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

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fi-compass, 2020, Financial needs in the agriculture and agri-food sectors in Belgium, Study report, 70 pages. Available at: https://www.fi-compass.eu/sites/default/files/publications/financial_needs_agriculture_agrifood_sectors_Belgium.pdf

Glossary and definitions

Expression	Explanation
ADISA	Système d'Aides au Développement et à l'Installation dans le secteur Agricole
Agri-food survey	Survey of the financial needs of EU agri-food processing enterprises carried out in mid-2019 in the framework of the study 'EU and Country level market analysis for Agriculture' and based on respondents' financial data from 2018.
AWU	Annual Working Unit
CAP	Common Agricultural Policy
EAA	Economic Accounts for Agriculture
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EIB	European Investment Bank
EIF	European Investment Fund
ERP	European Recovery Programme
EU	European Union
EU 24	The 24 EU Member States covered by the *fi-compass* 'EU and Country level market analysis for Agriculture': Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.
EU 28	All EU Member States: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, The United Kingdom.
EUR	Euro
FADN	Farm Accountancy Data Network
fi-compass survey[1]	Survey on financial needs and access to finance of 7 600 EU agricultural enterprises carried out by *fi-compass* in the period April - June 2018 and based on respondents' financial data from 2017.
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added

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

NGO	Non-Governmental Organisation
RDP	Rural Development Programme
Revolving credit	Revolving credit is a type of credit that does not have a fixed number of payments, in contrast to instalment credit.
Roll-over credit	The roll-over credit is a type of investment credit, to be drawn at a variable interest rate. The duration is subdivided into consecutive interest periods with a different rate (EURIBOR + margin). Thus, medium and long-term investments are financed at an attractive short-term rate.
SMEs	Small and medium-sized enterprises
SO	Standard Output
Straight Loans	A loan in which only interest is paid during the term of the loan, with the entire principal amount due with the final interest payment.
UAA	Utilised Agricultural Area
VLIF	Vlaams Landbouwinvesteringsfonds

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EXECUTIVE SUMMARY

This study gives an insight into agriculture and agri-food financing in Belgium 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 Belgium

Investment in the agriculture sector has stagnated over the last decade. The main investment drivers include modernisation, consolidation, and expansion dynamics. In 2018, Gross Fixed Capital Formation[2] (GFCF) in the agriculture sector was EUR 1.1 billion, which was below the levels of investment reached a decade earlier. This stagnation partly arises from a lack of growth in gross value added.

Nevertheless, **there is strong demand for agricultural finance, with one in three farms applying for a loan or a credit line** in 2017. The bulk of the demand relates to long-term financing and credit lines or overdraft facilities, which are the most used products of agricultural financing in Belgium. The agricultural finance market has grown steadily over the past decade. The volume of outstanding loans to the sector grew consistently between 2010 and 2018, with a slowdown in 2018, when it stabilised at EUR 8.9 billion.

The demand is matched by a strong supply of finance, addressed by specialised banks, and served by tailored financial products. The overall financing market in Belgium has been expanding regularly since 2010 and offers a favourable financing environment. In addition, the sector benefits from the CAP support. The investment support measures provide incentives to invest in new projects, and start-up support is available to young farmers during the early stages of starting or taking over a farm. A public guarantee mechanism is also available, although not frequently used.

However, the financing gap in the Belgian agriculture sector is estimated between EUR 137 million and EUR 194 million in 2017. This gap is the largest for small and medium-sized farms (i.e. farms below 100 hectares) and mostly concerns access to long-term loans (> five years).

Insufficient levels of collateral contribute to the financing gap. Farmers in Belgium are more often asked to provide a guarantee to secure the loan than their European peers, and most applicants are requested to provide a guarantee above 75% of the loan value. When purchasing land or equipment, the loan can be mortgaged, and little additional guarantee is needed. However, this is not the case for investments with little residual value (infrastructure buildings, greenhouses, trees, etc.). In such instance, collateral must come from a different source, such as pre-existing assets or family members.

About 33% of the overall financing gap can be attributed to young farmers (between EUR 44.6 and 65 million). This affects particularly farmers who do not take over a family holding. Investment risk sharing within the family and across generations in the case of intra-family farm buyouts reduces the need for public guarantees and is an essential pillar of young farmers' access to finance. These operations are often organised through a gradual buyout and usually involves pooling of mortgages from the young farmer together with collateral from

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

the parents. Nevertheless, even after the transition to the new generation, highly leveraged young farmers may face significant financing needs for second round investments to ensure continuity and development of their farms. In addition, some farmers lack managerial skills which are also required to finance investments, and family support and risk management cannot substitute such potential weakness.

In addition, the financing of investments is hindered by high risk levels in some sub-sectors and for some categories of farms (such as highly indebted farms, farms with low economic margins, or farms active in the production of more volatile products) that can neither meet the financing terms and conditions, nor provide enough collateral or demonstrate the ability to safely repay a loan. Lending decisions are also stricter for activities for which there is only sparse benchmark data to assess the investment project (new products, start-ups). Moreover, low economic margins and weak cash flows lead banks to reject some loan applications, or lead farmers to hold-back from applying for finance. Furthermore, the sustained supply of finance in a weak growth context has led some farms to accumulate high financial leverage, which further prevents lending in the sector. Consequently, banks favour specific profiles among farmers that can demonstrate viable balance sheets, positive investment returns and moderate investment risks. As a result, financing conditions restrict the supply of loans for smaller farms, new farms without credit history, highly leveraged farms, and less profitable investments.

RECOMMENDATIONS

- A revamp of the existing public guarantee scheme could help increase its attractiveness to farmers and financial institutions. Options could include elements, such as extension of the guarantee period, a first loss guarantee, or a portfolio guarantee. Further, administrative procedures for activation of the guarantee could be revised and simplified. The potential of a re-designed guarantee scheme with a wider base, not only linked to RDP investment projects, could also be evaluated.
- Young farmers and new entrants willing to develop their activity should be among the main target groups of any new initiative. Additional help could come from the opportunities offered by the new legal framework, such as the easier combination of financial instruments, grant support and interest rate subsidies, or the possibility to finance the purchase of land for young farmers.
- Any new instrument should either target or have preferential conditions for specific types of investments, particularly green investments, digitalization, organic production, etc., and be aligned with the new CAP Strategic Plan's objectives.
- The provision of stand-alone working capital finance allowed by the new EAFRD rules for 2021-2027 programming period can be a turning point for many farms facing price fluctuations and volatility. This could have an important impact on the development and sustainability of agriculture if it can be provided at preferential conditions (e.g. at lower interest rates or with longer grace periods).
- Technical assistance for the managing authority could be beneficial to support the process of implementation and monitoring of the guarantee instrument. A technical support component to help farmers develop their business plans, could be considered as part of any new instrument.

Financing gap for the agri-food sector in Belgium

Overall, gross investment in the Belgium agri-food sector increased significantly over the period 2008-2017, rising from EUR 3.1 billion to EUR 5.3 billion. Investments have mainly been driven by production efficiency improvements, maintaining of export market share, and adaptation to higher safety, energy, and environmental standards. Agri-food enterprises invested in upgrading their equipment, in response to higher input costs (such as energy), and a shortage of skilled work force. Export markets are key engines of activity and growth of the sector. Finally, although greening of the value chain is not new, this process continues to require investments.

The agri-food sector has access to a good supply of finance. Conditions in the financing market support a strong supply of finance from the five main domestic banks. In addition, several public finance providers complement standard commercial lending through their offers of a variety of financial products, sometimes supported by EU and nationally funded financial instruments.

Alongside the main structures supporting access to finance, notably through financial instruments, there is an active network of investment and financing firms throughout the country. These provide local professional contacts for companies looking for means to finance their multiple projects: creation, innovation, growth, investments, transmission, and export. Although their thematic area might vary according to the local context, they offer a similar suite of loans, guarantees and equity products

The agri-food survey did not identify major difficulties in access to finance in the sector. These findings were shared by interviewees from financial institutions and the industry. One potential area of supply side weakness arises from the characteristics of some prospective borrowers, who do not fit within standard criteria (terms and conditions) for receiving investment loans; for example, relating to required share of own equity they bring to the project, inability to find a third party to finance a mezzanine tranche, or weak cash flow.

The financing gap in the agri-food sector is estimated at EUR 232.2 million with unmet financing needs mostly concentrated in small sized firms (<50 employees) and with the largest gap for long-term loans. Reasons for firms to be discouraged from seeking financing are mainly related to their current situation, including:

- **Undercapitalisation and weak cash flows.** These represent key weaknesses for SMEs, and particularly for micro and small-sized enterprises, identified in Wallonia in 2014. Although the context has evolved positively since these constraints were first observed, they might still affect some SMEs in Belgium.
- **High risk levels of start-ups.** Combined with a lack of knowledge of public support possibilities, some enterprises can be discouraged from seeking finance due to their perceived high risk levels.

RECOMMENDATIONS

- A more detailed review of the current offering of public support instruments (nationally funded and from the ERDF) should be considered. Such a review should screen and assess access procedures in relation to the agri-food sector since, despite the availability of several instruments, the number of agri-food enterprises benefitting from these instruments seems to be limited.
- Especially, the adequacy and level of specialisation on agri-food of available public instruments to support the development of start-ups and address the limited capitalisation of small-sized enterprises should be evaluated, as these seem to be the main market weaknesses.

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

Approach

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

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

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

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

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

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

The financing gaps for the two sectors are calculated using data from the above-mentioned surveys and additional data and statistical indicators from Eurostat. The calculated financing gaps for the two sectors are independent from each other. The report also outlines the drivers of unmet demand for finance as identified from desk research, and from interviews with key stakeholders from the agriculture and agri-food sectors, government representatives, and financial institutions. 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 of the Belgian agriculture sector

- In 2019, the total output value of the sector was EUR 8.6 billion, with a gross value added of EUR 2.3 billion. While the output grew between 2014 and 2019, the gross value added did not change significantly.
- Like in most EU countries, the Belgian agriculture sector is undergoing a farm consolidation process characterised by reduction of the number of small-sized farms and increase of the average size of medium and large-sized farms.
- Fruits and vegetables are the sub-sectors with the largest output value, followed by livestock and milk.
- There is a contrast between farming in Flanders (more industrial) and Wallonia (more traditional).
- The overall number of people employed in agriculture in Belgium is shrinking by 10% every 5 years since 1990.
- Young farmers (under 40 years old) represented 10% of the farm population in 2017. Nearly 70% of farms were headed by a farmer aged 50 or above. Finding successors is a difficulty for those who would like to retire.
- The sector is well integrated with the international markets, through a good infrastructure and significant import and export flows.

This section presents the structure and performance of the primary agriculture sector in Belgium.

The gross value added (GVA) of the agriculture sector was EUR 2.3 billion in 2019 (EUR 1.9 billion in 2018)[3] and since 2010 had been fluctuating within the range of EUR 2 billion to EUR 2.4 billion, around a slightly negative trend. The GVA was derived from a total sectorial output value of EUR 8.6 billion in 2019.

***Table 1*:** Agricultural output and gross value added at basic price, 2010-2019, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gross value added	2 491	2 104	2 696	2 293	2 142	2 394	2 155	2 384	1 959	2 279
Agricultural Output	7 725	7 930	8 765	8 561	8 089	8 189	7 946	8 349	8 154	8 654

Source: Eurostat, 2019, Economic accounts for agriculture.

Fruits and vegetables, together with livestock and milk, are the largest segments of the Belgian agriculture according to their production value[4], but geographical disparities exist. The Northern part of the country (Flanders) produces more livestock, as well as fruit and vegetables, whereas the South (Wallonia) is more oriented towards crop farming, cereals and sugar beet. Cereals are prevalent in the centre of the country (upper part of Wallonia). Intensive livestock farms are common in Flanders, while more traditional and smaller livestock farms are found in the South of Wallonia. Wallonia counts 50% less large-sized farms

3 Eurostat, 2019, Economic accounts for agriculture (values at current price).
4 Eurostat, 2019, Economic accounts for agriculture (values at current price).

(with a Standard Output[5] (SO) above 250 000) than Flanders. Farm specialisation is more frequent in Flanders, where 88% of all farms have specialised in either livestock (50%, mostly cattle), arable farming (26%) or horticulture (12%). Overall, most of the Belgian total output value comes from Flanders, which accounted in 2017 for 70% of the vegetal output and 75% of the animal production[6].

The sector has undergone a structural change during the past decade. In 2017, Flanders had 23 225 agricultural businesses, while Wallonia counted 12 632 holdings[7]. The proportion of medium-sized farms in Belgium (between 20 and 100 hectares) is above the European average (53% of farms vs 31%)[8]. The number of small-sized farms is reducing, while the average size of medium and large-sized farms is growing. In 2016, the sector had about 800 farms less than in 2013, a net reduction of 2.1%, and about 5 000 farms disappeared between 2010 and 2013 (a reduction of about 10%). These reductions occurred in the medium or small-sized farms category. The number of large-sized farms grew by 13% between 2013 and 2016[9]. The structural change is driven by a decline in profitability, the availability of better performing farming technology and economies of scale through larger production operations.

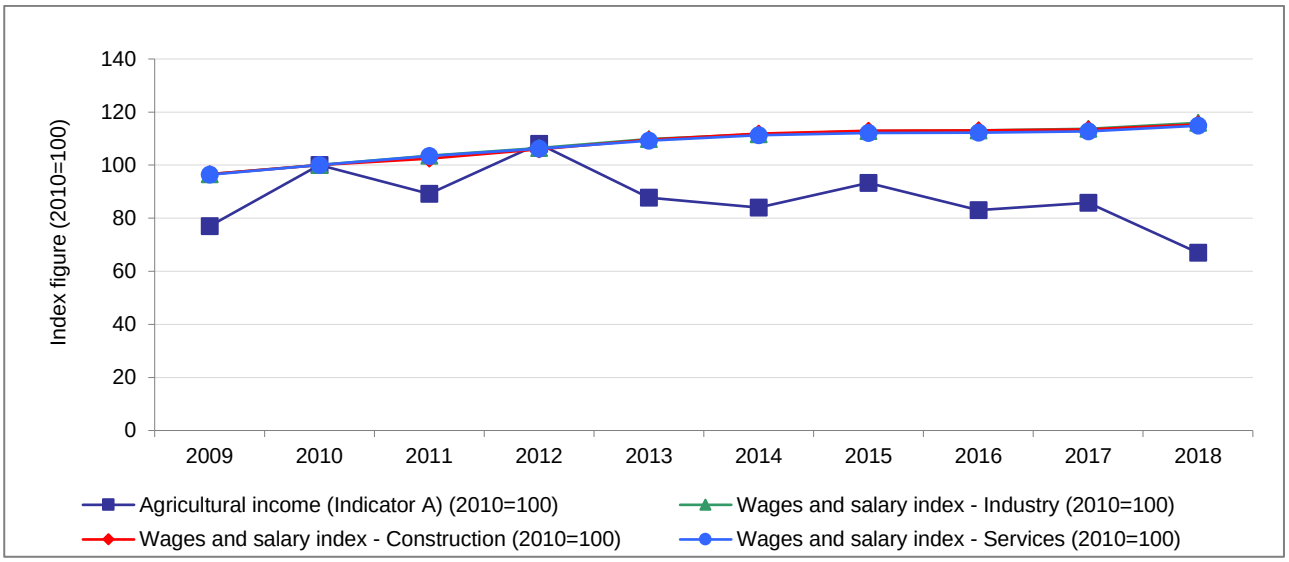
In 2016, there were 17 454 full time farmers in Wallonia and 10 656 in Flanders. When adding to these the family members, part-time farmers, and agricultural workers, the total agricultural employment in Belgium reaches 65 177 individuals in 2016. Available national statistics[10] indicate that the overall number of people employed in agriculture in Belgium is shrinking by 10% every five years since 1990.

Only 10% of the farmers were younger than 40 years old[11] in 2016, while nearly 70% of all farms were managed by a farmer aged 50 years or above, and among those, 16% were over 65 years old. Access to land has been identified as one of the main difficulties faced by young farmers[12], which is compounded by high entry barriers arising from land and equipment price inflation, as well as from low returns on investment. The low entry rates of young farmers are also supported by empirical data showing that only 16% of the farmers aged 50 years or above have an identified a successor to take over their farm.[13] This amounts to 30% of all farms in Belgium without successors in 2016 (10 561), and it represents a 7% increase from 2013. Farms with identified successors tend to be larger farms in the Walloon region[14]. These conditions suggest that the farm consolidation process in the sector will continue, perhaps at an accelerated pace in the next decade, and are symptomatic of the need for new entrants and stronger generational renewal.

The sector is well integrated with the international markets. Although agriculture is a minor part of the Belgian economy, representing around 0.7% of total value added, many sub-sectors are well integrated with the international markets (e.g. cereals, sugar beet, meat, milk, oilseeds). This integration reflects an advanced development of commercialisation infrastructures, the proximity of a main European port - Antwerp, and connections to the agri-food processing value chain layer.

5 The standard output (SO) of an agricultural product (crop or livestock) is the average monetary value of the agriculture output at farm-gate price in Euro.
6 Eurostat, 2018, Economic Accounts.
7 Statbel, 2019.
8 *fi-compass* survey.
9 Eurostat.
10 Statbel 2019, https://statbel.fgov.be/fr/themes/agriculture-peche/exploitations-agricoles-et-horticoles/plus.
11 Eurostat, 2018, Farm structure survey 2016, https://ec.europa.eu/eurostat/documents/2995521/9028470/5-28062018-AP-EN.pdf/8d97f49b-81c0-4f87-bdde-03fe8c3b8ec2.
12 European Commission, 2015, Young farmers' needs, https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2015/young-farmers/country-reports/annex-i.2-belgium.pdf.
13 Statbel, 2018, https://statbel.fgov.be/nl/nieuws/steeds-meer-landbouwers-vinden-geen-opvolger.
14 The average size of farms with a presumed successor is 74 ha compared to 36 ha for farms with no presumed successor, while the corresponding averages for Flanders are 36 ha and 15 ha.

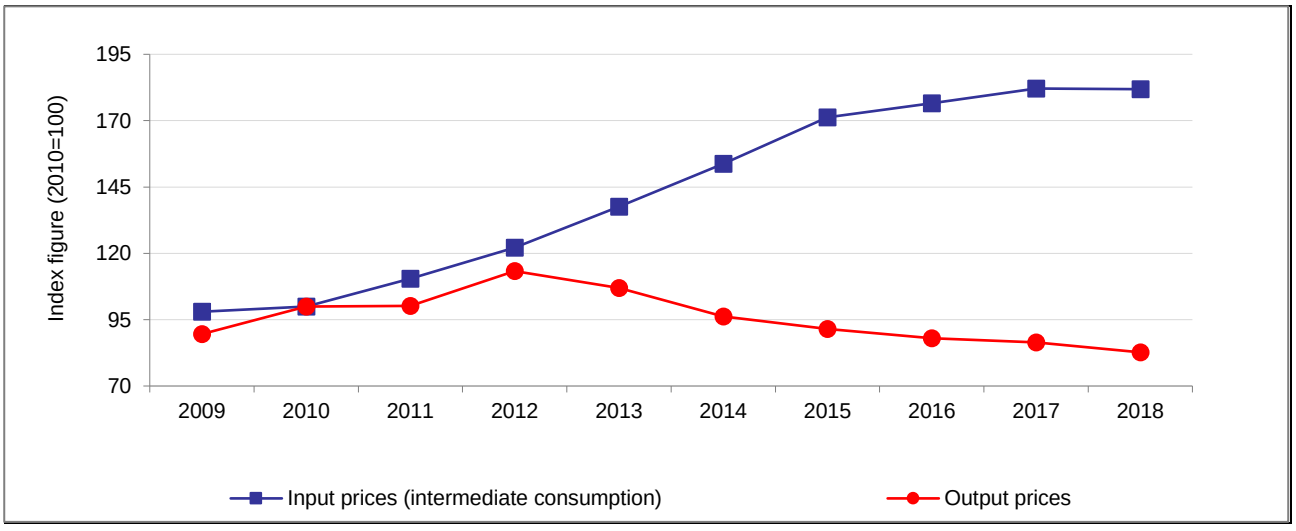
Figure 1: Evolution of agricultural income compared to wages and salaries in other sectors, 2009-2018



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

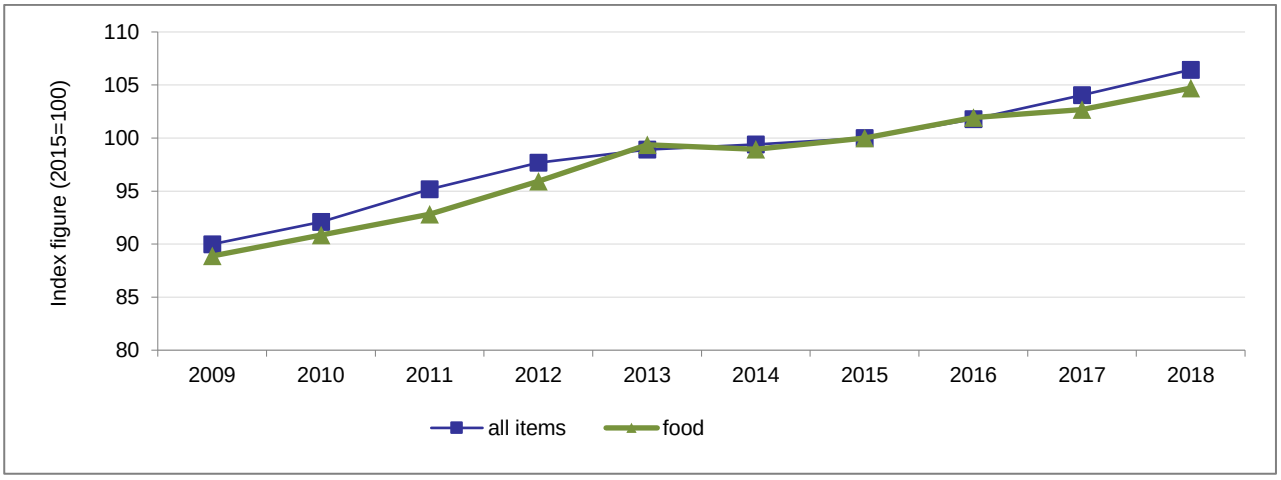
Agricultural income declined with more than 30% between 2012 and 2018, in contrast with the gradual increase of salaries in other economic sectors (Figure 1). This is largely explained by the contraction of the profits of the sector represented in Figure 2 and Figure 3. Although food prices have broadly moved in line with the general inflation, input and output prices for agriculture have evolved in opposite directions after 2012. As a result, farm profits have been squeezed significantly.

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



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

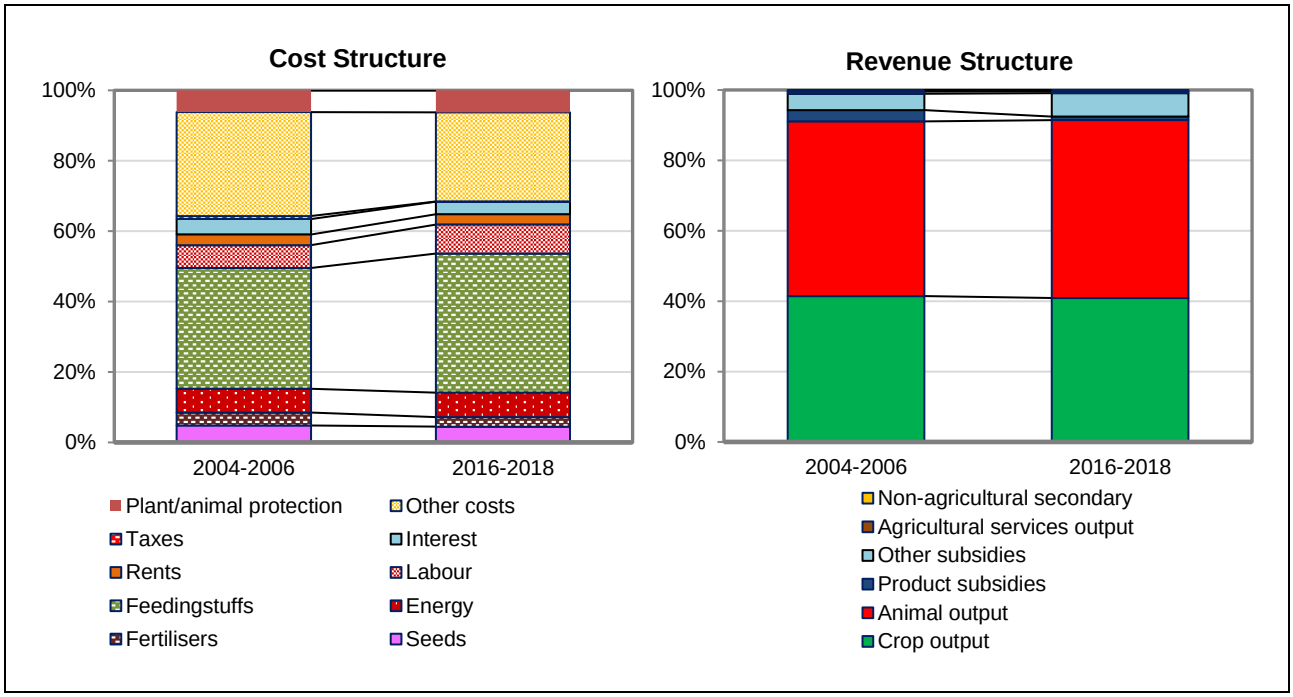
Figure 3: Evolution of harmonised index of consumers prices, 2009-2018



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

Over the course of ten years, the relative share of fending stuffs costs and labour grew in the overall cost structure of the sector (Figure 4). The revenue structure did not change significantly, apart from a reduction of product subsidies compensated by an increase of direct subsidies, explained by the evolution of the CAP support.

Figure 4: Agricultural income – cost and revenue structures in Belgium, 2004-2018



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

Statistical factsheet Belgium, 2019

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

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

This section describes the drivers of demand for finance in the agriculture sector and analyses the met and unmet demand. It seeks to identify the main reasons for farms to request financing and the agriculture sub-sectors showing the largest need for finance. The section also provides an analysis of the type of producers that face the greatest constraints to accessing credit. The examination of the demand for agricultural finance is based on the findings from the *fi-compass* survey results of 350 Belgian 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 Belgian agriculture sector

- Gross Fixed Capital Formation stagnated between 2012 and 2018 and was EUR 1.1 billion in 2018. Nevertheless, this represents approximately 55-60% of the GVA, and is significantly above the EU 28 average (around 30%).
- The demand for finance is underpinned by the modernisation of production equipment, consolidation of farm holdings, and expansion of production.
- Pig farms have the most need for finance and the highest loan to value ratios.
- Vegetables and organic production represent a smaller share of the total production value, but they represent a rapidly growing part of the demand for finance.
- Investments are mainly channelled to new machinery and new infrastructures.
- The largest demand for finance stems from the Flanders region, which has more intensive farming.
- Young farmers constitute a major component of the loan demand, despite their low share in the farm population.
- Through its contribution to incomes, balance sheet liquidity and investments, CAP support facilitates farmers' access to finance.
- More than a third of the Belgian farmers (35.6%) sought finance in 2017, and the typical financing pattern observed is a mix of long-term lending and credit lines.
- The unmet demand for finance is estimated at EUR 614.3 million.
- A significant share of the unmet demand comes from farmers, who did not apply for finance because of fear of a possible rejection. This is mainly driven by high levels of existing debt and lack of collateral, insufficient projected cash flows, and low financial literacy of the farmers.
- The main reasons for rejections of loan or credit lines application are: (i) risk levels of specific sub-sectors; (ii) economic non-viability of the farm; (iii) lack of collateral and (iv) credit history of the applicants.

2.2.1. Drivers of total demand for finance

Gross Fixed Capital Formation (GFCF)[15] in the Belgian agriculture sector stagnated between 2012 and 2018[16] (Table 2). After an increasing trend observed between year 2009 and 2011, in which investment levels

15 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.

16 Eurostat, 2019, Agricultural Economic Accounts.

peaked at EUR 1.3 billion, GFCF reduced gradually until 2013, and remained stable since then, reaching EUR 1.1 billion in 2018. This represents approximately 55-60% of the GVA, and it is significantly above the EU 28 average (around 30%), indicating an overall positive investment attitude among the Belgian farmers compared to its European peers. In 2018, the GFCF in agricultural products[17] represented 2% of the capital formation in the sector (EUR 24.3 million), whereas non-agricultural products (such as buildings, machinery and equipment) accounted for almost 98% (approximately, EUR 1 billion). In particular, the highest level of investments was devoted to capacity expansion, with about EUR 321 million invested in machine and equipment in 2018[18] (Table 2).

Table 2: Gross Fixed Capital Formation in the Belgian agriculture sector, 2009-2018, EUR million

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Agricultural Products	**22.8**	**40.7**	**30.2**	**12.4**	**7.9**	**51.3**	**23.8**	**23.8**	**22.8**	**24.3**
Animals	-6.1	11.8	1.3	-16.4	-20.9	22.4	-5.05	-5.05	-6.08	-4.5
Plantations	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9
Non-Agricultural Products	**1 146.4**	**1 175.3**	**1 304.1**	**1 094.2**	**989.1**	**1 009**	**1 007.3**	**1 004.2**	**1 087.3**	**1 090.1**
Materials	576	590	656.3	545.3	489.2	498.4	496.1	493.2	535.2	535.2
Buildings	396	405.7	451.2	374.9	336.4	342.6	341.1	339.1	367.9	367.9
Other	174.3	179.5	196.5	173.8	163.5	167.9	169.9	171.9	184.1	187
Total GFCF	1 169.2	1 216.1	1 334.4	1 106.6	997	1 060.3	1 031.1	1 028.1	1 110.1	1 114.5

Source: Eurostat, Agricultural Economic Accounts (values at current prices), 2019.

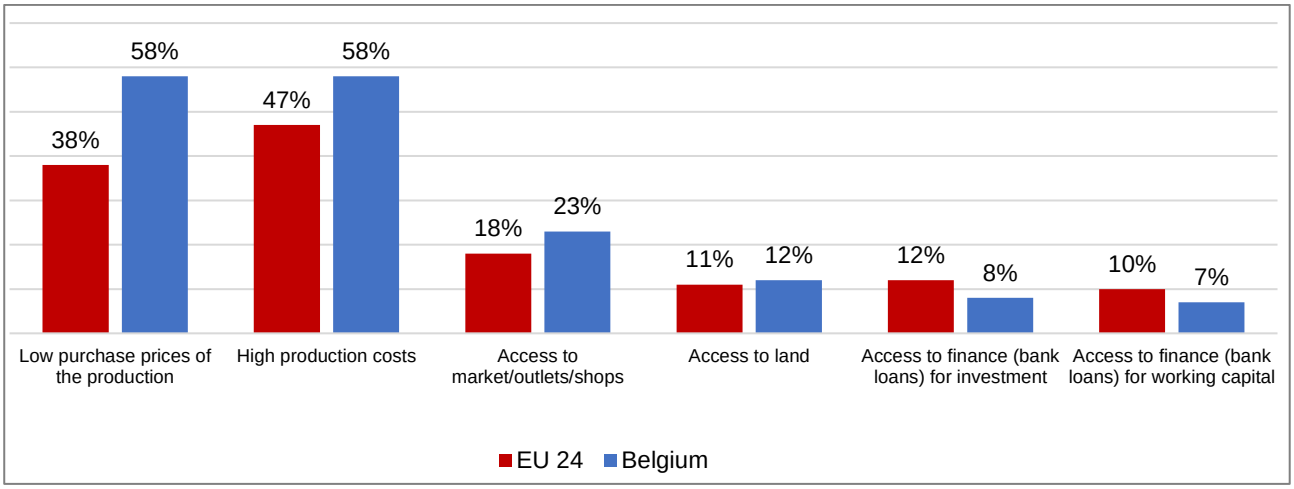
High cost of production and low purchase prices were the main challenges faced by Belgian farmers in 2017. According to the *fi-compass* survey, more than half of the agricultural holdings (58%) experienced difficulties related to the high cost of production and low sales prices (Figure 5). About 35% of the farmers reported a slight decrease in their selling prices, whereas more than 53% experienced an increase in the cost of production (Figure 5).

Land and equipment price inflation is pronounced, with respectively 6% and 7% between 2015 and 2018[19], but the highest increase has been in energy costs (35% between 2015 and 2018). All these changes contributed to the increased production costs per unit and reduced profits.

Access to markets is another area of difficulty, reported by 23% of the farmers surveyed by the *fi-compass* survey. In the fruit and vegetables segment, for example, this might partly reflect the difficulty small-sized farms encounter in meeting the volume and prices requirements of retailers with a strong market position[20].

17 The asset category, which includes animals and plantations.
18 Eurostat, 2019, Agricultural Economic Accounts.
19 Statbel, 2019.
20 According to interviews with producer associations.

Figure 5: Difficulties experienced by farmers in 2017



Source: fi-compass survey.

In recent years, the sector has been affected by international markets movements and climatic shocks. There was a pronounced decline in the bovine meat price across the period from 2015-2017[21]. After lifting the production quotas, sugar prices bottomed in 2017, leading to a 22% reduction of sugar beet prices that was only partly compensated by improved yields. The potato sub-sector suffered a 32% price reduction in 2017 driven by international market movements and strong production in Belgium[22]. Consequently, both the potato and sugar beet sub-sectors saw a reduction in the number of active small-sized farms, who were particularly affected by the lower profitability. Nevertheless, despite lower prices, the potato sub-sector showed strong growth driven by demand from the processing industry, and domestic and foreign consumer markets. The domestic production meets only 88% of the industry's demand, the rest being covered by import of fresh potatoes.

Agricultural investments are taking place in a context of modernisation and structural change of the sector. Their multiple underpinning dynamics can be summarised as follows:

- **Modernisation.** This implies the purchase of new machinery and the upgrade of old infrastructure. This driver of the demand for finance is underpinned by the need to remain competitive on the global markets and cope with lower output prices faced by some sub-sectors.
- **Consolidation.** Generational renewal and the aggregation of smaller farms (or growth of the medium and large-sized farms in a stable market) create a strong demand for finance.
- **Growth of specific sub-sectors**. Some segments of the sector need to finance a demand-driven growth. Those segments that need capacity expansion to increase their output volume include, among others, fruits and vegetables production, as well as organic types of products.

In 2017, the demand for agricultural finance was mainly driven by investments in new machinery and new infrastructure. The majority (76%) of Belgian farmers who applied for a loan in 2017 sought finance for the purchase of new and modern machineries and equipment (Figure 6). Equipment upgrade and digitalisation is expected to contribute to the increase of the farmers' loan demand in the coming years, but not to

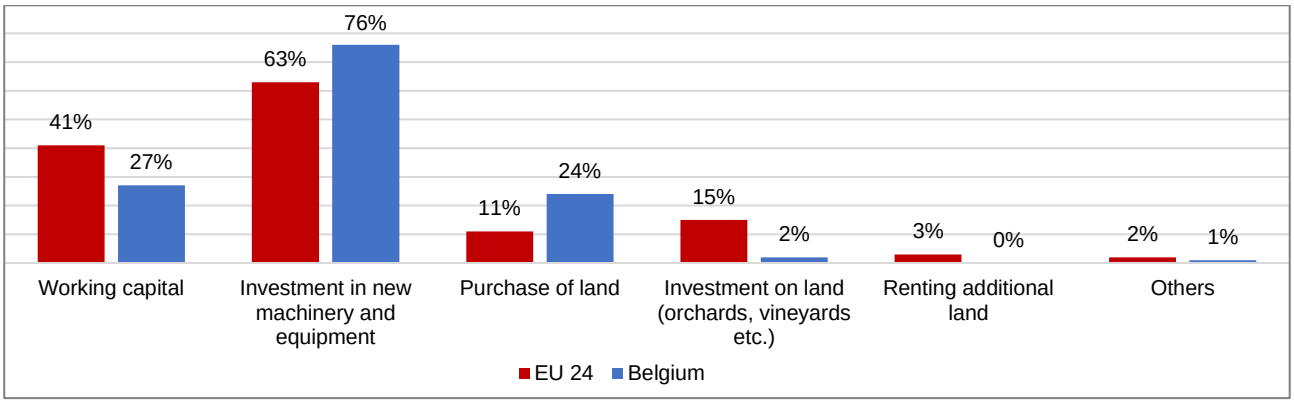
21 Statbel, 2018 https://statbel.fgov.be/en/themes/agriculture-fishery/agricultural-prices#figures.

22 Statbel, 2017, https://statbel.fgov.be/sites/default/files/files/documents/landbouw/8.1%20Land- %20en%20tuinbouwbedrijven/DBREF-L05-2017-TAB-A-FR.xls.

significantly shift the overall trend in demand for finance. CBC bank estimated that digitalisation has a strong potential for improving productivity.[23] Adoption of new production practices such as using drones, precision farming and other digital tools has been slow in Belgium and remains mostly confined to large-sized farms as their use is most beneficial in high value added or large-scale activities. So far, new technologies have been implemented mainly after full amortisation of the old equipment. However, the adoption of these new techniques might accelerate in the near future as rapid digitalisation might emerge, especially in Flanders and through the younger farming generation. A survey[24] conducted by the research centre ILVO found that 57% of the responding farms either already apply precision farming in 2018 or will most likely do so within a period of five years. The largest farms however have already reached an advanced level of automation. Sensor and Global Positioning System (GPS) based digital innovations (e.g. assisted driving, data collection) have reached a mature level, but more innovations are expected to come from the Internet of Things (IoT), satellite imagery based services, advisory platforms, drone technologies and robotics.

Purchase and investments in land (e.g. soil upgrade) are central to the financing needs of the primary agriculture sector. According to the *fi-compass* survey, it is the second main purpose for investment loans and 24% of the agricultural holdings in Belgium sought finance for it (Figure 6). These investments characterise the main needs of holdings with growing size, young farmers, and new entrants. The average arable land price in Wallonia was EUR 37 342 per ha in 2017[25], and grazing land was EUR 30 829 per ha. In 2017, 45% of the sales of agricultural land in Wallonia were to non-agricultural buyers. This suggests that the agricultural land market is under pressure, especially in the centre of the country as land investors may become a critical factor shaping production costs. An active rental market exists for arable land and pastures, but inflation has driven the rental prices up. In 2018 the annual average rental price was EUR 305 per hectare of arable land, and EUR 269 per hectare of pastures[26]. These prices have increased by respectively 70% and 62% during the last 20 years, and the increase is stronger in Flanders.

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



Source: fi-compass survey.

Young farmers constitute a major component of loan demand. As described earlier, young farmers face significant entry barriers, but will have to continue to take over farms as the overall farm population is ageing faster than the entry rate. Young farmers typically have to take over farms with assets between EUR 100 000 and EUR 500 000. In 2016, 69% of the farms were headed by farmers above 50 years old. If it is assumed

23 CBC Banque, 2017, Recolte et Gestion N. 44, https://www.cbc.be/content/dam/kbcondernemers/F- CBC/Articles/Recole-gestion/CBC_Recolte-et-Gestion_44_janvier-2017.pdf.

24 Department of Agriculture and Fishing, 2018, Application of precision farming techniques, https://lv.vlaanderen.be/nl/voorlichting-info/publicaties-cijfers/studies/innovatie-en-toekomst/toepassing-van.

25 Observatoire du foncier, rapport 2018, https://agriculture.wallonie.be/documents/20182/38860/rapport+2018+observatoire+foncier+mise+en+ligne.pdf/0404f357-2c9d-491b-b1ad-eff96eaed431.

26 Statbel 2019, https://statbel.fgov.be/fr/themes/agriculture-peche/fermages-dans-lagriculture.

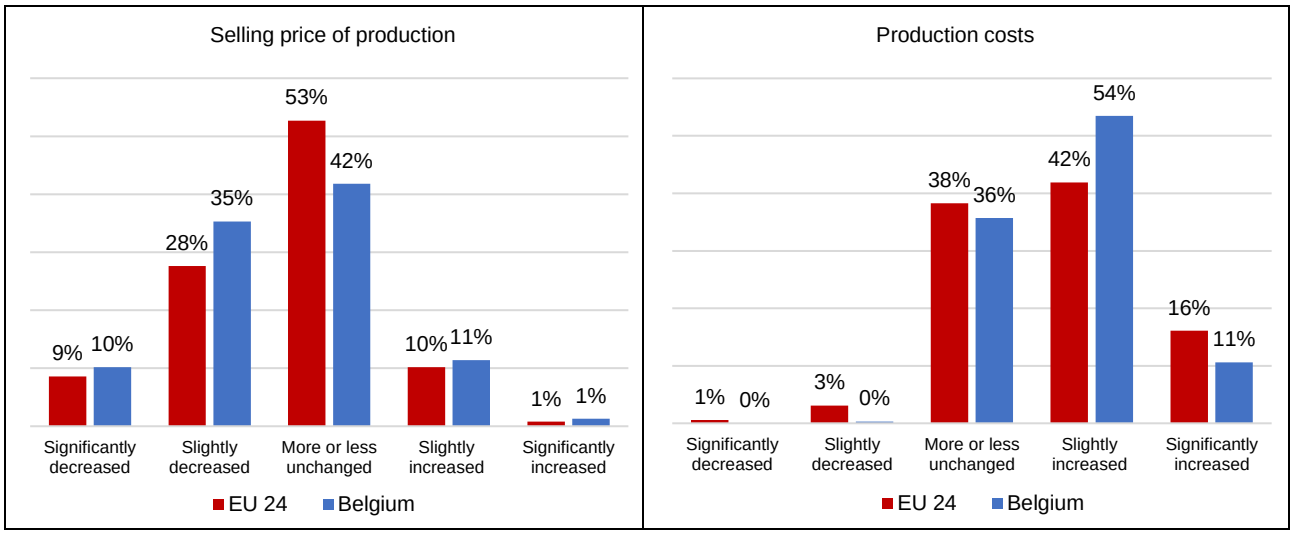
that (i) around 50% of those farmers (of above 50 years) would continue their activity after 2030, and (ii) that the remaining 10 000 farms would either be bought by young farmers, consolidated into existing holdings, or (iii) their assets would be split between existing farms, the approximate figure that would be needed for buying out these assets from the retiring in 2020-2030 farm generation can be calculated to roughly EUR 1 to 5 billion. In addition to this initial investment, significant modernisation investments would also require financing.

Cattle, pig and poultry sub-sectors remain the lead components of loan demand in Belgium, but beef producers are shifting their activities. Beef production value declined with 6% between 2015 and 2018 and the total liability for the beef specialist sub-sector also contracted. The decline is foreseen to continue in the next few years as investments in the bovine sector are declining in Wallonia due to lower profitability and meat price volatility. This is particularly the case for small and medium-sized farms, which have a lower return on assets and the highest ratio of liabilities to assets, and therefore a lower solvency (Table 3). According to interviews with farmers' representatives, some livestock farmers are repurposing their land to crop production, when soil characteristics allow. This conversion might require upfront investments to update or change their equipment, but cultivation requires less investments over the long run. Other producers are shifting to mixed livestock production. Large, intensive cattle, pigs, and poultry farms on the other hand, and in contrast to their smaller more traditional counterparts, have the highest level of assets, liabilities and return on assets. These large-sized farms are foreseen to continue driving up the demand for finance. Field crop and other permanent crop farms feature lower return on assets, but are less leveraged, with both less assets and less liabilities on average (Table 3).

Some sub-sectors have seen their turnover decline in recent years, but this has not led to a significant decline in their loan demand. The overall loan demand might be assessed by examining the trends in liabilities on balance sheets reported by the FADN dataset. Dairy farms, livestock producers and field crop farms make up for the bulk of the liabilities held by the agriculture sector. Overall, a spike was registered in 2015, driven by dairy farms, as well as pig and poultry producers. Other sectoral variations include:

- Cereals and grains output value declined between 2015 and 2018, but the total outstanding loan volume of these farms remained stable with a compounded annual growth rate of 0.5%.
- The total output value of pig production declined, but poultry output significantly increased, which was associated with an overall strong growth of loans to pigs and poultry specialist farms.
- Loan demand from mixed livestock farms also increased around 7% annually during 2014-2017.
- The share of fruit producers' liabilities remained stable and low.
- The horticulture segment reduced its liabilities by 4% annually.

Figure 7: Change in farms' key economic indicators, 2017



Source: fi-compass survey.

Table 3: Market assessment indicators for medium (M) and large (L) farms, 2017

	Field crops		Horticulture		Other permanent crops		Milk		Other grazing livestock		Granivores		Mixed	
	M	L	M	L	M	L	M	L	M	L	M	L	M	L
Assets EUR million	0.72	1.6	0.70	2.0	0.79	2.2	0.94	2.2	0.73	2.4	0.77	2.4	0.99	2.4
Liabilities EUR million	0.15	0.34	0.10	0.51	0.20	0.53	0.19	0.65	0.11	0.41	0.12	0.82	0.17	0.67
Solvency ratio %	4.6	4.9	6.8	3.9	3.9	4.2	5.1	3.4	6.5	5.9	6.5	2.9	5.7	3.6
Net worth EUR million	0.56	1.3	0.60	1.5	0.59	1.7	0.75	1.6	0.62	2.0	0.65	1.6	0.81	1.8
Net valued added EUR million	0.06	0.18	0.08	0.36	0.08	0.47	0.09	0.23	0.04	0.27	0.07	0.31	0.07	0.21
Return on Assets %	5	7	8	8	3	11	8	9	4	9	9	12	5	7

Source: Obtained by averaging data from FADN, 2018, for medium-sized farms (from EUR 25 to EUR 500 000 of standard output) and large-sized farms (above EUR 500 000 of standard output). See Commission Regulation (EC) No 1242/2008 for farm typology.

Although it represents a lower share of the total loan demand than the livestock sub-sector, the horticulture segment significantly contributes to the total demand for finance. Fresh vegetables output value displayed a marked increase of 10.6% between 2015 and 2018, and the total liability of the horticulture sub-sector decreased by 4.3% annually, before stabilising at a lower level in 2017. The sub-sector has a high return on assets and is relatively less leveraged.

Organic farming is growing fast in both vegetables and animal production, sustained by consumer demand, policy support and a slightly higher profitability[27]. The total number of animals registered as organic increased by 15% in 2018[28]. The Belgian consumer market for organic products continues to grow: total spending on organic products by Belgian families increased by 15% in 2018 to reach EUR 760 million. Organic farming requires more land surface and higher labour input compared to conventional farming, which translates into higher financial needs (investments and working capital).

Two Rural Development Programmes (RDP) (for Flanders and Wallonia) will jointly contribute EUR 1.6 billion to the agriculture sector during the 2014-2020 period. In both RDP programmes Measure 4 Investment in physical assets is the largest budget line and is the main investment measure used by farmers. Sub-measure 4.1 Support for on-farm investments is budgeted with EUR 365.5 million in Flanders (total public funding, including EAFRD, national co-funding and top-up) and EUR 131 million for Wallonia.

Under sub-measure 6.1 Support for young farmers, Wallonia and Flanders implemented an installation aid package for young farmers. The Walloon and Flemish Rural Development Programmes for 2014-2020 created a system of development and installation aid in the agriculture sector, known as ADISA[29] in Wallonia and VLIF[30] in Flanders. Applications for start-up aid are ranked according to the quality of the project submitted,

27 The organic surface cultivated in Flanders grew to 7 913 hectares (+ 7% in 2018) and accounts for approximately 1.3% of the total Flemish agricultural area. The same surface was 5 343 hectares in 2015.

28 https://lv.vlaanderen.be/nl/voorlichting-info/publicaties-cijfers/studies/sectoren/de-biologische-landbouw-2018.

29 Système d'Aides au Développement et à l'Installation dans le secteur Agricole (ADISA). https://agriculture.wallonie.be/adisa. ADISA replaced the system of investment aid for agricultural development, known as ISA (Investments in the Agriculture sector). This came into force on 1 October 2015.

30 Vlaams Landbouwinvesteringsfonds (VLIF) https://lv.vlaanderen.be/nl/subsidies/vlif-steun-voor-de-land-en-tuinbouw.

the accompanying business plan, the type of investment, and the level of experience of the applicant. The best projects are selected for start-up support up to EUR 70 000 and/or a public guarantee (see section 2.3.1.2 for details). Flanders has a EUR 58.3 million envelope whereas Wallonia had a EUR 51.6 million budget.

The above sub-measures, alongside with sub-measure 4.2 for agri-food processors, are a barometer for the investment mood in a country and the ongoing processes in the two sectors. Implementation statistics (Table 2) suggest a strong interest from farmers for the public support, and willingness to invest. Their overall demand, if gauged by the proxy for all submitted applications, is by 30% to 50 % higher from what the managing authorities have offered through the grant calls. Even though this figure relates to all applications, before any administrative and eligible check, it is a good indicator for the investment demand.

In Flanders, by the end of 2018, for sub-measure 4.1, about 53% of the budget foreseen under P2a[31] was spent with 10 505 holdings receiving support for restructuring and modernisation. In addition, and also by the end of 2018, for specific investments targeting improving energy efficiency, about 35% of the budget was spent, supporting 2 159 projects. Last, but not least, 53% of the budget under the sub-measure targeting investments supporting the reduction of GHG /ammonia emissions, has also been spent.

The target in Wallonia is to reach 38 % of the agricultural holdings supported by investment in 2023.[32] At the end of 2018, 26 % of farms had already benefited from investment aid. These are mainly farms receiving investment aid approved in the programming period 2007-2013 and which are paid, in full or in part, with the budget of the new RDP 2014-2020. However, some investment projects on sub-measure 4.1 are starting to be finalised (about 6 %). At the time of writing, EUR 109 million had been announced under all grant calls for farm modernisation and about 3 935 applications were selected for support. A financing of EUR 47.2 million had not been satisfied, if considering demand from all applications, before administrative and eligibility checks.

In both cases - Flanders and Wallonia - implementation is steadily progressing and Belgian farmers are seeking finance.

As to the case of young farmers setting up for as farm managers for the first time, the situation is more balanced when looking at the support provided until the end of 2019 (sub-measure 6.1).[33] In Flanders, already 40% of the EUR 58.3 million had already been spent (by the end of 2018) and at the time of writing already 82% of the target for the number of young farmers receiving support for the whole period, is achieved (1 149 from 1 400). As the managing authority had launched calls for EUR 40 million, it still had a small budget left available for future calls under sub-measure 6.1. In a similar way, Wallonia had reached 39% of the planned target at the end of 2018 and had launched grant calls for young farmers under sub-measure 6.1 for 80% of the planned budget (EUR 40.3 million) and overall demand was slightly higher than what had been available (Table 4).

31 Priority 2, focus area 2A, and based on the text of the EAFRD Regulation 1305/2013 for 'improving the economic performance of all farms and facilitating farm restructuring and modernisation, notably with a view to increasing market participation and orientation as well as agricultural diversification'.

32 Since a beneficiary farm is counted only once during the period even if several aid awards are granted, the number of profitable farms is expected to grow rather slowly in the coming years.

33 To be noted that young farmers can also apply under Measure 4 as any other farmer.

Table 4: Implementation data on RDP Flanders and RDP Wallonia sub-measures 4.1 and 6.1, at the end of 2019

Sub-measure	**Total budget under all calls for applications (EUR million)**	**Total # of received applications**	**Total budget requested by all submitted applications for all calls (EUR million)**	**Total # of approved and supported applications from all calls**	**Total requested budget not being supported by all calls (EUR million)**
	A	B	C	D	(C-A)
	Flanders				
4.1 Investments in agricultural holdings	475.5	72 528	586.7	51 282	111.2
6.1 Support for young farmers	40.3	738	34.2	702	n.a.
	Wallonia				
4.1 Investments in agricultural holdings	108.9	5 711	156.1	3 935	47.2
6.1 Support for young farmers	43.2	723	50.6	598	7.4

Source: Flemish and Walloon Ministries for Agriculture, 2020, Preliminary data.

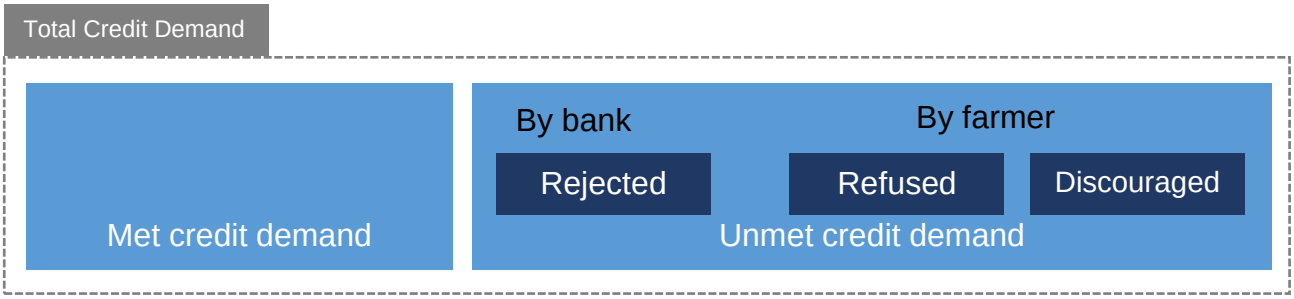
Note: The total amount requested is calculated based on all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not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

CAP support through direct payments and the EAFRD are important for the stable demand of farmers for bank finance. According to interviews with banks, these payments generate for each beneficiary a level of guaranteed income, and therefore, a guaranteed repayment capacity in case he/she applies for a loan. All interviews confirmed that the investment support and start-up grants are essential to the sector. They also often determine whether a new entrant can start a new farm.

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 8).

Figure 8: Schematic overview of the demand side of agriculture sector

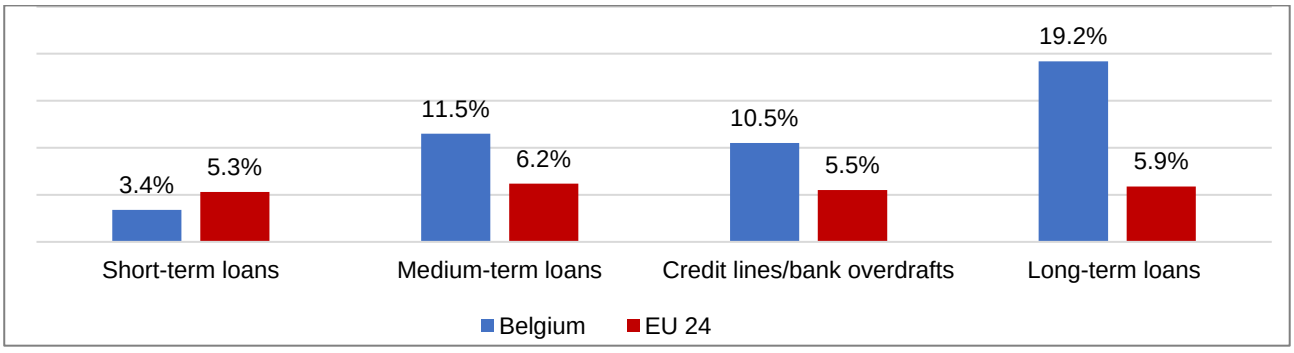


Source: Ecorys, 2019.

Based on the results of the *fi-compass* survey, the unmet demand for finance in the agriculture sector in Belgium is estimated at EUR 614.3 million.

More than one third of the farmers (35.6%) sought finance in 2017, and the typical financing pattern is a mix of long-term lending and credit lines. According to the *fi*-compass survey, long-term loans were the most demanded financing product (19.2%), followed by medium-term loans (11.5%) and credit lines/bank overdrafts (10.5%) (Figure 9). The rate of application in Belgium is higher than in the EU 24 for all products, except for short-term loans. Credit lines are generally used to cover short-term needs[34]. The average size of loan applications recorded by the survey ranged from EUR 50 000 for short-term loans to EUR 160 000 for long-term loans.

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

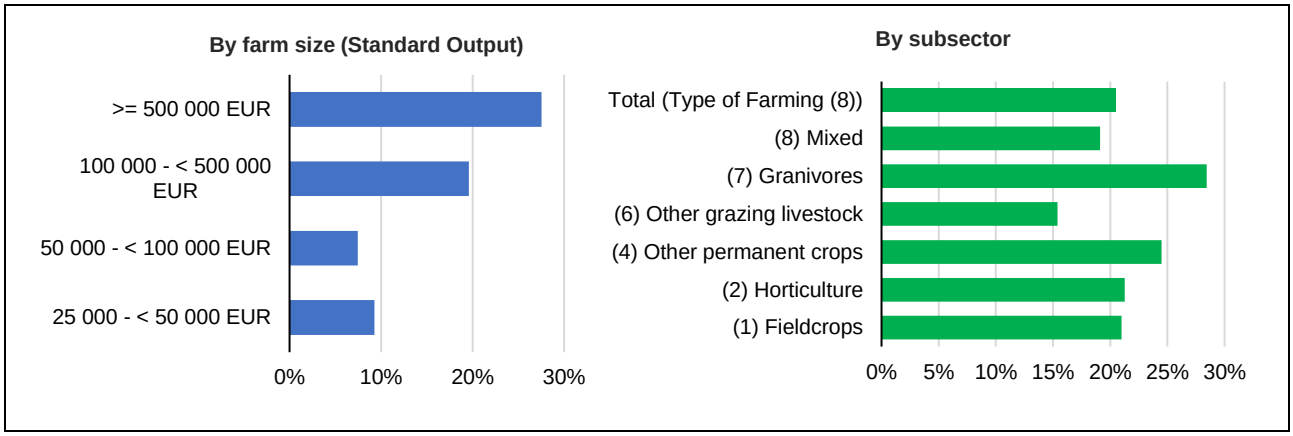


Source: fi-compass survey.

34 Interviews with banks.

Large-sized farms account for the largest part of the demand for finance, and they have 15 to 25 times more liabilities than small holdings. Small-sized farms (EUR 25 000 to EUR 50 000 SO[35]) generally have a loan to value ratio two to three times lower than large-sized farms (above EUR 500 000 SO) (Figure 10). In 2017, a large Belgian farm in the cereal sub-sector would typically have a 20% loan to value ratio, with an average medium to long-term outstanding loan value of EUR 318 814 on its balance sheet. This amount of liability is about 15 times more than the average for small field crop farms[36]. For large milk farms, the average medium to long-term liability reaches EUR 623 316 with a loan to value ratio of 29%. Pig farms have the highest average loan to value ratio.

Figure 10: Loan to value ratios in 2017



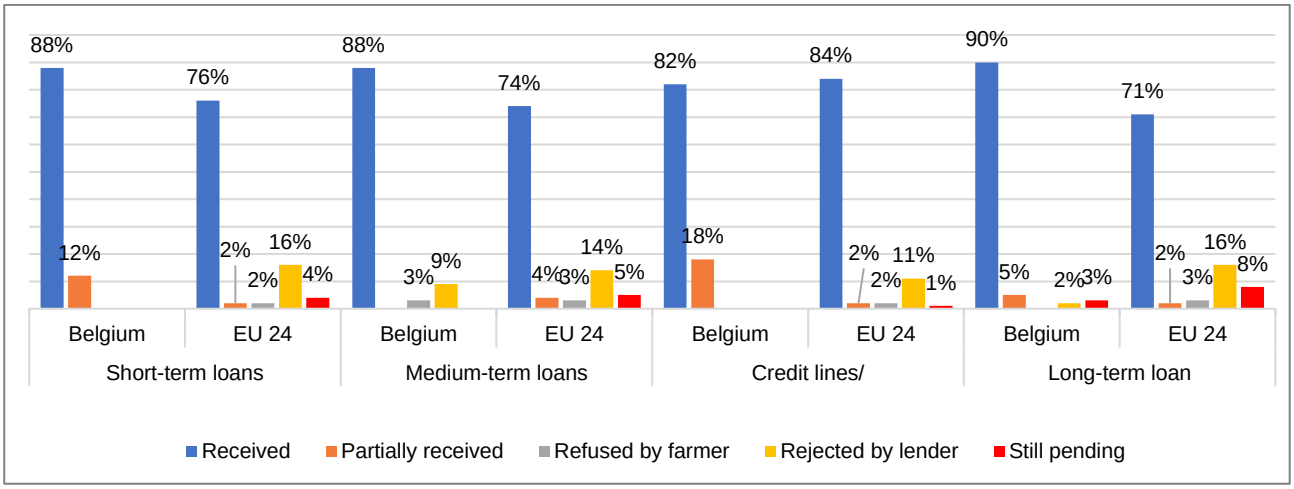
Source: Based on FADN 2018. Total liabilities over total assets.

Loan applications approval rates are high for all financing product types, compared to the EU 24 average. While the survey did not recorded rejected short-term loans nor credit lines applications, 9% of medium-term loans applications and 2% of long-term loans applications were rejected by the bank (Figure 11). Rather than flat out rejections, partial approval is a more frequent outcome of application in Belgium. One of the explanatory factors is that, more often than in other EU countries, banks tend to offer a lower amount to be borrowed instead of fully rejecting the application. In addition, according to interviews with banks and producer associations, loan applications are informally filtered by local financial advisors (accountants, local bank representatives). This is reflected in the rate of discouraged loan applications (see further down in this section).

35 The financing gap analysis in this report is presented across surface-based farm size classes. However, we also rely on the standard output break down of the FADN dataset.

36 FADN, 2018.

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



Source: fi-compass survey.

The drivers for loan applications rejections are closely related to the risk levels. Some farms face high risks because of the sub-sector they operate in, other farms have a high-risk profile due to their specific balance sheet situation, and finally, new entrants and young farmers might be deemed risky because they lack a credit history**:**

- **High investment risk levels.** Financial institutions in Belgium are more likely to reject loan applications because of the investment risk than in other developed EU countries. In the *fi-compass* survey, 62% of rejections where motivated by the investment risk (Figure 12). According to banks interviewed for this study, the general risk levels in some sub-sectors is an important factor of their assessment[37]. This was also confirmed by producer associations. In addition, start-ups and innovative investments might be considered risky, whenever banks do not have benchmark data to assess the investment project. Belgium has a growing start-up ecosystem[38] with projects on automation and precision agriculture, urban or indoor farming and organic production. These start-ups often present a high investment risk and need venture capital finance rather than bank loans.
- **Economic viability of the farm**. Economic viability is the one of the most important factors affecting lending decisions, according to interviews with banks. The projected ability to service the debt is the primary determinant of the financing decision. In 2018, the Ministry of Agriculture of Wallonia assessed the economic viability of Walloon farms based on a set of balance sheet indicators[39]. The crop sub-sector was found to have the highest proportion of viable farms, while milk[40] was the weakest sub-sector with close to 60% of farms facing medium to high viability risk. According to the same study, 40% of small-sized farms where facing high viability risk compared to only 10% of large and very large-sized farms. Large and very

37 Examples of sub-sectors with a higher risk profile include livestock breeding, dairy farmers, or sector recently affected by large output price variations. For instance, with the removal of the quota system, sugar beet farmers faced a difficult year in 2017 when historically low world sugar prices coincided with ongoing adjustment to the new market-based production decision mechanism. Similar difficulties were noted by the milk sub-sector in 2015-2016. Although the crisis ended in 2017 when prices reached their highest levels since 2015, it had left its mark on the balance sheet of most milk producers.

38 See https://data.startups.be/actors for examples.

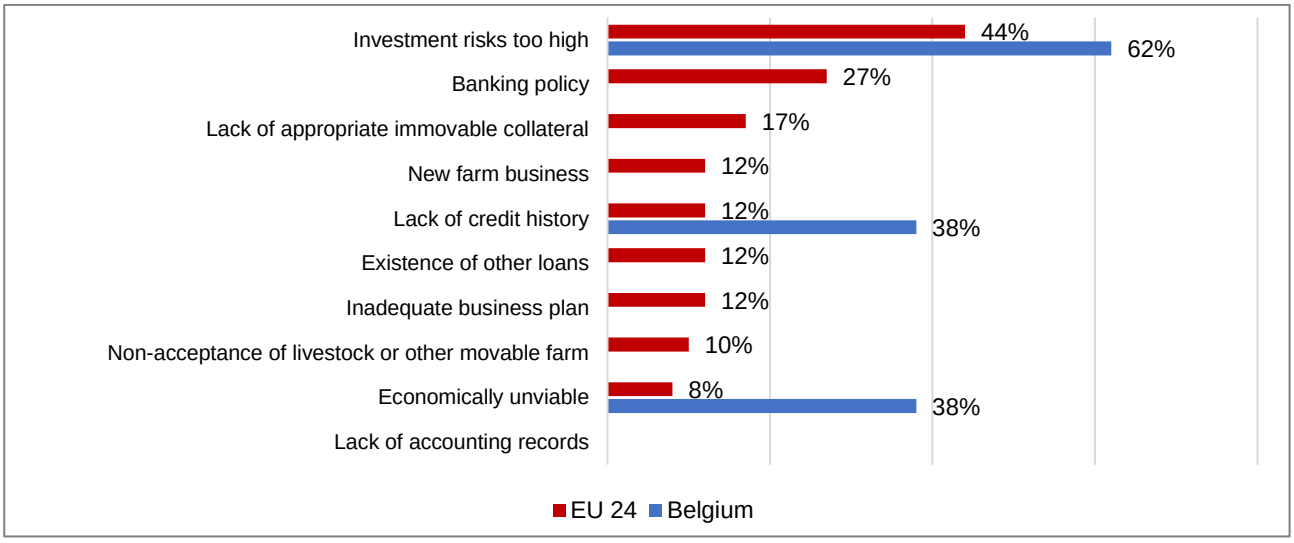
39 Miserque, O. and Marsin, JM., 2018, La viabilité des exploitations agricoles: détection des exploitations à risque. https://agriculture.wallonie.be/documents/20182/21858/La+viabilit%C3%A9+des+exploitations+agricoles.pdf/376f0f87-f9d0-4d08-84fe-2728a3dab6e2.

40 As the milk context has improved, it is likely that the meat sector would be shown to be most at risk if these indicators were recalculated for 2017-2018.

large-sized farms were also the categories with the highest ratio of farms with no viability risk. Over the last few years, higher needs for capital investments to maintain a competitive edge, low economic returns and the volatility of output prices has created a scissor effect of decreasing repayment capacity and higher financial needs that has led to increased farm exits and a higher vulnerability of small-sized farms.

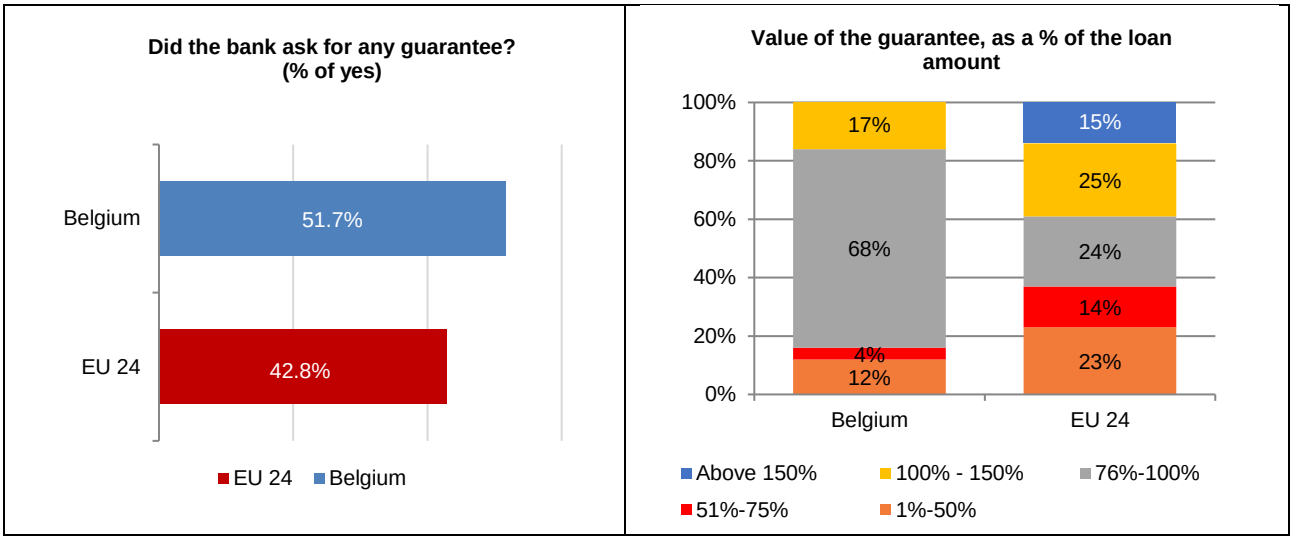
- **Lack of credit history of the applicant**. Credit risk assessment account for past lending experience and demonstrated business management capacity. Such credit history is generally difficult to prove for young farmers and particularly new entrants. According to the *fi-compass* survey, lack of credit history was the second driver of rejected loan or credit line applications in 2017.
- **Lack of collateral**. The ability to provide at least 75% of the loan value in collateral is critical to secure medium and especially long-term loans. According to the *fi-compass* survey, more Belgian farmers were asked to provide a guarantee to secure the loan than their European peers, and more than 85% were asked to provide a guarantee above 75% of the loan value.(Figure 13). When purchasing land or equipment investments, the loan can be mortgaged, and little additional guarantee is needed. However, according to interviews with banks and with producer associations, this is not the case for investments with little residual value (infrastructure buildings, greenhouses, trees, etc.). In such instance, collateral must come from a different source, such as pre-existing assets or family members. Consequently, according to interviews with banks and with producer associations, this constraint mostly affects new entrants which aim to start an activity in risky segments of the agriculture sector, such as fruit and vegetables, dairy, livestock.

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



Source: fi-compass survey.

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



Source: *fi-compass* survey.

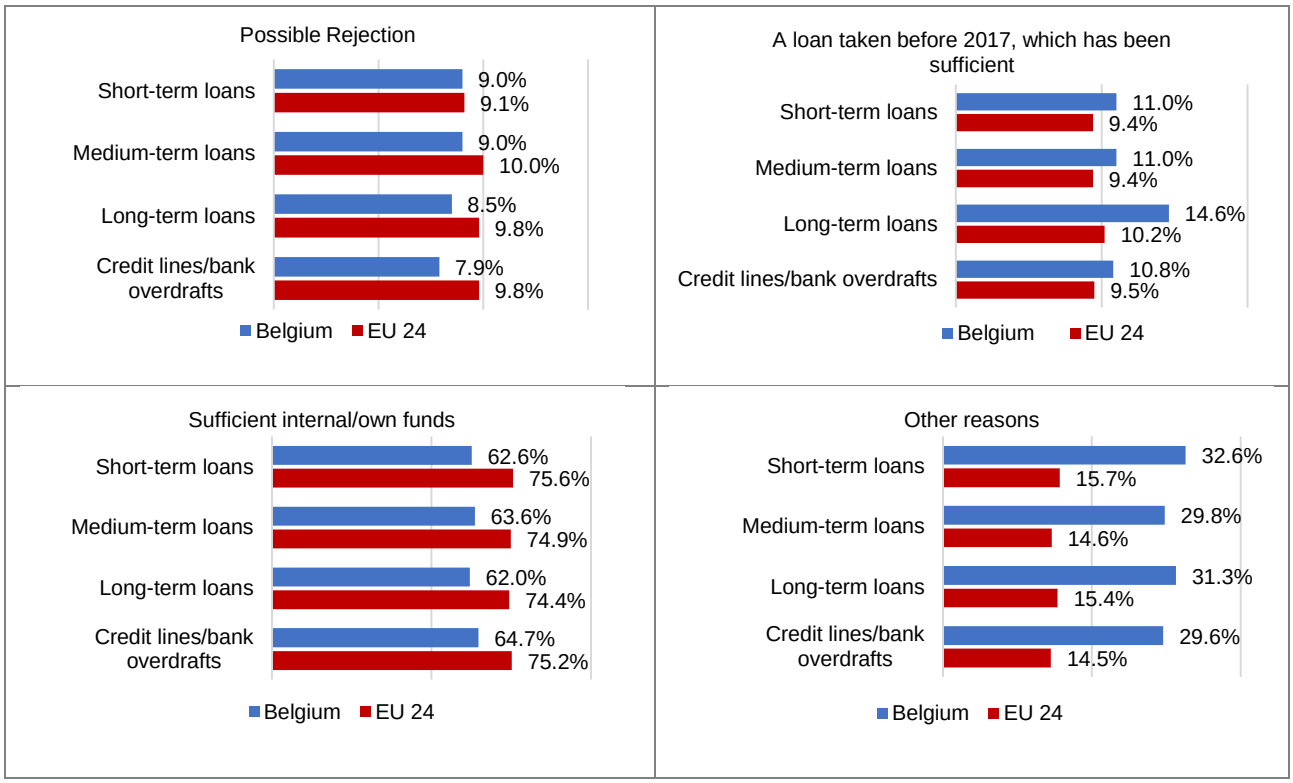
Discouraged farmers in the Belgian primary sector ranged between 8% and 9%, depending on the type of financing product. In 2017, the share of farmers who did not apply for finance because of fear of possible rejection was very close to the EU 24 average. The majority of farmers were discouraged to apply for short and medium-term bank loans (9%), followed by long-term investment loans and credit lines/bank overdrafts (8.5% and 7.9%, respectively) (Figure 14). These findings might be driven by:

- **High level of existing debt and lack of collateral**. Some farms might already hold high levels of liabilities, which prevents further borrowing, even though more capital is needed for productive investments. According to interviews with banks, such limits on the maximum financial leverage are more stringent in sub-sectors where assets have no or low residual value and cannot serve as collateral for guarantees (e.g.

fruit and vegetable producers with greenhouses and trees as their main asset). As discussed above, the ability to provide at least 75% of the loan value as collateral is critical to secure the loans[41].

- **Insufficient cash flow projections** flagged at an early stage in informal assessments. In most cases loan applications are informally filtered by local financial advisors (accountants, local bank representatives) before being put through a formal application procedure[42]. Difficulties to service the loan will always result in a recommendation not to present an application. Such difficulties might arise with projects with a low return on investment or sectors with more volatile output prices (i.e. low and/or uncertain margins, as in the dairy or livestock sectors in 2017 according to interviews with banks).
- **Low financial literacy.** Although not a common reason for not applying, a lack of knowledge of financing mechanisms and procedures, as well as low business planning skills might hinder some farmers. No financial training dedicated to farmers exist in Belgium. Most farmers rely on their accountant and their banker to assess their situation, manage their balance sheet, and obtain finance. Financial skills and skills related to applying for subsidies/grants/credits were identified as a key need for training by a survey[43] carried out by Ecorys in Belgium in 2015. Furthermore, only 20 to 30% of farmers apply for finance with a business plan, according to interviews with banks . An increased number and quality of business plans would improve access to finance.

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



Source: fi-compass survey.

41 According to interviews with banks and with producer associations.
42 Interviews with banks and producer organisations.
43 European Commission, 2015, Young farmers' needs, https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2015/young-farmers/country-reports/annex-i.2-belgium.pdf

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 Belgium 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 Belgian agriculture sector

- Five commercial banks are the main source of financing for the agriculture sector.
- Four of the main banks in the agricultural finance market offer products specifically tailored for agriculture (e.g. Agroflex loans, Agri-line, seasonal loans).
- Banks offer a variety of financing solutions, with different levels of flexibility and repayment mechanisms. The most common types of loans are provided to finance investment in machinery or equipment, and land acquisition, with a maturity between seven and 20 years.
- EAFRD investment support has a significant role in the financing of agriculture.
- A public guarantee scheme is available for young farmers for start-up loans, and for farmers in general for investments loans. However, during the 2014-2020 period, these guarantees were not used in Wallonia and only on a few instances in Flanders.
- The Flemish Agricultural Investment Fund (VLIF) has implemented a working capital guarantee in Flanders to support the sector during four crises.
- The volume of outstanding loans to the sector has consistently grown between 2010 and 2018. In 2018, the total outstanding loan volume to the primary sector (including fishery and forestry) was EUR 8.9 billion.
- No structural constraints were identified on the supply side of the agricultural financial market. Overall, the constraint in the supply of finance does not seem to lie in the volume of the offer as such, but in the adequacy between supply and demand for financing
- Credit history and financial data influences the supply of finance to young farmers, new entrants, and small-sized farms, with repayment capacity having a central role. Familial farm succession is a form of inter-generational risk management, which reduces the need for public guarantees and is a key pillar of young farmers' access to finance.
- Availability of collateral is another key factor providing access to bank lending.

2.3.1. Description of finance environment and funding availability

2.3.1.1. Finance providers

Commercial banks

Commercial banks are the main source of financing for the agriculture sector. Five banks share the bulk of the Belgian agricultural lending market. In Wallonia, the largest market share is with Crélan, followed by CBC Banque[44], then by ING and BNP Paribas Fortis sharing the remainder. In Flanders, KBC bank has the

44 KBC subsidiary.

highest market share, followed by Crélan, and ING. Crélan is particularly active on the agriculture lending market in Wallonia, and it also has a medium-sized market share in Flanders. In 2017, agriculture represented 13.39% of its loan portfolio[45], i.e. approximately EUR 1.9 billion.

Belgian banks, and especially banks with a focus on agriculture, have a strong rural network of local branches. Lending is often based on long-term relationships between banks and farmers. Between 70% and 95% of respondents to *the fi-compass* survey did not apply to more than one bank to get a loan. Most banks have a specialised department for agricultural credit analysis and validation, in combination with a specialised sales force.

Rural development support

Investment and start-up support (in the form of grants and a guarantee) are available in Flanders and Wallonia. Wallonia provides support for agricultural investments through the ADISA facility[46]. The Flemish Region also provides a similar type of support system through the VLIF[47].

Other suppliers of finance

The Société d'Investissement Agricole de Wallonie (SIAW) is a subsidiary of the Société d'Investissement Régionale de Wallonie (SRIW). This for-profit investment firm, partially owned by the public administration, provides access to finance to agricultural enterprises. Its initial purpose was to co-finance on-farm food processing projects, but it remains a marginal player in the primary sector.

Other suppliers of finance include crowdfunding platforms and NGOs. Aside from the public guarantee scheme, there is no other established financial instrument for the agriculture sector in Belgium. Some producers have turned to crowdfunding platforms such as MiiMOSA[48] to finance small projects, up to around EUR 30 000. Another novelty in the sector is the role cooperatives play, such as 'Terre en vue' in Wallonia and 'Landgenoten' in Flanders, which collect funds to buy land and facilitate young farmers' and new entrants' access to land, and the sustainability of agricultural land.

2.3.1.2. Financial products

The most common financial product is a standard investment loan with maturity of seven years for machinery and up to 20 years for land purchase. However, banks offer a variety of financing solutions, with different levels of flexibility and repayment mechanisms.

Long-term loans (> five years maturity). The most common form of long-term loan products are instalment loans, with scheduled, periodic repayments, and with fixed or indexed interest rate. When used to finance infrastructure investments (buildings such as barns, stables, storage rooms, etc.) these loans generally have a maturity from 15 to 20 years, depending on the economic life span of the project. Land acquisition loans are generally issued with a maturity of 20 years. When used to finance new machinery and equipment, these loans' repayment period is usually set to seven years for new material, and five years for a second-hand purchase.

For these types of investments, the banking sector also offers the possibility to use roll-over loans with medium to long-term maturities and short-term interest rate fixation. The capital can then be drawn in multiple tranches,

45 Crélan annual report, 2018, https://www.crelan.be/assets/2018-04/rapport_annuel2017.pdf.

46 Système d'Aides au Développement et à l'Installation dans le secteur Agricole (ADISA). https://agriculture.wallonie.be/adisa.

47 Vlaams Landbouwinvesteringsfonds (VLIF). https://lv.vlaanderen.be/nl/subsidies/vlif-steun/vlif-waarborgregeling.

48 MiiMOSA is a French crowdfunding platform launched in 2014 in France and in 2016 in Belgium. After 2.5 years of activity, the platform had channelled EUR 14 million in Belgium. https://www.miimosa.com/fr/lending_stats.

at variable interest rates depending on the EURIBOR, when the loan is 'rolled over' across the next period. Example of this flexible product for the agriculture sector is the Crélan roll-over credit. In 2018, the Créan roll-over had a minimum of EUR 25 000 for farmers whereas the KBC roll-over credit had a minimum amount of EUR 250 000, and the one from CBC, EUR 500 000. KCB and CBC however offer the Agroflex[49] investment loan that comes with a set of flexible grace periods ('jokers') to address financial difficulties that might arise from price volatility, climatic disturbances or unforeseeable circumstances. In addition, the loan can be drawn in multiple tranches (see paragraph on agricultural financial products further below).

Medium-term loans (1.5 to five years maturity). This lending timeframe is not particularly common in agriculture since it does not match the usual lifespan of most projects. A repayment period between two and five years can however be achieved by adjusting longer-term solutions to a shorter timespan (particularly the roll-over option). Another solution more suited to below-5-year lending is a 'bullet' loan. In this case, the capital is repaid in one instalment, when the loan matures.

Short-term loans (< 1.5 years maturity). Standard short-term loans with regular instalments, are not common but are often requested by farms facing financial difficulties. Short-term working capital needs are rather financed with "bullet" loans, where the capital is repaid in one instalment at the end of the contractual period. For instance, agricultural seasonal loans (e.g. those proposed by Crélan) are designed to finance the start of a crop cycle. The duration of this product is determined according to the crop, with a maximum of 12 months. The industry's rule of thumb is that working capital financing can reach up to EUR 500 per hectare for grain crops, and more for potato and vegetables. But these working capital loans generally do not cover more than 50% of the actual need. For livestock farms, short-term loans for working capital rarely go above EUR 15 000.

Credit lines and overdraft facilities. Credit lines are common means of finance for working capital. For example, the Agri-Line (Crélan, minimum EUR 12 500, for three to 12 months) can finance up to one year of working capital requirement in the form of a multiple drawdown[50] line of credit. Farmers can also request overdraft facilities (e.g. KBC Advance in Current Account, Crélan roll-over[51] credit).

Overdraft facilities aimed at farmers include products from KBC/CBC, Crélan. KBC and CBC offer a 'Livestock and Culture Credit' to meet temporary cash flow needs by allowing a debit balance within the limits of an agreed ceiling. Crélan offers a simple cash credit for farmers. BNP Paribas Fortis also provides an agricultural overdraft facility called 'Seasonal credit', which is a variation of its cash credit product.

Finally, revolving loans are overdraft facilities designed for high volumes of working capital financing. These are available to farmers but generally more suited for large-sized enterprises.

Leasing. Agricultural leasing represented 1.6% of all vehicle leasing[52] in Belgium in 2018. All main banks provide leasing solutions for agricultural machinery. Most farm equipment manufacturing firms also offer leasing (e.g. John Deer, New Holland, Class).

Most young farmers apply for financing close to 100% of the asset value [53]when taking over or establishing a farm. In generational transfer cases, banks work out an ad hoc combination of medium and long-term loans. The size of these loans are generally larger than the average loan volume taken out by other

49 KBC Bank, Verstrynge, Bart, 2019, Financing in volatile markets, Presentation during *fi-compass* conference Addressing price volatility and financing needs of young farmers and agriculture, Brussels, 29 April 2019, https://www.fi-compass.eu/sites/default/files/publications/Financing%20in%20volatile%20markets.pdf.

50 Farmers can draw multiple times from the line at their own convenience, up to the maximum agreed amount.

51 Rollover credits are more often used for investment purpose.

52 BLV/ABL, consulted webpage in January 2020. http://www.blv-abl.be/fr/statistiques/leasing-en-belgique/production-de-leasing-mobilier-selon-le-type-de-clients.

53 The young farms still has to pay for the taxes and transactions costs with own funding.

categories of farmers[54]. But their maturity remains linked to the estimated economic lifetime of the farm's assets.

Public guarantee schemes

In Flanders and in Wallonia, a public guarantee scheme is available for young farmers for start-up loans, and for farmers in general for investments loans, in combination or instead of the investment support from the RDP. They are funded from the regional governments' budgets. The two schemes are similar but implemented under two different regional regulations[55] and support systems. In both cases, the guarantee is complementary and supplemental. The advantage therefore lies in the level of collateral linked to the credit. If personal guarantees and, where applicable, joint guarantees from third parties, are insufficient, the public guarantee can supplement existing ones and give access to the loan. The public guarantee is available for young farmers (for start-up loans) and farmers (for investment loans) under the following parameters:

- The guarantees are issued for investment projects eligible for support under sub-measures 4.1 and 6.1. Applicants do not need to also apply for the RDP grant, but a combination is possible.
- The guarantees cover up to 75% (ADISA) or 80% (VLIF) of the loan amount, or up to EUR 800 000 (VLIF) or EUR 750 000 (ADISA).
- Maximum guarantee period of 10 years (which might be shorter than the maturity of the secured loan).
- For young farmers start-up loans, the guarantees are capped by the Gross Grant Equivalent (GGE) of EUR 70 000 foreseen under sub-measure 6.1.
- For investment loans, the guarantees are capped by the GGE of EUR 150 000 foreseen under sub-measure 4.1.
- They are supplemental guarantees that are established on top of other guarantees (mandatory condition).
- They are called by banks in case of default, after all other securities, and after notifying the managing authority.

However, these guarantees were not used in Wallonia[56] and only on a few instances in Flanders during the 2014-2020 period[57]. Between 2014 and 2016, a total of ten loans[58] were granted against a VLIF guarantee for an amount just below EUR 4 million. One factor explaining the low application numbers is the supplemental nature of the guarantee, which is only activated by banks after recovering all other securities[59]. Thus, the credit institution must call on all other securities it has a claim on, such as mortgages and other first loss guarantees. It is only after this condition has been met that it can request the public intervention. In addition, the bank cannot seize the amount recovered without notifying the administration. The final payment of the guarantee is only made to the bank after the completion of recovery procedures, which can take more than three years. In addition, the size and duration parameters might reduce the incentives to apply for a guarantee in a context,

54 Interviews with banks.

55 The regulation for the Flemish guarantee can be found at https://codex.vlaanderen.be/Portals/Codex/documenten/1026323.html#H1072881 for the Flemish guarantee and the equivalent Walloon regulation is accessible at https://agriculture.wallonie.be/documents/20182/21915/arrete_ministeriel_execution_aides_developpement_agricole.pdf/f5a5713b-1e64-4d4c-b692-f71bdcb4fad5.

56 Interview with the MA.

57 From VLIF activity reports up to 2019, available at https://lv.vlaanderen.be/nl/voorlichting-info/publicaties/investeren.

58 In five cases, a guarantee was granted on a start-up credit. The other five cases concerned agricultural investment loans.

59 The provision of collateral should be at least 40% of the new value of the immovable part of the investment project covered by a mortgage and the movable part by an agricultural privilege or property on the business, and for the remaining credit amount a mortgage authorisation given to the credit institution.

where most loans repayment periods are longer than 10 years and most investments projects much larger than EUR 800 000. Finally, most farmers, if selected from an RDP grant, prefer receiving the full aid amount in the form of a grant support, unaltered by the reduction entailed by the gross grant equivalent factored in the maximum grant amount calculation when a guarantee is also used. The grant is then used to improve working capital levels, and the resulting enhanced balance sheet can give access to a regular bank loan.

The guarantee scheme was used more often in previous programming periods, e.g. an outstanding guaranteed volume of EUR 121.86 million was reported by Wallonia in December 2015[60], and EUR 274.94 million in June 2002[61]. In the two previous programming periods, about one in four co-financed investment loans and three in four start-up loans were covered by the public guarantee in Wallonia[62].

The VLIF has implemented a set of temporary working capital guarantee measures in Flanders to support the sector during four crises (the Russian embargo, the Fipronil, the African swine fever, the pear and apple crises, and the COVID-19 pandemic). Before 2020, these guarantees where applied for in four instances (of which three were approved). The application rate under these schemes has been relatively low[63]. A potential reason for the low application rate is that the existence of a temporary guarantee signals a justified financial need, which lead banks to agree on debt restructuring measures or grace periods, according to interviews with the managing authorities. In addition, these guarantees were offered with a fee (0.225%+0.05% per year). The other parameters included:

- **Fipronil crisis.** Up to 80% of working capital loans from EUR 15 000 to EUR 140 000, for up to five years, for fipronil affected poultry farms[64].
- **African swine fever crisis**. Working capital loans guaranteed, for up to three years, up to the equivalent of 50% of the annual operating cost of pig farms in Flanders that are affected by liquidity shortages as a result of the African swine fever crisis[65].
- **Russian import ban and pear and apple crises (exceptional events).** Working capital loans guaranteed, for up to four years, up to a gross grant equivalent of EUR 15 000 and 50% of the annual operating cost of pig farms in Flanders that are affected by liquidity shortages as a result of exceptional events such as the Russian export ban[66].
- **COVID-19 crisis**. A guarantee for three years for working capital loans of up to seven years, for a maximum gross grant equivalent of EUR 20 000. In order to benefit from this measure, the applicant must demonstrate that after 1 February 2020, their turnover has decreased by at least 15% compared to the same period in 2019, or that at least 25% of their ready-to-sell products have been lost on an annual basis because they cannot be sold.

Finally, partially guaranteed loans under the InnovFin – EU Finance for innovators programme for innovative small and medium-sized enterprises and small mid-caps with up to 499 employees, are available on the market and used by agriculture businesses. InnovFin provides various financing tools (including debt and equity products) focussing on research and innovation investment, as well as start-ups and new entrants. In Belgium,

60 Court of Auditors, 2018, Les garanties accordées par la Région Wallonne. https://www.ccrek.be/FR/Publications/Fiche.html?id=bb652012-59ba-4f03-ade7-0ae74f04468f.
61 Court of Auditors, 2005, Deux types d'aides au secteur agricole : les aides à l'investissement et à l'installation de jeunes agriculteurs. https://www.ccrek.be/FR/Publications/Fiche.html?id=e5f57f18-5c38-4fd2-9c48-bd92397a8b8a.
62 Court of Auditors, 2012, Deux types d'aides au secteur agricole : les aides à l'investissement et à l'installation de jeunes agriculteurs. https://www.ccrek.be/FR/Publications/Fiche.html?id=8de1fa34-c7d9-404e-8856-e97851e91938.
63 At the time of writing, no data was available on the COVID guarantee.
64 http://www.ejustice.just.fgov.be/mopdf/2017/09/22_1.pdf#Page52.
65 https://codex.vlaanderen.be/PrintDocument.ashx?id=1030333.
66 https://codex.vlaanderen.be/Portals/Codex/documenten/1026491.html.

as of the end of 2018, InnovFin portfolio managed by EIF had provided access to finance in the agriculture, forestry and fishing sector for a total of EUR 4.7 million (5.0 % of the total portfolio).

No financial instruments funded by the EAFRD have been implemented in Belgium in the 2014-2020 programming period. However, both regional EAFRD managing authorities are evaluating this possibility for the 2021-2027 programming period. In this context, in 2019, they followed a targeted coaching on financial instruments provided by experts from the EIB (*fi-compass*) and DG AGRI to get a better understanding of the benefit that financial instruments can provide to thefinal recipients of the new CAP Plans.

2.3.1.3. Description of the financing market

Financing market conditions generate a strong supply of finance. Interest rates in 2018 were historically low and Belgian rates are lower than the average Eurozone across all type of loans[67]. Between 2014 and 2018, 12 to 65% of Belgian financial institutions reported that competition from other banks led them to ease lending standards[68]. This went in combination to decreasing margins on average loans every quarter until October 2018. As a result, the annual growth rate of total liabilities to non-financial corporation increased to 8.3% in the second quarter of 2018, the highest expansion rate in the last 10 years[69]. Belgian banks' liquidity positions also led to more lending over the period, although a few institutions signalled some tightening of lending standards in the last quarter of 2018, for the first time in more than five years.

The Financial Stability Review[70] for 2017 reported that **commercial banks had a good level of liquidity and the banking sector was still considered to have a good profitability**, consistently higher than the EU average. Table 5 below shows the trend of interest rates from 2013 to 2018.

Table 5: Average interest rate in Belgium for lending to non-financial corporation, by loan amount, 2010-2018, in %

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Up to EUR 0.25 million	3.23	3.52	3.02	2.76	2.57	2.06	1.81	1.75	1.72
Over EUR 0.25 million and up to EUR 1 million	3.12	3.41	2.94	2.68	2.37	1.92	1.63	1.55	1.51
Over EUR 1 million	1.85	2.30	1.83	1.80	1.78	1.62	1.45	1.37	1.34

Source: Elaboration based on interest rates reported by National bank of Belgium, 2019.

According to the National Bank of Belgium in 2015 the 55%[71] of outstanding loans were granted to enterprises with high total factor productivity, this is because productive enterprises tend to be larger and better capitalised than others. Another factor that influences the risk assessment of commercial banks for lending to non-financial corporation is the age of the company**.** In 2015, a large proportion of loans were issued to older businesses, as younger enterprises usually encounter difficulties to get loans for the first time as they lack credit history.

Credit default risk is on average lower for agriculture than for other sectors according to interviews with banks. This is reflected in the low bankruptcy rate in agriculture compared to other sectors in Belgium

67 For loans to non-financial corporations, National Bank of Belgium.
68 European Central Bank's bank lending survey (BLS).
69 National Bank of Belgium, 2019.
70 National Bank of Belgium, 2017, Financial Stability Review 2017, https://www.nbb.be/en/articles/financial-stability-report-2017.
71 Duprez, Piette, 2017, Are bank loans being granted to the best-performing firms?

(53 bankrupt farms[72] in 2018 - 0.15% of farms, compared to 0.5% to 1% or more for other sectors on average in Belgium). Another *fi-compass* report[73] also found that the default rate of agricultural clients is the same or lower than for other SMEs for most of the financial intermediaries.

2.3.2. Analysis of the supply of finance

There is no liquidity constraint on the supply side of finance market. The volume of outstanding loans to the agriculture sector has consistently grown between 2010 and 2018, with a slowdown in 2018 (Table 6). It was not affected by the reduction of lending to the overall economy in 2013 and 2016 (Figure 15). The supply of finance is relatively unconstrained across most sectors in Belgium and the financial institutions' balance sheets are generally healthy (see section 2.3.1.3). This facilitate bank's access to provision of funding and leads to a high of lending capacity. One of the banks has a larger market share (see section 2.3.1.1), but it faces competition from the other banks that have developed agricultural financial products, and from the non-agricultural banks, which are able to capture small market shares with standard financial products[74]. Interviewed financial institutions did not report voluntary cap on their exposure to certain sectors, except for pig production and horticulture, due to their higher risk levels.

Table 6: Supply of finance to agriculture, forestry and fishing in Belgium, 2010-2018, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Outstanding loan volume	7 961	8 173	8 216	8 382	8 446	8 572	8 723	8 892	8 870
Index (100=2010)	100.0	102.7	103.2	105.3	106.1	107.7	109.6	111.7	111.4

Source: National Bank of Belgium, 2019.

Nevertheless, the perception of banks about the agricultural risk levels lead to increased vigilance. Risks in agriculture are linked to sudden (negative) changes of market prices, trade embargos, weather impacts such as from droughts, floods, etc. In Belgium, the pork sub-sector, for example, has faced severe output price volatility between 2015 and 2018 and horticulture is deemed among the riskiest sub-sectors due to high output price volatility and low asset residual value in case of bankruptcy. A key problem and distinctive feature of agriculture is that producers generally do not control their selling prices. Some farms enter in supply contracts with processors before the start of a production cycle. This gives a degree of certainty on prices in the short-term and for the expected harvest. However, these contracts are periodically renewed, and prices kept the same or in some isolated cases, adjusted, according to interviews with producer associations. Some sub-sectors might face strong profit volatility. For example, dairy and fruit sub-sectors can face a 50% variation within one or two years of time. Potatoes and sugar beets also faced volatile output prices in recent years, even though most of the output of these two products is sold through forward contracts. Such high volatility is relatively new in Belgium and, according to farmers' organisations, also coming from a more market-oriented CAP. Financial institutions cope with this context with increased vigilance and caution, when adjusting lending terms and conditions, for instance, by requiring farms facing such output price volatility to demonstrate balance sheets with lower loan to value ratio and/or higher cash reserves. Crop farms, which own land are considered less risky because these farms can mortgage land to secure loans. Similarly, those pig or poultry farms, which hold long term production contracts have a more stable and predictable income, and are thus considered as

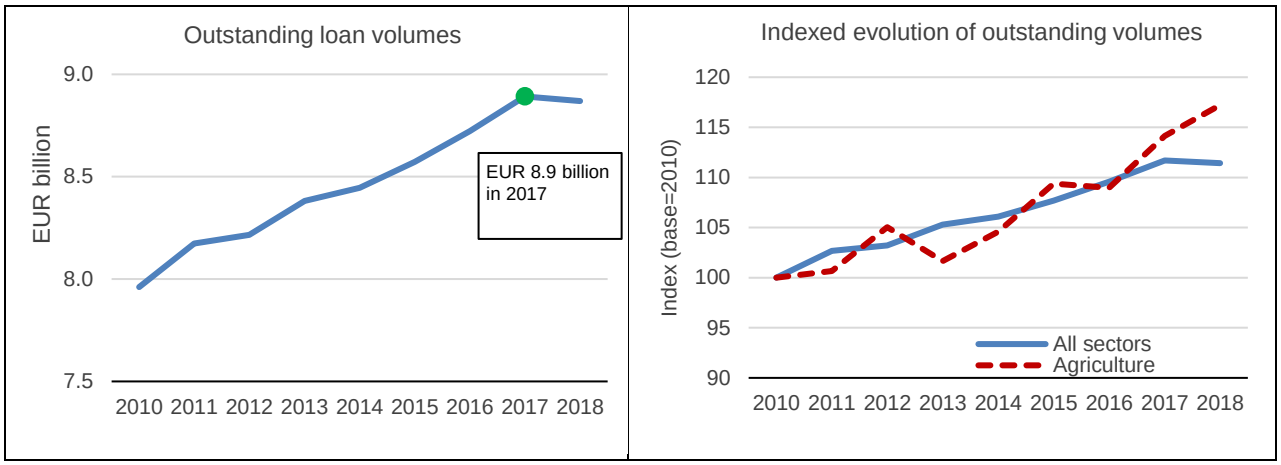
72 Statbel, 2019, Data on bankruptcy per sector, https://statbel.fgov.be/en/themes/enterprises/bankruptcy-statistic.

73 *fi-compass*, 2018, Flexible financial products for the agriculture sector in the EU, Study report, https://www.fi-compass.eu/sites/default/files/publications/Flexible%20financial%20products%20for%20the%20EU%20agricultural%20sector_0.pdf.

74 Interviews with farmers associations suggested that non-specialised banks 'periodically' enter the market.

less risky for financial institutions, whereby their access to finance is easier than for those not holding long-term contracts.

Figure 15: Supply of finance in Belgium to agriculture, forestry and fishing, 2010-2018



Source: National Bank of Belgium, 2019.

Overall, the constraint in the supply of finance does not seem to lie in the volume of the offer as such, but in the adequacy between supply and demand for financing. Financial institutions generally consider agriculture as a relatively safe sector to lend, according to interviews with banks. Nevertheless, banks seek specific profiles among farmers, with viable balance sheets, positive investment returns and moderate investment risks. As a result, financing conditions restrict the supply of loans for smaller farms, new farms without credit history, highly leveraged farms and less profitable investments (either due to their nature or their context).

Credit history and financial data influences the supply of finance to young farmers, new entrants and small-sized farms (see section 2.2 for related *fi-compass* survey results). Credit history and previous interactions between banks and customers are important factors for credit analysts to assess creditworthiness. New entrants, especially young farmers do not have a credit history, which generally leads to a higher risk premium for this segment of the market or a conservative lending approach.

Availability of collateral and guarantees is another key factor in lending. In the *fi-compass* survey, 2% indicated using a public guarantee. However, guarantees are needed for most medium to long-term loans. Results from the *fi-compass* survey indicate that 97% of producers for whom the bank requested a guarantee pledged personal collateral, 14 percentage points more than the EU 24 average (Figure 11). This personal capital generally consists in land, building, or equipment. Generally, young farmers apply for close to 100% financing (loan to value ratio). Therefore, they need large guarantees. According to interviews with banks, in up to 70% of applications of young farmers, the family provides assets for guarantees (or co-finance the project). In most family farming cases, the young farmer's parents are required to co-sign loan contracts. These arrangements are made when parents are gradually transmitting the farm to the younger generation. This allows for pooling mortgages from the young farmer together with collateral from parents. Several options are generally explored, and the young farmer might initially take over the equipment during a few years before a full buyout.

This form of inter-generational risk sharing reduces the need for public guarantees and is a key pillar of young farmers' access to finance. In Wallonia, 90 to 95% of family farms are transmitted within the family. These operations are always organised in a step wise process where assets are split (e.g. moveable vs immovable assets). And the young farmers start by taking over part of the holding. It is always done is such a way that allows the young farmer to demonstrate his control over at least 50% of the land, which then gives access to RDP start-up support. He does not necessarily need to buy all the land and can rent from his parents.

This type of process significantly reduces the investment risk. According to interviews with producer associations, young farmers succeeding to their parents always obtain bank loans.

However, even when young farmers can count on family support for the generational transition, a need might still exist when a second round of investments is needed to ensure the continuity of the farm, at time when the young farmer is already financially leveraged.

2.4. Financing gap in the agriculture sector

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

Key elements of the financing gap in the Belgian agriculture sector

- The total financing gap for agriculture is estimated between EUR 137 million and EUR 194 million.
- Access to long-term financing constitutes the biggest difficulty.
- The financing gap is found to arise mainly from medium-sized farms.
- The key constraints leading to a financing gap include: lack of collateral for new entrants, higher lending risks in some sub-sectors, and credit risks for less profitable activities with lower repayment capacity.
- About 33% of the overall financing gap might be attributed to young farmers.
- New entrants and young farmers face difficulties, especially when they do not benefit from an established farming family that can offer collateral and support throughout the first years.

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

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

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

The financing gap arises from unmet financing demand from economically viable farms[75]. The unmet demand for finance includes:

(i) lending applied for but rejected by the bank; or

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

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

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

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

The financing gap in the Belgian agriculture sector is estimated between EUR 137 million and EUR 194 million. Unmet financing needs are concentrated in specific segments of the sector. The financing gap concerns medium-sized farms (EUR 94 million), the most common type of farms in Belgium, followed closely by small-sized farms (EUR 69 million). The type of loans for which the gap is the largest are long-term loans. This coincides with the type of loans where high guarantees are more often requested from applicants

75 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, regardless of their economic viability.

by the banks. The *fi-compass* survey did not register rejected applications for short-term loans and credit lines. The part of the gap related to short-term loans and credit lines arises from the discouraged applicants in need of finance which did not apply for a loan because they expected a rejection or because they received a negative early assessment from informal contacts either with banks or with their accountants.

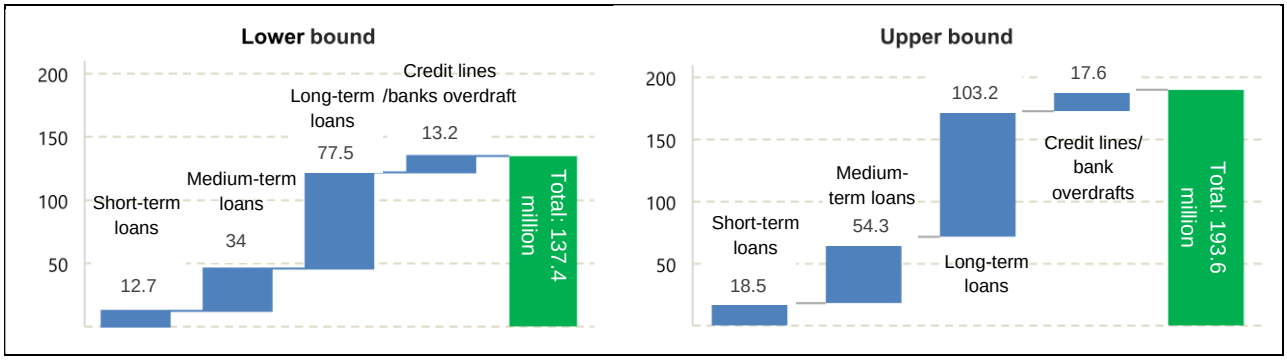
Table 7: Financing gap by farm size and product, 2017, EUR million

		Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Upper bound	Small-sized farms	**69.2**	5.7	20.6	37.8	5.1
	Medium-sized farms	**93.8**	9.1	25.0	52.4	7.2
	Large-sized farms	**30.6**	3.7	8.7	12.9	5.3
	Total	**193.6**	**18.5**	**54.3**	**103.2**	**17.6**
Lower bound	Small-sized farms	**49.0**	3.9	12.9	28.4	3.8
	Medium-sized farms	**66.7**	6.3	15.6	39.3	5.4
	Large-sized farms	**21.7**	2.5	5.5	9.7	4.0
	Total	**137.4**	**12.7**	**34.0**	**77.5**	**13.2**

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

Given the elements highlighted in the previous section, the financing gap in Belgium seems to stem among other things from the high requirements for guarantees that can be difficult to meet, especially for young farmers not taking over a family holding and new entrants. This constraint is amplified when the applicant does not have any credit history. The second element of importance is the higher investment risk generated by low economic returns of some agriculture sub-sectors, especially when associated with volatile output prices. This leads financial institutions to be prudent when assessing investments and adjusting terms and conditions for some sub-sectors, such as those of livestock, milk, fruit, and vegetables production.

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



Source: Calculations based on results from the fi-compass survey, 2019.

About 33% of the overall financing gap might be attributed to young farmers. Between 66% and 75% of rejected and viable loan applications registered by the *fi-compass* survey came from applicants below 40 years old. Similarly, between 22% and 25% of the discouraged applications came from young farmers. Using this information to provide a different breakdown of farms with constrained access to finance, a financing gap for young farmers of between EUR 44.6 and EUR 65 million is obtained. Even when young farmers can count on family support for the generational transition, a need might still exist when a second round of investments is needed to ensure the continuity of the farm, at time when the young farmer is already financially leveraged. In

addition, managerial skills are also required to finance investments[76], and family support and risk management cannot substitute such potential weakness.

Over the coming years, the evolution of the financing gap will result from various opposing forces. According to the *fi-compass* survey, 54% of farms indicated expecting no change in their financial need, while 10% expected a decrease, and 17% an increase. This suggests a stable level of development, respectively financial needs for the coming years, on average, and consequently, a stable financing gap. However, the continued consolidation of the sector may reduce further the number of small-sized farms to the benefit of larger holdings with better repayment capacity, thereby reducing the size of the gap. On the other hand, a large number of farm takeovers is foreseen in the coming years (also because of generation renewal needs), which might increase the size of the financing gap if young farmers or interested new entrants cannot find sufficient guarantees to secure the financing of these investments. Finally, access to finance will also be impacted by the ability of producers in riskier sub-sectors with volatile output prices and thin economic margins (such as fruit and vegetables, dairy, or livestock) to manage their repayment capacity while facing output price volatility and climatic risks.

76 Interviews with banks and producer organisations.

2.5. Conclusions

Investments in the agriculture sector have been stagnating over the last decade. The investments undertaken are driven by modernisation, consolidation, and expansion dynamics. The investment level led to a formation of fixed capital of EUR 1.1 billion in 2018, which was less than the levels reached a decade earlier. This stagnation partly arises from a non-growing gross value added.

Nevertheless, **the demand for agricultural finance is strong, with one in three farms applying for a loan** or a credit line in 2017. The bulk of the demand relates to long-term finance and credit lines or overdraft facilities, which are staples of agricultural finance in Belgium.

The demand is matched by an equally strong supply of finance, addressed by specialised banks, and served by tailored financial products. The overall financing market in Belgium has been expanding regularly since 2010 and provides for a favourable financing environment. In addition, the sector benefits from CAP support. Investment support measures provide incentives to invest in new projects and start-up support to young farmers. A public guarantee mechanism is also available, although not frequently used.

However, the financing of investments is hindered by high risk levels in some sub-sectors and for some categories of farms which cannot meet the financing terms and conditions and provide enough collateral or demonstrate the ability to safely repay a loan. In addition, the low economic margins and weak cash flows lead banks to reject some loan applications, or they lead farmers to withhold from applying for finance. Finally, the sustained supply of finance in a weak growth context has led some farms to accumulate high financial leverage, which prevents banks to further lend.

New entrants and young farmers face difficulties, due to their lack of credit history and difficulty to provide sufficient collateral. Young farmers who take over a family holding tend to have easier access to finance, since often the family supports them, by providing guarantees or allowing a partial and progressive takeover of the farm's assets. However, even in these cases, a financing gap might still exist when a second round of investments is needed to ensure the continuity of the farm, at time when the young farmer is already financially leveraged.

Thus, a financing gap in the Belgian agriculture sector is estimated between EUR 137 million and EUR 194 million in 2017. This gap is the largest for small and medium-sized farms, and it concerns mostly the access to long-term loans.

Findings from this report suggest the following recommendations:

- A revamp of the existing public guarantee scheme could help increase its attractiveness to farmers and financial institutions. Options could include elements, such as extension of the guarantee period, a first loss guarantee, or a portfolio guarantee. Further, administrative procedures for activation of the guarantee could be revised and simplified. The potential of a re-designed guarantee scheme with a wider base, not only linked to RDP investment projects, could also be evaluated.
- Young farmers and new entrants willing to develop their activity should be among the main target groups of any new initiative. Additional help could come from the opportunities offered by the new legal framework, such as the easier combination of financial instruments, grant support and interest rate subsidies, or the possibility to finance the purchase of land for young farmers.
- Any new instrument should either target or have preferential conditions for specific types of investments, particularly green investments, digitalization, organic production, etc., and be aligned with the new CAP Strategic Plan's objectives.
- The provision of stand-alone working capital finance allowed by the new EAFRD rules for the 2021-2027 programming period can be a turning point for many farms facing price fluctuations and volatility. This could have an important impact on the development and sustainability of agriculture if it can be provided at preferential conditions (e.g. at lower interest rates or with longer grace periods).
- Technical assistance for the managing authority could be beneficial to support the process of implementation and monitoring of the guarantee instrument. A technical support component to help farmers develop their business plans could be considered as part of any new instrument.

3. PART II: AGRI-FOOD SECTOR

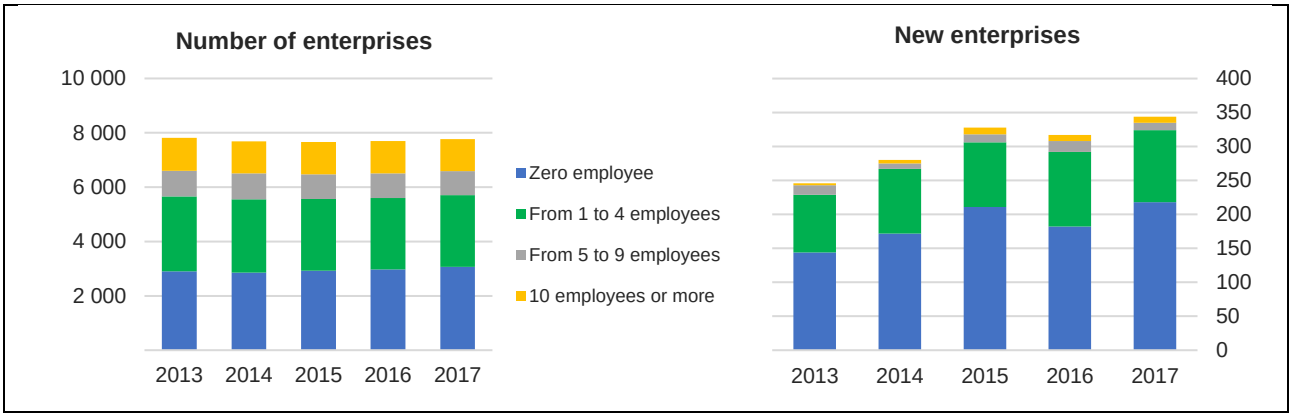
3.1. Market analysis

Key elements on the Belgian agri-food sector

- Agri-food is the largest industrial sector in Belgium. The production value of the sector steadily increased in the last decade, growing from EUR 39.4 billion in 2008 to EUR 49 billion in 2018.
- The sector is dominated by SMEs (95%) alongside a few large and very large-sized enterprises.
- Based on turnover in 2018, the largest segment is the manufacture of chocolate and sugar confectionery (10% of the industry), while the manufacturing of bakery products segment counts the most enterprises.
- Exports are a key source of growth and turnover.

Agri-food is the largest industrial sector in Belgium. It consisted of 7 249 enterprises in 2018, 94% of which were manufacturing food[77]. About 3 000 of these firms did not have employees, denoting the prevalence of micro enterprises. The sector is dominated by SMEs (95%) alongside a few large and very large-sized companies. Although smaller, the number of enterprises in the beverage sub-sector is increasing (+30% between 2008 and 2017), whereas the number of food manufacturing firms is declining (-11% between 2008 and 2017). The agri-food sector is also the largest source of employment in the country and around 70% of its workforce was located in Flanders in 2018. Its annual turnover was EUR 49 billion in 2018. The sub-sector with the most enterprises was the manufacturing of bakery products.

Figure 17: Number of firms in the agri-food sector, 2013-2017



Source: SBS - Eurostat, 2019. Note: Breakdown by size class not available for 2018 at the time of writing.

Based on turnover in 2018, the largest segment is the manufacture of chocolate and sugar confectionery (10% of the industry), followed by meat processing and animal feed manufacture (9% and 7%). However, beer manufacturing has the highest value added, closely followed by bread and pastry, and chocolate manufacturing. Approximately[78] 90% of the turnover comes from the manufacturing of food.

The production value of the sector steadily increased in the last decade, with an average of 3% annual increase of its turnover. Between 2008 and 2017, the production value of the Belgian agri-food sector increased by about 33.4%, growing from EUR 39.4 billion in 2008 to EUR 52.7 billion in 2017. In 2018, the domestic market size and related turnover marked a slight decrease to EUR 49 billion, with the sector showing

77 Data for this paragraph obtained from Eurostat SBS statistics, 2019.
78 Statistics are confidential for some sub-segments, such as wine manufacturing.

signs of stagnation for the first time in a decade, according to interviews with the industry. In 2017, the output value of manufacture of food products accounted for 79% of the total production value of the sector and amounted to EUR 41.7 billion. In the same year, the production value of the manufacture of beverages reached about EUR 11 billion.

The sector is well integrated with global markets, as exports are a key growth driver and the sector operates alongside imports amounting to 75% of the export value. France, the Netherlands and Germany account for more than half of the Belgian exports. With EUR 1.3 billion of exports in 2017, Belgium was the largest European beer exporter, followed by Germany. This volume accounted for about 60% of the Belgian beverage exports. The largest manufactured food exports category is processed meat, followed by processed fruit and vegetables, together representing about 35% of the manufactured food exports.

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

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

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

- Gross investment in the agri-food sector increased consistently over the period 2008-2017[79].
- Processing and preserving of fruit and vegetables, and manufacture of dairy products were the segments, whose investments grew the most between 2008 and 2017.
- Investment in the agri-food sector is driven by the following dynamics: the necessity to improve production efficiency, growth of export market shares, and ensuring compliance with safety, energy, and environmental standards.
- Investment support is available from the EAFRD, under sub-measure 4.2 of both RDPs, but the budget consumption is low.
- In 2018, more than half of the respondents to the Agri-food survey applied for bank finance.
- The rejection rate of loan applications in the agri-food sector is low, and the access to finance for the sector is good.
- Discouraged enterprises make the bulk of the unmet demand for finance, but this group is smaller than on average elsewhere in the EU 24.
- The unmet demand for the agri-food sector in Belgium is estimated at EUR 232.2 million.
- The unmet demand is driven by undercapitalisation and weak cash flows, as well as high risk levels for small-sized enterprises.

3.2.1. Drivers of total demand for finance

Overall, the gross investment in the agri-food sector increased over the period 2008-2017. Between 2008 and 2017, gross investment in the Belgian agri-food sector increased from EUR 3.1 billion in 2008, to EUR 5.3 billion in 2017 (Table 8). In 2017, the largest amount of investment was devoted to tangible goods (EUR 2.6 billion), which accounted for about 50% of the overall gross investment of the sector, followed by investment in machinery and equipment, with a share of 38% (EUR 2.2 billion)[80].

79 Full investment data for 2018 is not yet available on Eurostat at the time of preparing the report.
80 Eurostat Business Statistics database (SBS).

Table 8: Gross Investment in Belgian agri-food sector, 2008-2017, EUR million

Gross investment in..	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Construction & alteration of buildings	80.8	137.7	168.7	124.9	140	134.6	146.7	164.1	182.5	185.3
Existing buildings and structures	160.6	156.2	169.8	211	196.2	229.3	198	314	263.9	232.5
Land	21.4	20.4	30.1	13	38.8	35.5	23.8	24.9	53.9	31.3
Machinery and equipment	1 270	1 276	1 437	1 440	1 576	1 608	1 599	1 839	2 081	2 202
Tangible goods[81]	1 578	1 599	1 844	1 807	1 952	2 022	1 967	2 342	2 581	2 651
Total	**3 111**	**3 189**	**3 650**	**3 596**	**3 904**	**4 026**	**3 935**	**4 683**	**5 162**	**5 302**

Source: SBS- Eurostat, 2019.

Annual investment levels are higher in food manufacturing sub-sectors than in the beverage segments[82]. Since 2010, investment has increased faster in Wallonia than Flanders. But the bulk of the investment still takes place in Flanders (EUR 897 million compared to EUR 305 in Wallonia and EUR 101 million in Brussels, for food manufacturing in 2016[83]). Most of the investments in the beverage sub-sector concerns beer production[84].

At sub-sector level, processing and preserving of fruit and vegetables, and manufacture of dairy products were the segments that grew their investments the most between 2008 and 2017. Although both segments accounted respectively only for 18% and 8% of total gross investments in 2017, they experienced the largest increase over the period 2008 and 2017. Gross investments in processing and preserving of fruit and vegetables increased from about EUR 314.4 million in 2008 to EUR 934 million in 2017, while the investment levels in manufacture of dairy products moved from EUR 150 million to EUR 446 million over the same period[85].

In 2017, manufacture of other food products was the sub-sector with highest investment level. Gross investment in manufacture of other food products increased by 43% between 2008 and 2017, reaching EUR 738 million in 2017[86].

Investment in the agri-food sector is driven by the following dynamics:

I. **The necessity to improve production efficiency.** Firms invest in upgrading their equipment, driven by increased input costs (such as energy) and a shortage of skilled labour force. Up to one in four enterprises might face issues to recruit skilled staff, according to interviews with the industry associations. The Agri-food survey suggests that 39% face difficulties in accessing qualified work force (Figure 18). Notably, automation and process digitalisation might offer efficiency gains. According to the Agri-food survey, in 2018 about 52% of Belgian agri-food enterprises recorded an increase in their costs of production (Figure

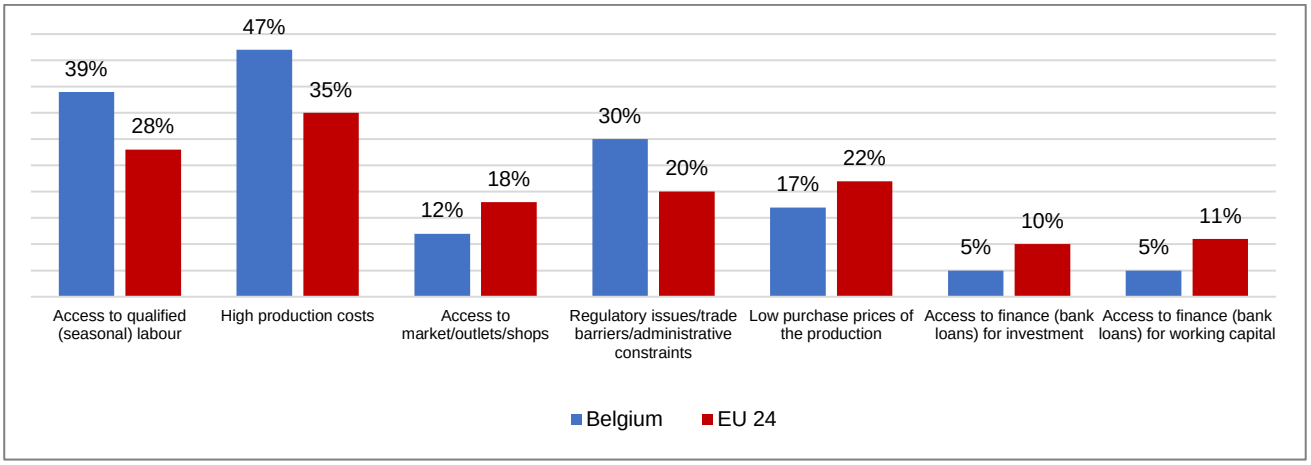
81 Gross investment in tangible goods is defined as investment during the reference period in all tangible goods. Included are new and existing tangible capital goods, whether bought from third parties or produced for own use (i.e. capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land.
82 Author's calculation based on Statbel 2019.
83 FEVIA, 2019, https://www.fevia.be/sites/fevia/files/media/fichier_2016.pdf.
84 Eurostat Business Statistics database (SBS).
85 Eurostat Business Statistics database (SBS).
86 Eurostat Business Statistics database (SBS).

19). Expensive cost of production is the central difficulty, together with skills shortage, experienced by the sector. Respectively, 47% of the firms operating in the sector faced such problem in 2018 (Figure 18). Large-sized companies invest more in the replacement of tools, while smaller firms focus more on innovation.

II. **Export oriented growth**. Export markets are key engines of growth and economic activity for the sector. Export market shares have stopped growing in 2018 but remain a key focus area for the sector and investments were planned to recover lost grounds[87]. One of the strategies to regain market shares rely on product innovations (e.g. pink chocolate, alcohol-free cider, packaging).

III. **Compliance with safety, energy, and environmental standards**. Although greening of the value chain is not new, this process continues to require investments, according to interviews with the industry.

Figure 18: Main difficulties experience by agri-food enterprises in 2018



Source: Agri-food survey.

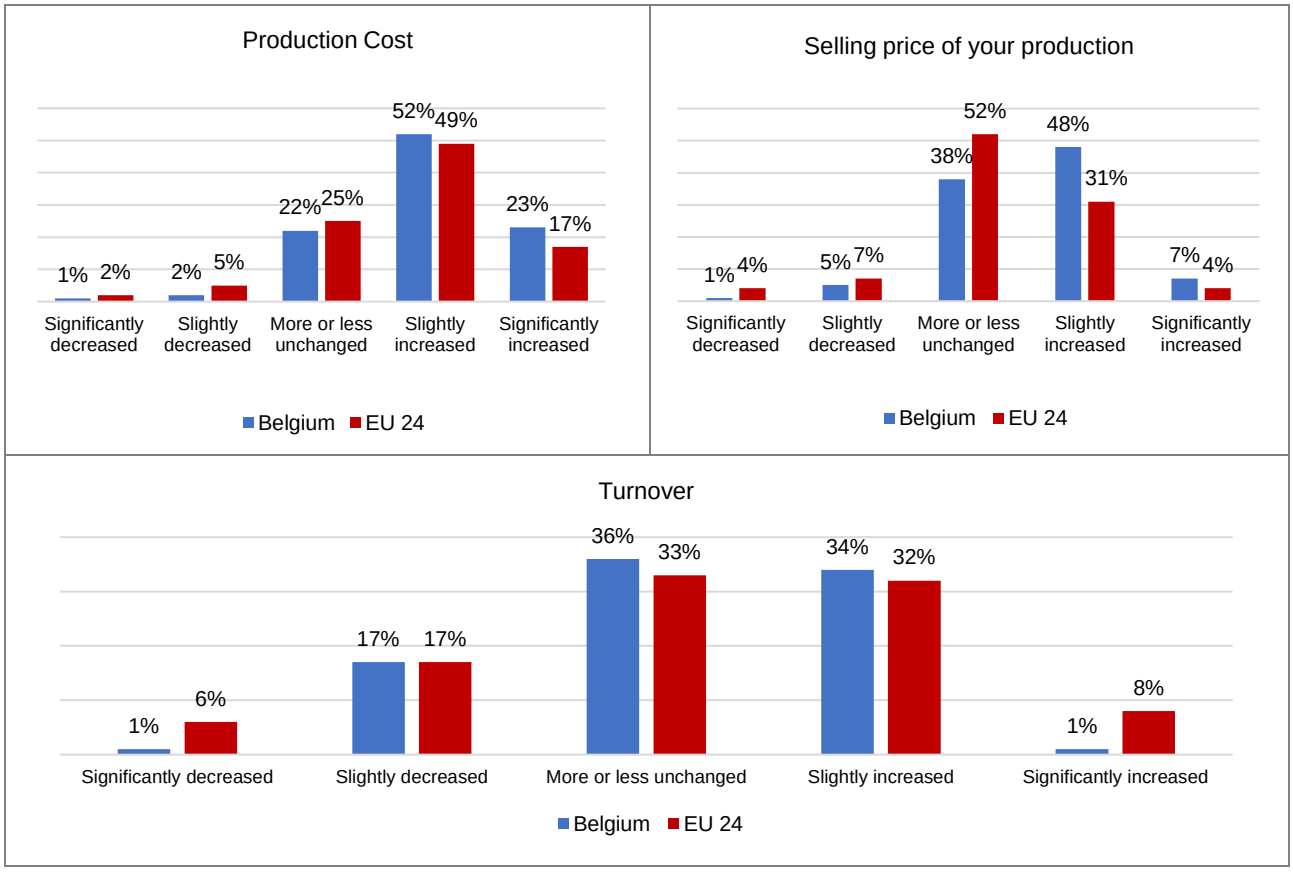
Generally, the largest investments are more concentrated within the group of large-sized companies operating in the country. In the beverage manufacturing segment, the group of larger firms include[88] (in no specific order) Coca Cola, Evian, Moet Hennessy, AB-Inbev, Duvel-Moortgat. In the manufacturing of food sub-sector, the group of large-sized firms includes Nestlé, Danone, Ferrero, Unilever, Neuhaus, Leonidas, Mondelez, Jules Destrooper, Lotus. Some of these actors operate across multiple segments of the sector.

Innovation is supported by Flander's FOOD (Flanders), Wagralim (Wallonia), and the Pôle agro-alimentaire (Brussels region). These competitiveness clusters aimed at supporting economic activity and employment through facilitating cooperation by and between industrialists, universities, and research and training centres. They focus on innovations for efficiency, sustainability and quality in the sector.

87 FEVIA, 2019, Rapport économique annuel, https://www.fevia.be/fr/publication/rapport-economique-annuel-fevia-2018-2019.

88 Firm name taken from dataset created by https://trendstop.levif.be/.

Figure 19: Changes in agri-food companies' key economic indicators, 2018



Source: Agri-food survey.

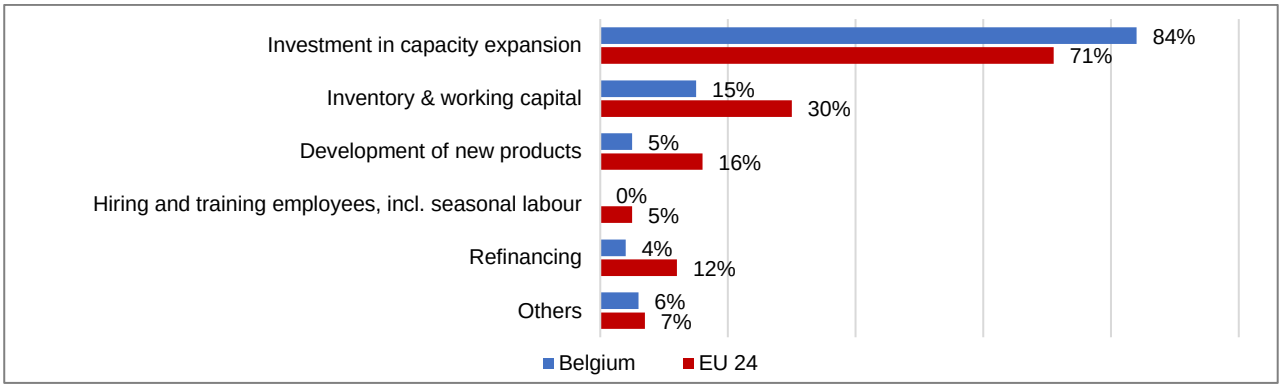
Most surveyed agri-food enterprises (75%) reported increased production costs in 2018, and this was combined with better selling prices. Only 6% reported decreasing selling prices (Figure 19). Similarly, 80% of the enterprises reported an unchanged or increased turnover, which is slightly more than the EU 24 average. These indicators suggest a good context in the sector in 2018, slightly better than elsewhere in the EU.

Belgian agri-food enterprises focused their investments mainly to capacity expansion. To improve production processes, the bulk of the demanded finance in the sector was used for investments in equipment, building and transports. According to the Agri-food survey, about 84% of Belgian agri-food firms applied for finance in order to invest in capacity expansion (Figure 20).

Working capital needs also played an important role in driving the demand for finance, although less than on average elsewhere in the EU 24. About 15% of the companies applied for finance to satisfy their inventory and working capital needs. Furthermore, the development of new products generally was financed with internal funds rather than through bank lending.

Aside from the production costs and labour shortage reported as major difficulties, one third of the respondent firms mentioned administrative and regulatory burden as one of the main difficulties (Figure 18). Such administrative difficulties might slowdown investments and therefore reduce the demand for finance.

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



Source: Agri-food survey, 2019.

The EAFRD supports investments in the agri-food sector. Agri-food companies involved in the primary processing of agricultural and horticultural products may be eligible for support under the RDP. The planned support equals EUR 8.5 million in the Flemish RDP and EUR 24.8 million in the Walloon RDP 2014-2020, under sub-measure M4.2 "Support for investments in processing and marketing of agricultural products". This support complements investments in the marketing and/or processing of agricultural products, which mainly concern the preparation or the first phase of the processing or marketing, and investments that limit or revalorise waste, residual fractions or residual flows resulting from the supply, processing or marketing of agricultural products.

By the end of 2020, the Flemish target of 40 supported enterprises was almost achieved as 37 projects were already up and running, and 30 companies had been selected in Wallonia for a similar support. While the budgets under the two sub-measures are relatively low (in comparison with other sub-measures), the current implementation shows that the two managing authorities have done a good planning of what would be demanded as support from the sector. The easy access to bank loans, especially for established businesses, is one of the reasons for the low planned public budget. This, however, opens up possibilities for the Managing Authorities to pursue other objectives under their RDPs, which are equally important.

Table 9: RDP sub-measure 4.2 Support for investments in processing and marketing of agricultural products budget consumption

Sub-measure	Total budget under all calls for applications (EUR million)	Total # of received applications	Total budget requested by all submitted applications for all calls (EUR million)	Total # of approved and supported applications from all calls	Total requested budget not being supported by all calls (EUR million)
	A	B	C	D	(C-A)
	Flanders				
4.2	8.20	47	9.37	37	1.17
	Wallonia				
4.2	5.45	54	2.91	30	

Source: Flemish and Walloon Ministries of Agriculture, 2020. Preliminary data.

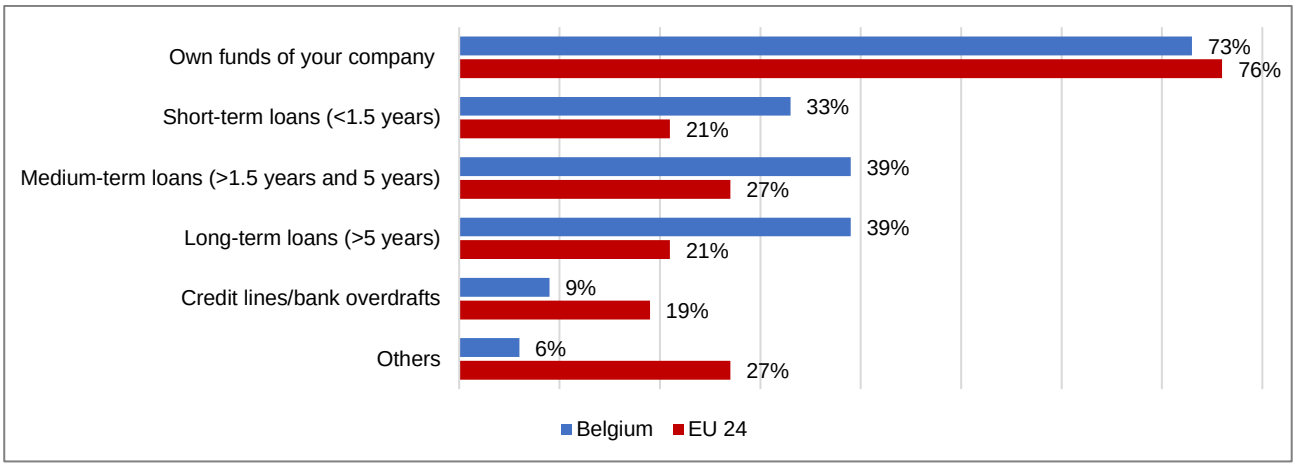
Note: The total amount requested is calculated based on all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not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

3.2.2. Analysis of the demand for finance

In this section, unmet demand for finance is quantified and analysed. The potential total demand for finance combines both met and unmet demand. The unmet demand consists of applications rejected by a financial institution, offers of credit refused by agri-food firms, alongside cases where agri-food firms 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 Belgium is estimated at EUR 232.2 million.

Figure 21: Most important sources of financing in the last three years



Source: Agri-food survey.

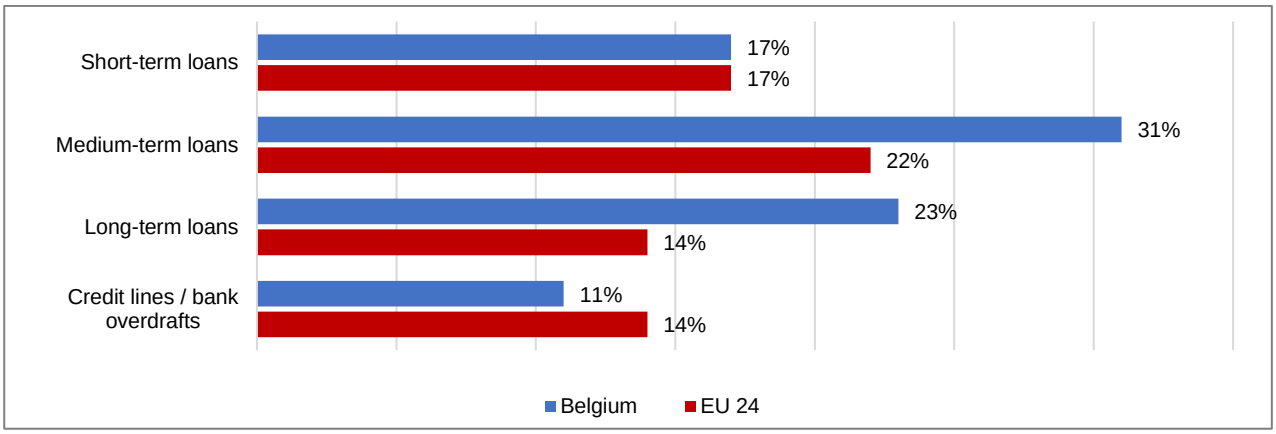
Own funding represented the most important source of financing, but bank loans were reported to be more important for Belgian enterprises than elsewhere in the EU 24 (Figure 21). About 73% of Belgian agri-food firms relied on their own sources to meet their demand for finance over the period 2016-2018. However, a good part of the sector also relies on bank products.

Heterogeneity in enterprise sizes leads to different capital structures and financial needs across the sector. Most large-sized enterprises have access to capital markets, foreign direct investments, and subsidiary lending[89] from parent companies. They also have good access to bank finance when needed, and they drive the largest share of the demand for finance. However, the sector is mainly made up of SMEs (section 3.1 for enterprise demographics), which rely mostly on bank products.

In 2018, more than half of the respondents to the agri-food survey applied for finance. According to the survey, about 58% of the agri-food firms in Belgium applied for bank financing, a much higher percentage than the EU 24 average of 46%. Medium-term investment loans were the most sought product (31%), followed by long-term bank loans (23%). A lower number of applications were observed for short-term loans and credit lines/overdrafts (17% and 11%, respectively) (Figure 22).

89 Subsidiary loans are loans provided by a parent company to one of its subsidiaries.

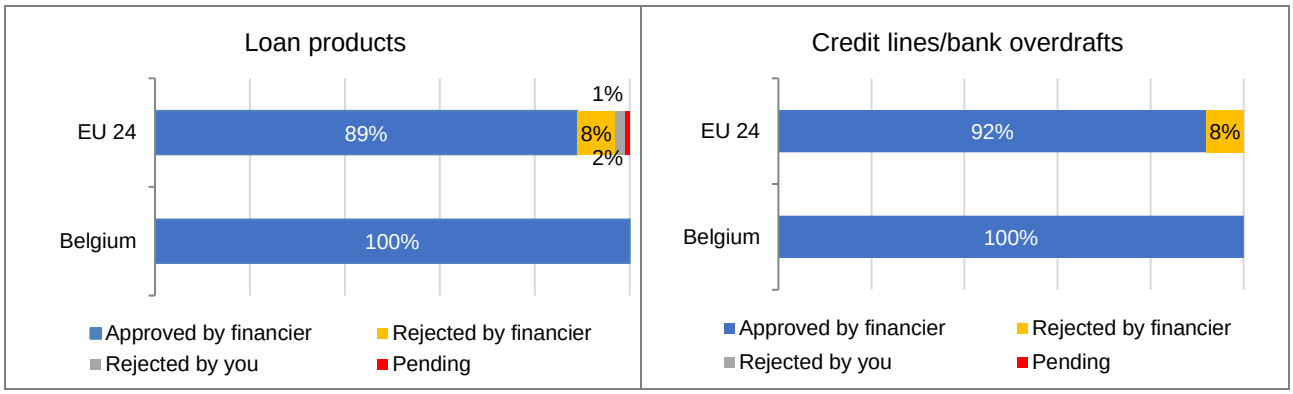
Figure 22: Belgian firms applying for finance in the agri-food sector in 2018, by financing product



Source: Agri-food survey.

The rejection rate of loan applications in the Belgian agri-food sector is low. According to the Agri-food survey, no rejection occurred in the sector over the period examined. All types of applications recorded an acceptance rate of 100% regardless of the product maturity considered (Figure 23). This result denotes a good access to finance, which has been confirmed by interviews with industry associations. The Agri-food survey also recorded few enterprises (5%) reporting having difficulties in accessing finance (Figure 18).

Figure 23: Results from loans' application in the agri-food sector in 2018

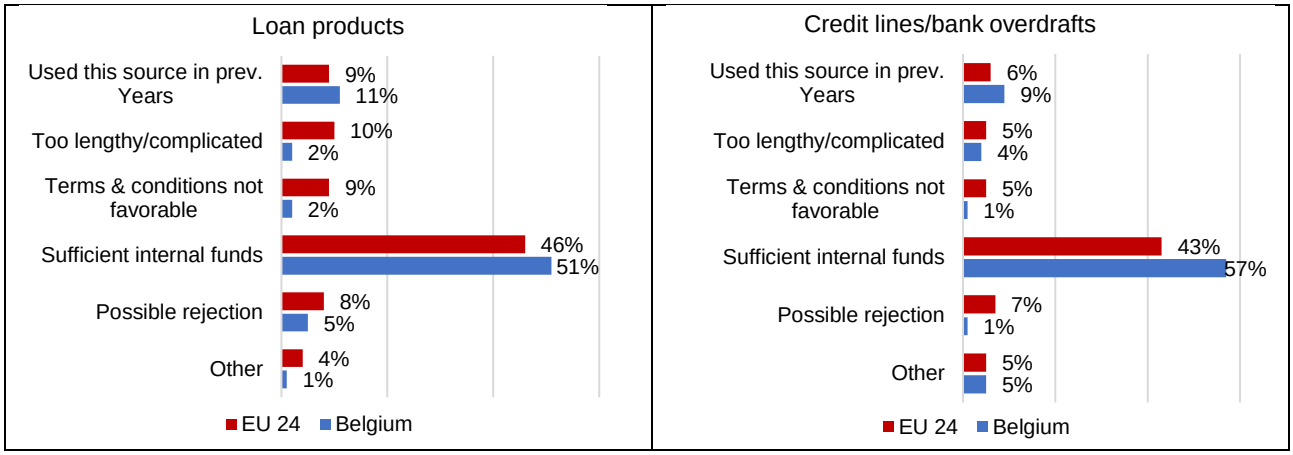


Source: Agri-food survey.

The presence of sufficient own resources was the main reason for not applying for bank loans. Between 51% and 57% of the firms considered themselves to have sufficient available own resources and did not request bank financing. On average, these percentages were much higher than those observed at EU level for all types of product maturities (Figure 24).

Survey results on reasons for not applying for bank products confirm a good access to finance. Terms and conditions are not a key reason for not applying, enterprises rarely find application procedures too lengthy or complicated (between 2% and 4% of respondents), and the second most important reason for not seeking additional lending in 2018 was the successful applications in previous years (between 9% and 11% of respondents - Figure 24).

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



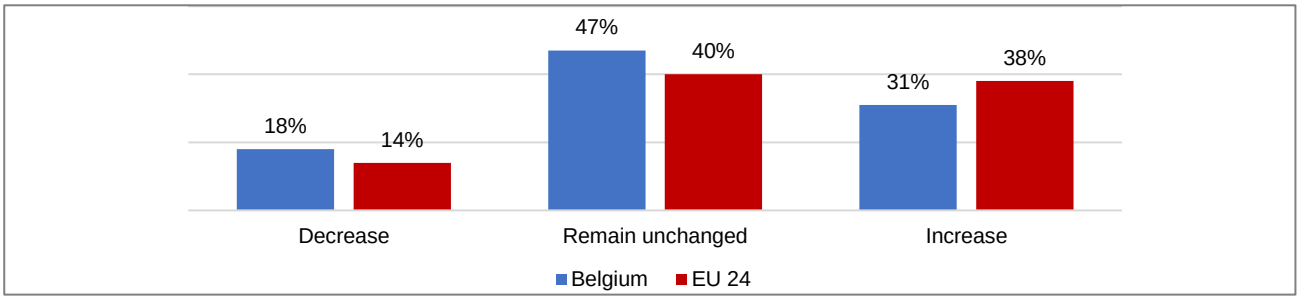
Source: Agri-food survey.

Discouraged enterprises make the bulk of the unmet demand for finance, but this group is smaller than on average elsewhere in the EU 24. A low percentage (5% and 1%) of enterprises did not applied for bank loans and credit lines, because of fear of possible rejection; a much lower percentage than the EU 24 average (8% and 7%, respectively) (Figure 23). Although the survey does not provide data on the drivers of the expectation of possible rejections, a few reasons have been discussed with stakeholders:

- **Undercapitalisation and weak cash flows.** These were key weaknesses identified among SMEs in general but that also applies to agri-food sector, and particularly for micro and small-sized enterprises according to the 2014-2020 ex-ante assessment for ESIF financial instruments[90] carried out in Wallonia. Although the context has positively evolved since this diagnostic was established these constraints might still affect some SMEs in 2018.
- **High risk levels within start-ups.** This factor can lead to discouragement to seek finance, especially if combined to a lack of knowledge of public support options. It is however expected that such occurrence remains exceptional. The sector is dynamic within the micro and small-sized category of enterprises. The growing number of new enterprises in a constant population (see section 3.1) suggests creation dynamics but also investment risks.

The demand for finance in the sector is expected to remain unchanged for most companies. According to the Agri-food survey, 47% of the firms operating in the sector expect their financing needs to be the same for the next two-three years. Nevertheless, about 31% of the enterprises believe their demand of finance will increase over the same time horizon, compared to only 14%, who say it will decrease.

Figure 25: Agri-food companies' expectations on future financing needs, 2018



Source: Agri-food survey.

90 PwC, 2014, Etude ex-ante pour la mesure `Instruments financiers 'pour la programmation 2014-2020 des fonds structurels, Final report, available at https://www.fi-compass.eu/sites/default/files/publications/conclusions_0.pdf.

3.3. Analysis on the supply side to the agri-food sector

This section provides an overview of the financial environment in which the agri-food sector in Belgium 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 Belgian agri-food sector
• A large variety of finance providers exist in Belgium and contribute to the total supply of finance to agri-food sector, which is not treated as a separate sector from the manufacturing in general and is offered generic loan products. • Alongside the main structures supporting access to finance, a network of investment and financing firms (so called 'Invests') are active throughout the country. • The financing market generated a strong supply of finance between 2010 and 2018. • The supply includes a wide set of financing products able to meet all types of financial needs, for enterprises of all sizes (from the micro enterprise to the very large corporation). • Overall, interviews and desk research performed in the context of this study did not identify strong supply side constraints on the financing of the agri-food sector in Belgium.

3.3.1. Description of finance environment and funding availability

3.3.1.1. Finance providers

Among the key finance providers are banks and public institutions. Most of the sector's financing is provided by commercial banks. The five largest banks are Belfius Banque, BNP Paribas Fortis, CBC Banque, ING Belgium, KBC Bank. These five providers compete in a relatively small financing market, in which the agri-food sector is a significant segment. In addition, different public institutions exist to support investment and facilitate access to finance for SMEs. They include the PMV group and the VLAIO in Flanders[91] and the SOWALFIN and SRIW in Wallonia both of which offer equity, loans and guarantee products (see next section for a description of their products). The VLAIO and the SOWALFIN are intermediaries for EU structural funds[92].

Alongside the main structures supporting access to finance, a network of semi-public investment and financing firms (so called 'Invests') is active throughout the country. They are local professional contacts for companies looking for means to finance multiple type of projects, e.g. creation, innovation, growth, investments, transmission and export. Although their thematic area might vary according to their local context, they offer a similar suite of loans, guarantees and equity products. These companies include:

- Namur Invest
- WAP Invest
- Invest Mons Borinage Centre
- SambreInvest.
- Nivelinvest
- Noshaq
- OstBelgien Invest

91 Flanders Innovation and Entrepreneurship (VLAIO) and Participatiemaatschappij Vlaanderen (PMV).
92 https://www.vlaio.be/nl/subsidies-financiering/subsidiedatabank/zoek?thema=26 and http://www.sowalfin.be.

- InvestSud
- Luxembour Développement
- LRM
- finance&invest.brussels
- Novalia

Agri-food enterprises have access to a series of products supported by public and semi-public investment firms, but few of them request support. In 2017, 19 new agri-food projects were funded in Wallonia through INVESTs network firms such as Noshaq, Sambrinvest, Ostbelgieninvest, or Namur invest. These intermediaries also implement ERDF financial instruments[93]. SambrInvest had 20 agri-food projects in its portfolio. WapInvest had 20 agri-food investment on its portfolio, i.e. 21.7%, which makes agri-food its main investment sector. Luxembourg Développement had 8% of its portfolio allocated to agri-food sector in 2018.

SOWACCESS is a subsidiary of the SOWALFIN, which provides support in buyout transactions. In 2017, it provided technical support and facilitated 7 transactions in the agri-food sector for a total volume of EUR 20.8 million). Similarly, the Flemish credit agency (Vlaamse Kredietbemiddelaar) provides technical support.

In addition to institutional finance providers, crowdfunding platforms and peer-to-peer funding mechanisms exist in Belgium:

- Belgian crowdfunding platforms[94] include Lita.co Ecco Nova, Look&Fin, Participate, Spreds, 9 Bolero Crowdfunding, Lendahand and Raizers. The Miimosa platform recently entered the market, building on its French base. In addition, KissKissBankBank and Seedrs are platforms with examples of collaboration[95] with classic financial institutions to combine standard financing with crowdfunding.
- Peer-to-peer funding includes Pret Coup de Pouce, which allows individual lenders to lend small amounts.

Crowdfunding is a method of raising capital through the collective effort of friends, family, customers, and individual investors. This approach taps into the collective efforts of a large pool of individuals – primarily online via social media and crowdfunding platforms. There are a variety of crowdfunding types. These three primary types are donation-based, rewards-based, and equity crowdfunding. Peer-to-peer funding is through a loan, rather than an investor owning a stake in a business. There is a match via an online platform, which connects the lender and a person or a business.

3.3.1.2. Financial products

This section presents an inventory of financial products accessible to agri-food enterprises. These products might be grouped into the following categories: commercial bank products, and products from public and semi-public investment firms. Non-public venture capital and private equity are left out of this mapping. Financial institutions usually do not treat agri-food as a separate sector in their loan product offering. Therefore, financial products available to the sector are similar to what is offered to any other manufacturing sector.

Commercial bank products

- **Long-term loans** (> five years maturity). These loans might take the form of standard investment loans with fixed or variable interest rates, or through roll-over loans.
- **Medium-term loans** (maturity between 1.5 and five years). Long-term loan products can all be tailored down to two years term to maturities.
- **Short-term loans** (maturity < 1.5 years). Large volumes of short-term financing are generally addressed with straight loans, repaid in one instalment after a short period,

93 See full list of active financial instruments in Belgium here: https://www.fi-compass.eu/financial-instruments/belgium.

94 Financial Services and Markets Authority (FSMA), 2018, Equity and debt based crowdfunding in Belgium, https://www.fsma.be/sites/default/files/public/content/crowdfunding/2018-12-19_crowdfundingstudy.pdf.

95 https://www.ing.be/en/business/lending/working-capital-and-liquidity/crowdfunding.

- **Credit lines and overdraft facilities**. All banks offer their versions of credit lines and overdraft formula. Cash credit on checking accounts. Revolving credit facilities can be set up for very large short-term financing needs.
- **Leasing**. All major banks offer financial leasing on all types of production equipment and vehicles.
- **Micro-lending**. Micro-loans are available from institutions like Crédal or Microstart.

Products offered from the public and semi-public investment companies:

- Subordinated loans;
- Co-financing
- Start-up loans;
- Mezzanine loans;
- Micro-credit;
- Guarantees (first loss or supplemental);
- Counter guarantees.

Table 10 presents some examples of financial products available from the network of investment companies (listed in the previous section) accessible to agri-food enterprises in Belgium[96]. Some of these products are financed through ERDF financial instruments[97], others from nationally funded instruments, and some are financed from the equity of intermediaries.

Table 10: Illustrations of a few of the products supported by financial instruments available to the agri-food sector

Finance provider	Product
PMV Group For SME investment projects connected to Flanders.	**Subordinated loan**. Maximum of EUR 350 000 or 4x own contribution. Up to 50% of the global investment needs. For co-financing of investments and working capital. The duration is 3 to 10 years and the interest rate is at least 3. **Starting loan.** Up to EUR 100 000 with duration of 3 to 10 years and the interest rate is 3% per year. **Win-win loan.** A private individual can lend up to EUR 50 000 from a Flemish SME during a term of 8 years. For this, the lender receives an annual tax credit of 2.5% on the outstanding capital of the Win-Win loan. If the borrower cannot pay back, the lender can also get 30% of the amount owed through a one-off tax credit. An SME can enter into Win-Win loans for an amount of EUR 200 000, with a maximum of EUR 50 000 per lender. **PMV corporate loan**. Tailor-made co-financing solutions (up to 50%) with a long duration for SMEs and large-sized companies. These loans amount to a minimum of EUR 350 000 and a maximum of EUR 1 000 000. They can be both subordinated ('mezzanine financing') and non-subordinated. **Micro credit.** Up to EUR 25 000 can be borrowed for working capital and investments financing for maximum 5 years, at an interest rate of 6%. **PMV risk capital.** Subordinated (convertible) loans for SMEs & large-sized companies' investments of EUR 125 000 to EUR 5 million. **Guarantee**. Up to EUR 15 million and 75% of the amount. The guarantee is of a supplementary nature and comes on top of the other securities. The fee is calculated as the amount of the guarantee x duration of the guarantee in years x 0.5%

96 There is no standard process for enterprises to access these products. They can reach out directly to the different providers when structuring their project, or the bank can enquire on behalf of their clients.

97 See full list of active financial instruments in Belgium here: https://www.fi-compass.eu/financial-instruments/belgium.

LIMBURG INVESTMENT COMPANY (LRM)[98] For investments in the Limburg province	**LRM Risk capital financing.** Risk capital financing (subordinated loan and share participation) of at least EUR 50 000. Either through the PLUS loan is for amounts of EUR 250 000 to EUR 600 000, unsecured, at a 6% interest rate. Or through the KlimOp subordinated loan from EUR 50 000 to EUR 250 000. Buy-out files and project financing within multinational companies can also be financed by LRM. The investment amounts vary from EUR 750 000.
SRIB BRUCOFIN BRUSOC For investments in SMEs in the region of Brussels	**Micro credit:** up to EUR 25 000 **Start-up loan:** up to EUR 100 000 **Subordinated loan.** **Mezzanine loan.**
SOWALFIN *(SOWALFIN GROUP)* For investments in Wallonia	**First loss guarantee**. Up 25% of the loan and up to EUR 500 000. For investment loans with at least another security. 1.5% annual fee, upfront. **Supplemental guarantee**. Up 75% of the loan and up to EUR 1.5 million. For investment and working capital loans. 1% to 1.1% annual fee. **Subordinated loan**. **Invests financing**
SOCAMUT *(SOWALFIN GROUP)* For investments and working capital	**Guarantee.** Up 75% of the loan and up to EUR 50 000. **Micro credit.** Up 50% of the loan and up to EUR 25 000 (subordinated). Or a mix of both. Maximum project size of ERU 250 000. **Counter guarantee.** Through three Wallonia mutual guarantee funds. 50% to 75% counter guarantee offered to guarantees of up to 75% of the loan (80% if < EUR 25,000) and up to EUR 150 000.
SOFINEX *(SOWALFIN GROUP)* For exporting activities	**Guarantee.** For export operations or foreign investments. Up to 75% of the loan and up to EUR 1.5 million per micro enterprises and SME (EUR 5 million per large-sized enterprise). **Loan or equity**. Up to 50% of the project and up to EUR 1 million per enterprise. For international operations.
NOVALLIA For innovative and sustainability investments	**Easy'Green loan**. Energy efficiency investment loan for micro enterprises and SMEs. Up to EUR 1 million per project and up to EUR 3 million per enterprise. **Easy'up loan.** Investment loans for micro enterprises and SMEs. Up to EUR 500 000 and up to 40% of the total size.
INVESTs Any type of investment, with a focus on innovation. Through 9 investment funds.	Convertible, subordinated, unsecured or guaranteed loans. Up to EUR 2.5 million (EUR 400 000 if through ERFD INVEST subsidiary).
EUROQUITY & BAN Flanders.	Equity fund raising platform.

Note: List non exhaustive. Source: Review of websites.

98 https://www.lrm.b

3.3.1.3. Description of the financing market

In 2018, overall, the supply of finance to non-financial corporations was strong, and the conditions of the banking sector remained stable. In addition, as in 2017, the Belgian banking sector performed better than these in the EU 28. The positive performance highlights that Belgium moved faster in addressing the negative issues created by the 2011 economic crisis.

As result of the fast recovery of the banking sector, **the loan-deposit ratio is increasing since 2015 and in 2018, the share of non-performing loans (2.3%) remained consistently lower than EU 28 average[99].**

The loan-deposit ratio increased by 2%, reaching 97.5% in 2018. This indicates that t**he volume of loans continued to expand, following on the positive trend of 2017** and driven by the growth of private lending.

In 2018, overall interest rates continued to decrease due to lower costs on both new loans and refinancing operations, at on average 1.5% (Table 5). However, according to the national bank's data, interest income increased in 2018 with respect the previous year. This came from an attempt from commercial banks to compensate lower interest rates by increasing the volume of new loans, with more favourable lending conditions, thereby increasing the available supply of finance.

The Bank Lending Survey (2018) reported no change in credit standards and terms and conditions for lending to non-financial corporation.

3.3.2. Analysis of the supply of finance

The Belgian agri-food sector has access to a good supply of finance. The conditions on the financing market and its environment (see section 3.3.1.3) generate a strong supply of finance from the five main domestic banks. The interest rate has been reducing in recent years on average for all types of products (see section 2.3.1.3). In addition, a large number of public finance providers (see section 3.3.1.1.) complement the standard commercial lending offer with a variety of financing products, sometimes supported by EU and nationally funded financial instruments.

The ex-ante assessment for use of ESIF financial instruments for the period 2014-2020[100] in the Brussels region (not the other regions) had pointed to a high degree of complexity in the variety of financial products offered to SMEs with public support. This complexity might characterise the overall investment support options in the country. The complexity in the offering remained in 2018 and might be one of the only impeding factors to the effectiveness of the public support to access to finance for the agri-food sector.

For commercial banks, the main constraints come from the characteristics of some prospective borrowers, which might not fit the terms and conditions of the lending for investment loans (share of own equity to bring to the project, inability to find a third party to finance a mezzanine tranche, weak cash flows).

Overall, interviews and desk research performed in the context of this study did not identify strong supply side constraints on the financing of the agri-food sector in Belgium.

99 NBB, 2019, Financial Stability Review.

100 IDEA Consulting, May 2017, Rapport d'évaluation ex ante - Instruments financiers dans le cadre du programme opérationnel FEDER 2014-2020 de la Région de Bruxelles Capitale, available at https://www.fi-compass.eu/sites/default/files/publications/evaluation-ex-ante-if-rbc-fr.PDF.

3.4. Financing gap in the agri-food sector

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

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

- The total financing gap in the agri-food sector is estimated to be EUR 232 million.
- The gap is the largest for the small-sized firms (<50 employees).
- Long-term loans show the largest gap.
- The main driver of the gap are enterprises, who withheld from applying for finance (discouraged enterprises).

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 Belgian 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[101]. 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 can be considered as viable.

Table 11: Financing gap by firm size and product, 2018, EUR million

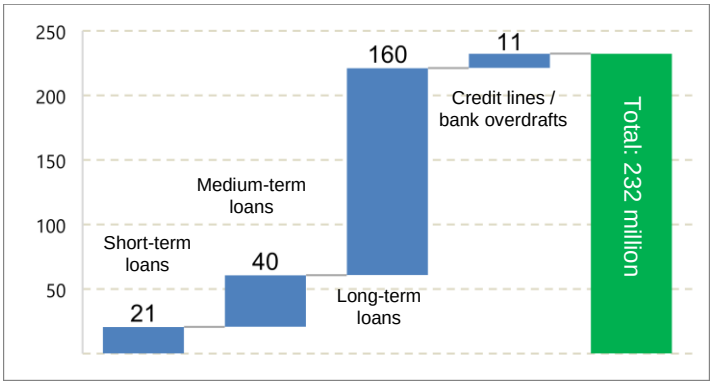
	Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank over drafta
Small-sized firms	**178.2**	15.0	30.9	123.7	8.5
Medium-sized firms	**36.8**	4.4	6.2	24.5	1.7
Large-sized firms	**17.3**	1.2	3.0	12.1	1.0
Total	**232.2**	**20.7**	**40.2**	**160.3**	**11.1**

Source: Agri-food survey.

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

The financing gap for the Belgian agri-food sector is estimated to be EUR 232.2 million. The unmet financing needs are mostly concentrated in small sized firms. The type of loans for which the gap is largest are long-term loans.

Figure 26: Financing gap by product in the agri-food sector, 2018, EUR million



Source: Calculations based on the Agri-food survey.

Overall, the sector seems to benefit from an adequate supply of finance. This is reflected in the fact that rejections of loan applications by financial institution seem not to be a significant issue in Belgium as highlighted in the Agri-food survey and confirmed by banks and enterprises' representatives interviewed. **The financing gap quantified above is mainly driven by enterprises which withheld from seeking bank products (discouraged applications).**

3.5. Conclusions

The agri-food sector has access to a good supply of finance. The conditions on the financing market and its environment generate a strong supply of finance from the five main domestic banks. In addition, a large number of public finance providers complement the standard commercial lending offer with a variety of financing products, sometimes supported by EU and nationally funded financial instruments.

Overall, the gross investment in the agri-food sector increased over the period 2008-2017, from EUR 3.1 billion in 2008, to EUR 5.3 billion in 2017. These investments are driven by the following dynamics: production efficiency, maintain of export market share, adaptation to higher safety, energy, and environmental standard. Firms invest in upgrading their equipment, driven by increase in input costs (such as energy) and a shortage of skilled labour force. Export markets are key engines of growth and economic activity for the sector. Finally, although greening of the value chain is not new, this process continues to guarantee investments.

Alongside commercial banks, a network of investment and financing firms is active throughout the country. They are local professional contacts for companies looking for means to finance multiple type of projects: creation, innovation, growth, investments, transmission and export. Although their thematic area might vary according to their local context, they offer a similar suite of loans, guarantees and equity products.

The agri-food survey did not identify major difficulties in access to finance. And these findings were confirmed by interviews with financial institutions and the industry. The only weakness in the supply side might be found behind the characteristics of some prospective borrowers, which might not fit the terms and conditions of the lending for investment loans (share of own equity to bring to the project, inability to find a third party to financing a mezzanine tranche, weak cash flows).

However, a financing gap in the agri-food sector is estimated at **EUR 232.2 million.** The unmet financing needs are mostly concentrated in small-sized firms. The type of loans for which the gap is largest are long-term loans. The gap was mainly identified among firms which are discouraged to seek financing by their current situation, which might include:

- **Undercapitalisation and weak cash flows.** These were key weaknesses identified among SMEs in general but that also apply to agri-food, and particularly for micro and small-sized enterprises, in Wallonia in 2014. Although the context has positively evolved since this diagnostic was established. This constraint might still affect some SMEs in the country.
- **High risk levels within start-ups.** This factor can lead to discouragement to seek finance, especially if combined to a lack of knowledge of public support options for some enterprises.

The following recommendations could be considered:

- A more detailed review of the current offering of public support instruments (nationally funded and from the ERDF) should be considered. Such a review should screen and assess access procedures in relation to the agri-food sector since, despite the availability of several instruments, the number of agri-food enterprises benefitting from these instruments seems to be limited
- Especially, the adequacy and level of specialisation on agri-food of available public instruments to support the development of start-ups and address the limited capitalisation of small-sized enterprises should be evaluated, as these seem to be the main market weaknesses

ANNEX

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A.2. Stakeholders interviewed

Name of institution/organisation	Type of Stakeholder
Crélan	Financial institution
CBC	Financial institution
ING	Financial institution
PNB Paribas Fortis	Financial institution
Ministry of Agriculture – Wallonia	Managing Authority
Ministry of Agriculture – Flanders	Managing Authority
Fédération Wallone de l'agriculture (FWA)	Producer Association
Fédération Unie de Groupements d'Éleveurs et d'Agriculteurs (FUGEA)	Producer Association
Fédération des Jeunes Agriculteurs (FJA)	Producer Association
Société Wallone d'Investissment Agricole (SWIA)	Financial institution
Fédé RT ASBL	Producer Association
FEVIA (Federatie van de Belgische voedingsindustrie - Fédération de l'industrie alimentaire belge)	Industry Association
Boerendbond	Producer association

A.3 Methodology for financing gap calculation

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

Financing gap definition.

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

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

1. $\boldsymbol{Rejected}$ **credit applications** include applications that are rejected by banks (or other credit organisations) and offered from banks, but turned down by the farmers/firms.
2. **The share of** $\boldsymbol{Viable}$ **firms is measured by** the share of total firms that have a non-negative turnover growth[102] or a non-negative turnover and that are not in a situation of cost increase (these two criteria might be used to obtain an upper and lower boundary for the calculations).
3. **Discouraged application is proxied by the average size** (financial value) of loan applications made by firms that applied for a similar type of financial product. This allows for grouping firms which did not apply for fear of rejection with rejected firms (see step 2 and 4 below).

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

Step1: Ratio of viable farms with unmet demand for finance

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

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

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

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

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

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

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

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

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

Step 2: Number of farms rejected or discouraged

$\boldsymbol{N.of\ Farms\ in\ unmet\ demand_{ij}^{Viable}}$: 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 33rd percentile of the PPI index in the EU. We assume equal rates of rejections among small, medium- and large-sized farms, and disentangle the share of farms with constrained in obtaining credit by financing product.

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

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

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

for $i = Small, Medium, Large$

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

Step 3: Standard Loan Application Size

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

Step 4: Financial gap across farm size and product type

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

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

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

for $i = Small, Medium, Large$

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

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

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

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

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

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

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

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

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Lower bound: farms with a non-negative turnover growth and no cost increase	Share of respondents rejected by creditor or farmer	0.00%	0.78%	0.39%	0.00%
	Share of respondents that have not applied because of possible rejection	1.42%	1.16%	1.16%	1.55%
	Total (sum of rejected and discouraged)	***1.42%***	***1.94%***	***1.55%***	***1.55%***
Upper bound: farms with a non-negative turnover growth	Share of respondents rejected by creditor or farmer	0.00%	1.17%	0.39%	0.00%
	Share of respondents that have not applied because of possible rejection	2.07%	1.93%	1.68%	2.07%
	Total (sum of rejected and discouraged)	***2.07%***	***3.10%***	***2.07%***	***2.07%***
Total unmet demand: all farms	Share of respondents rejected by creditor or farmer	0.00%	1.43%	0.39%	0.00%
	Share of respondents that have not applied because of possible rejection	7.08%	7.09%	6.84%	4.77%
	Total (sum of rejected and discouraged)	***7.08%***	***8.52%***	***7.23%***	***4.77%***
Farms with constrained access to finance, **lower bound**	Small-sized farms	200	274	219	219
	Medium-sized farms	256	350	280	280
	Large-sized farms	35	48	38	38
Farms with constrained access to finance, **upper bound**	Small-sized farms	291	438	291	291
	Medium-sized farms	372	559	372	372
	Large-sized farms	51	77	51	51
Standard loan application size (EUR)	Small-sized farms	19 043	46 194	127 398	17 192
	Medium-sized farms	24 128	43 906	138 333	19 071
	Large-sized farms	71 161	111 732	249 083	101 566

Source: fi-compass survey.

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

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Firms with a non-negative turnover growth	Share of respondents rejected by creditor or firm	0.00%	0.00%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	2.52%	3.79%	5.36%	1.26%
	Total (sum of rejected and discouraged)	***2.52%***	***3.79%***	***5.36%***	***1.26%***
Total unmet demand	Share of respondents rejected by creditor or firm	0.00%	0.00%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	2.52%	3.79%	5.36%	1.26%
	Total (sum of rejected and discouraged)	***2.52%***	***3.79%***	***5.36%***	***1.26%***
Firms with constrained access to finance	Small-sized firms	167	250	354	83
	Medium-sized firms	6	9	13	3
	Large-sized firms	2	3	4	1
Standard loan application size (EUR)	Small-sized firms	148 539	187 534	547 277	201 061
	Medium-sized firms	1 849 741	966 632	2 342 935	821 223
	Large-sized firms	7 840 373	4 416 886	29 433 818	19 807 723

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 14 reports the number of respondents by Member State.

Table 14: *fi-compass* survey sample size per Member State

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

Source: fi-compass survey.

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

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

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

A.5 TG II: agri-food survey

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

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

The survey was conducted targeting the completion of a minimum of 45 questionnaires for each Member State. The minimum sample size obtained varied per country mirroring the differences in the size of the sector. Table **15** reports the sample size per country.

Table 15: Agri-food survey sample size per Member State

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

Source: Agri-food survey.

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

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