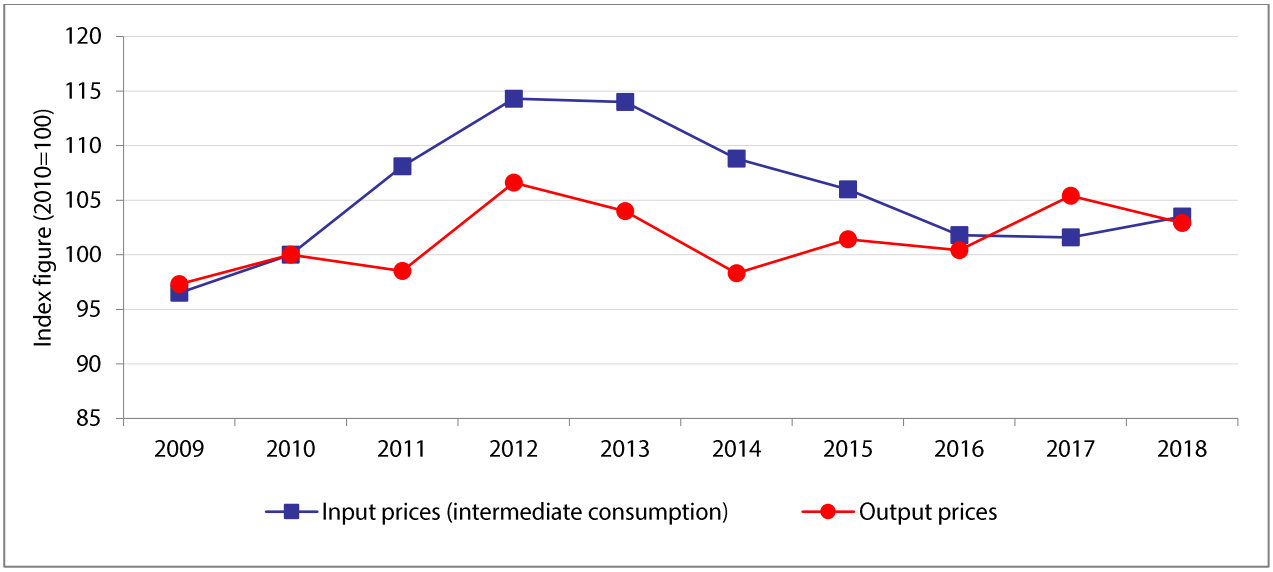
Country	No. of Respondents	Country	No. of Respondents
Belgium	100	Latvia	50
Bulgaria	100	Lithuania	50
Czech Republic	66	Hungary	46
Denmark	50	The Netherlands	80
Germany	186	Austria	50
Estonia	50	Poland	130
Ireland	50	Portugal	100
Greece	70	Romania	150
Spain	197	Slovenia	50
France	180	Slovakia	50
Croatia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

Source: Agri-food survey.

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

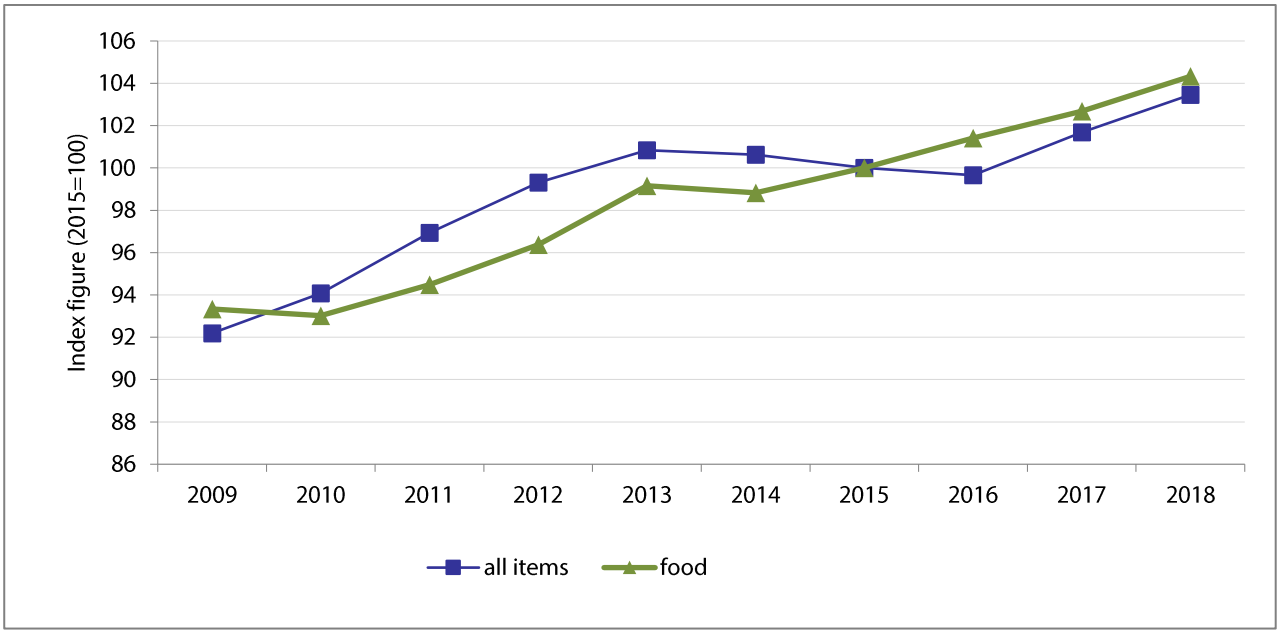
A.6 Data from the agriculture statistical factsheets

Figure 46: Evolution of agricultural output and input prices, 2009-2018



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

Figure 47: Evolution of harmonised index of consumer prices, 2009-2018



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

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