fi compass
EAFRD

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

June 2020

European Commission

European Investment Bank
The EU bank

DISCLAIMER

This document has been produced with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of the European Union or the European Investment Bank. Sole responsibility for the views, interpretations or conclusions contained in this document lies with the authors. No representation or warranty expressed or implied is given and no liability or responsibility is or will be accepted by the European Commission or the European Investment Bank or by the managing authorities of ESI Funds Programmes in relation to the accuracy or completeness of the information contained in this document and any such liability or responsibility is expressly excluded. For the avoidance of doubt, this document is provided for information only. Financial data given in this document has not been audited, the business plans examined for the selected case studies have not been checked and the financial model used for simulations has not been audited. The case studies and financial simulations are purely for theoretical and explanatory illustration purposes.

The case projects can in no way be taken to reflect projects that will actually be financed using financial instruments. Neither the European Commission nor the European Investment Bank gives any undertaking to provide any additional information on this document or correct any inaccuracies contained therein.

This document has been prepared with the support of a consortium of Ecorys and Frankfurt School of Finance & Management gGmbH.

This document is to be referred as: *fi-compass*, 2020, Financial needs in the agriculture and agri-food sectors in Austria, Study report, 77 pages. Available at: https://www.fi-compass.eu/sites/default/files/publications/financial_needs_agriculture_agrifood_sectors_Austria.pdf.

Glossary and definitions

Expression	Explanation
Agri-food survey	Survey of the financial needs of EU agri-food processing enterprises carried out in mid-2019 in the framework of study 'EU and Country level market analysis for Agriculture' and based on respondents' financial data from 2018.
AKIS	Agriculture knowledge and innovation system
AWS	Austria Wirtschaftsservice GmbH
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 Countries	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
ha	Hectares

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.

IACS	Integrated Administration and Control System
KGG-UBG	Kreditgarantie- und Unternehmensbeteiligungsgesellschaft
NGO	Non-Governmental Organisation
NOEBEG	NÖ Bürgschaften und Beteiligungen GmbH
RDP	Rural Development Programme
SAFE	Survey on the Access to Finance of Enterprises
SMEs	Small and medium-sized enterprises
SO	Standard Output
UAA	Utilised Agricultural Area
WKBG	Wiener Kreditbürgschafts-und Beteiligungsbank AG

Table of contents

List of figures

List of tables

EXECUTIVE SUMMARY

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

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

Financing gap for the agriculture sector in Austria

The agriculture sector in Austria shows a positive attitude towards investment. This report's analysis highlights three main investment drivers of the Austrian agriculture sector:

(i) **Modernisation of agricultural enterprises**. As in many other countries, farmers in Austria suffer from the weak position they occupy in the value chain, facing difficulties relating to increasing input costs and fluctuating selling prices of their products. To overcome these barriers, Austrian farmers invest in the competitiveness of their enterprises and in solutions for shortening the value chain. In addition, to improve their position in the market, Austrian farmers adopt a stricter set of production standards in terms of quality, environmental impact and animal welfare.

(ii) **Income diversification**. Austrian farmers are diversifying their activities to capture additional sources of income. They are mainly combining agricultural production with services that benefit other industries, such as agri-tourism and renewable energy.

(iii) **Expansion of farms' size and production capacity** of some agricultural sub-sectors. This happens in particular, in the dairy sub-sector, where the abolishment of the milk quota has shifted production from mountains to more favourable areas. Restriction removal has generated a positive effect and led to an increase in investment related to purchase or rent of additional land.

Results from the report indicate that access to European Agriculture Fund for Rural Development (EAFRD) resources and requests for bank finance are correlated, and these two sources of financing are often complementary in investment operations. For instance, bank finance is important to fund non-eligible expenditures under EAFRD. This includes cases with financing for the purchase of land in Austria, which is mainly supported by bank finance. Furthermore, this source of finance for this type of investment in agriculture is far above the EU 24 average. Financing needs also relate to working capital, which represents 17% of the loans obtained by Austrian farmers in 2017.

Financing supply, for its part, is provided by a group of financial intermediaries with a long history and sufficient specialisation in the sector. They are also able to cover the Austrian rural areas with a large number of local outlets. The downside of this situation is that, at provincial level, just one intermediary dominates the market, which generates a subsequent risk of limited competition. This seems to be confirmed by the number of lending applications in 2017, where the share of farmers that consulted only one or two banks to obtain a loan is higher in Austria in comparison with the EU 24 average. Nevertheless, limited competition in the market has not emerged as a significant issue in the interviews conducted for this report. In addition, the supply of finance is supported by a public interest subsidy scheme, which seems to be appreciated and is effective in helping farmers to access finance at favourable conditions.

Non-financial support is also provided to farmers seeking advice. The District Chambers of Agriculture provides capacity building and technical assistance to farmers requesting support for the development of their investment project form. According to interviews conducted for this report, banks are also open to informal discussions and advice on the preparation of business plans before formal applications.

Overall, the financial market for Austrian farmers seems to be well developed and able to support investment and working capital needs of the sector.

However, this study shows that there is still potential for new financial instruments, with a market gap estimated between EUR 145 million and EUR 246 million. Around 65% of the gap value relates to small-sized farms (below 20 ha) and around 38% to young farmers. In terms of financial products, almost 75% of the gap relates to medium and long-term investment loans. This market gap is comprised of separate components:

- The first component of the financing gap is constituted by the estimated value of loan applications submitted in the past year by viable enterprises which were rejected by banks, or which translated into loan offers refused by the applicants due to non-acceptable lending conditions. This financing gap component relates mostly to investment loans, since rejection of viable applications for short-term loans seems to be non-significant according to this report. Loan application rejections appear to be mostly related to lack of assets to be used as collateral. To this regard, it is also worth noting that according to *fi-compass* survey data, request for collateral or guarantee in Austria is more frequent and represents on average a higher percentage of the loan value in comparison with the EU 24 average. In addition, lack of collateral might affect particularly young farmers and most specifically the new entrants that do not have the possibility to take over a parents' holding.
- The second component of the gap relates to the estimated value of loan applications that are not submitted by farmers considered viable due to discouragement of a possible rejection. This phenomenon can be tied to lack of knowledge and familiarity with the banking system which prevents viable enterprises applying for finance. Hence, farmers can miss potentially profitable investment opportunities. While interviews conducted for this report show that farmers in Austria can already obtain information and advice relating to access to finance, an additional effort in terms of awareness raising and training on the financial management and investment opportunities for agricultural business may help to expand the market further. These initiatives might encourage a group of enterprises (not very large but still significant) that may be self-excluded from the financial market. In the case of Austria, the other reason for not applying for a loan may also be the consequence of preliminary informal meeting with banks, which may discourage enterprises from applications due to weaknesses in the business plan or their credit history.

RECOMMENDATIONS

Even though Austrian farmers can rely on an already well-developed and functional financial market, a targeted use of financial instruments in the next CAP programming period may help to facilitate access to finance for new enterprises currently excluded (or more often self-excluded) from the market:

- A guarantee instrument based on EAFRD resources may complement the support currently provided through the public interest rate subsidy scheme, supporting access to finance for farmers (young farmers in particular) and/or small-sized farms who lack sufficient assets to be used as collateral.
- The combination of the guarantee instrument with technical support for the development of the business plan, together with a more general action of information and awareness raising may also be beneficial.

The use of financial instruments might also help to attract new financial intermediaries in the sector, potentially creating more competition for the benefit of the farmers.

Financing gap for the agri-food sector in Austria

The investment dynamics in the Austrian agri-food sector are driven by an export boom. Whilst the overall turnover of the Austrian agri-food sector has increased by 20% during the last 10 years (2009-2019), the turnover growth from exports has doubled during the same time span. Revenues obtained from exports are the main reason for turnover growth in the agri-food sector. Against this background, the following investment drivers of the Austrian agri-food sector stand out:

(i) **Improving productivity** and efficiency of production capacity by means of investments in automatised technologies;
(ii) **Expansion in new products and product differentiation** is another investment driver, in order to respond to consumer trends; and

(iii) **Promotion activities** on domestic and international markets (including branding strategies).

Whilst Austrian agri-food enterprises have high equity ratios, there is still sizeable demand for finance. The rural development support measure for processing and marketing of agri-food products only covers a small share of total investments. Based on the Agri-food survey, 34% of Austrian agri-food enterprises applied for finance in 2018. As a result, the total amount of credit provided to the agri-food sector is growing steadily, similarly for the agriculture sector. **In June 2019, the total outstanding loan volume in the Austrian agri-food sector was EUR 2.1 billion**.

The financial landscape is comparable with regards to agriculture loans, but specialised intermediaries offer various guarantee instruments for agri-food enterprises that are applying for a loan. In addition, these institutions offer equity investment solutions, which improve the overall rating of the enterprise, leading to better conditions on interest rates in case of loans.

Based on the analysis, a financing gap has been identified and estimated to be EUR 175 million. Two thirds of this gap are concentrated to small-sized enterprises (approximately EUR 116 million). In terms of financial products, 64% of the financing gap relates to long-term loans.

The financing gap for the agri-food sector in Austria is comprised of the following:

(i) The main reason for the rejection of investment loan applications is insufficient own capital as banks require own financial contribution to reduce moral hazard. This impacts on the level of collateral, which is insufficient and listed as another reason for rejections.
(ii) Obtained qualitative information reveals that the discouragement is mainly related to bank requirements, in particular relating to request for collateral.

RECOMMENDATIONS

Based on the findings of this report, the following recommendations should be considered to improve the offer of financial instruments supporting the sector:

- Significant problem for enterprises in agri-food sector is the provision of sufficient collateral. Whilst several financial intermediaries offer a wide range of guarantee options, the agri-food businesses are challenged with having enough of their own capital. This suggests to further reflect on the possibility to bolster the current guarantee offering, possibly in synergy with current instruments and avoiding duplications.
- A significant obstacle, especially for start-ups and new entrants, is the low level of their own funds and equity that limits their creditworthiness. Therefore, it is worth considering improving equity financial instruments (e.g. some type of acceleration funding and venture funding) in agri-food sector as the existing equity financial instruments are more indented for other industries.
- Considering the market dominance of one bank, it can be assumed that financial instruments might stimulate interest from new operators, providing a broader choice to Austrian agri-food enterprises.

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 Austria. 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) in the context of the new CAP Strategic Plan for Austria 2021-2027.

Approach

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

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

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

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

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

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

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

The report does not take into account the impact of the ongoing COVID-19 health crisis and/or the effect of any new support scheme being set-up by the Member State and/or changes in 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 Austrian agriculture sector
• Out of 132 490 farms, more than 90% are managed as small-sized family farms (below 20 ha)[2]. • 54.7% of Austrian farms specialise on grazing livestock (cattle, sheep), followed by 19.8% arable crop farms, 10.1% are mixed farms, 10.3% specialise on perennials (wine, fruit), and 4.6% are categorised as intensive livestock farms (pig, poultry)[3]. • Family farms are involved in diverse cooperatives, focused on producing, processing and the marketing of branded high-quality products, and aiming at shortening the supply chain. • However, less than 10% of the farms specialise in on-farm processing of their agricultural produce, found mainly in the wine, fruits and vegetables, and dairy sectors. • Austria's farmers are, on average, younger compared to the EU, as 22.2%[4] of the farming population is below the age of 40. • 60% of farm income is generated through agricultural activities, pointing towards the significance of part time farming in Austria. • Overall, the agriculture sector is showing growth in the last decade, best reflected by its production value and farm incomes.

Austrian agriculture goes far beyond food production and generating decent and comparable livelihoods in rural areas. While agriculture contributes just 1.2% to the Gross Value Added (GVA) of the Austrian economy, the small-scale family farmers (90% manage less than 20 ha per farm) provide multifunctional services that also have an impact on other industries (e.g. tourism, renewable energy). Nearly two thirds of the predominantly rural country are covered by mountains, explaining also, why Austria has centred its agricultural policy on environmental sustainability, specialising on high value added, mostly organic, agri-food products, in order to compete in the global market.

Since 2010, Austrian agriculture has been performing positively, despite showing vulnerabilities to climate change[5]. The main drivers for this development lie in:

(i) the growing demand for Austrian agri-food products beyond its borders;

(ii) the public services that farmers provide; and

(iii) the technological progress[6].

The positive development of the Austrian agriculture sector (Figure 1) in recent years is best displayed by a set of key indicators:

- The livestock dominated production value of Austrian agriculture (2018: EUR 7.4 billion) increased by 16.9% since 2010 (Figure 1)[7]; and

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

3 LBG, 2018, Austrian Agriculture Accounting System.

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

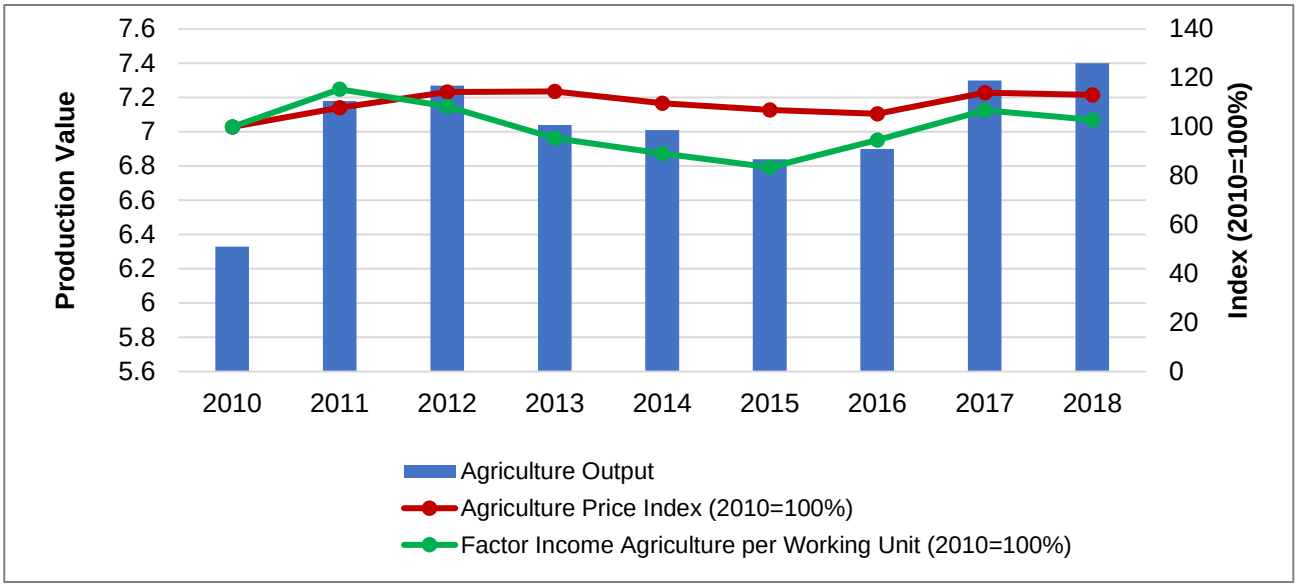
5 Weather-related volatilities in cereal production can vary over 26% (e.g. Austrian cereal production in 2011 and 2014 was 5.7 million tons, and in 2013 just 4.5 million tons).

6 Austrian Institute for Economic Research, 2018, Austrian Agriculture 2020-2050.

7 Ministry of Agriculture, Regions and Tourism, 2019, Grüner Bericht (Report on the Situation of Austrian agriculture).

- Recovering from poor harvest years and increasing market prices, the factor income agriculture[8] has increased by 23.2% since 2015.

Figure 1: Development of the agricultural output (EUR billion), producer prices and factor income agriculture in 2010-2018 in Austria, 2010=100%

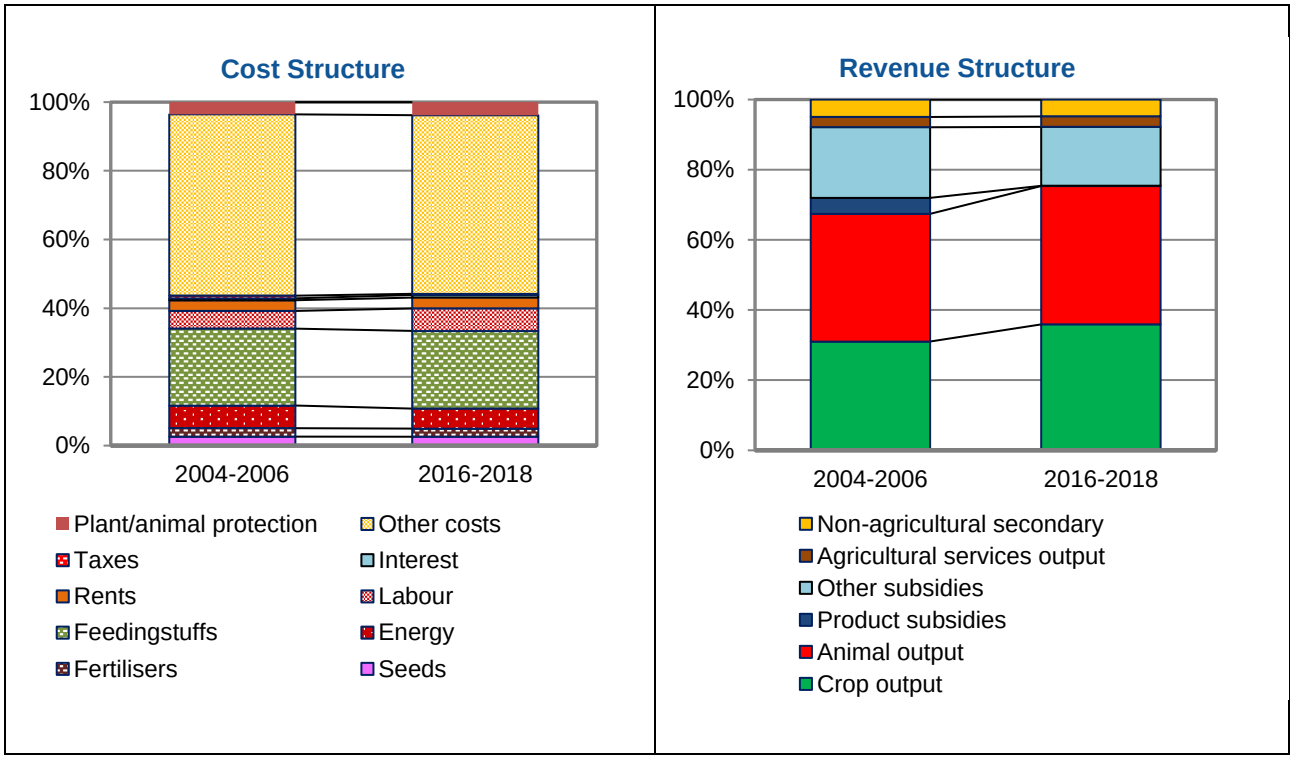


Source: Ministry of Agriculture, Regions and Tourism, 2019.

As for the cost and revenue structure for the agriculture sector (Figure 2), comparing the years 2004-2006 with 2016-2018, costs for taxes and animal feed have decreased, while the cost of labour has increased. On the revenue side, the share of revenues stemming from public support has decreased, while the share from animal and crop output has increased.

8 Agricultural factor income measures the income generated by farming, which is used to remunerate borrowed or rented factors of production (capital, wages and land rents), as well as own production factors (own labour, capital and land).

Figure 2: Agriculture income – cost and revenue structure in Austria, 2004-2018



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

Statistical factsheet Austria, 2019

More data on agriculture indicators from Austria can be found in the **Statistical Factsheet for Austria 2019** of the Directorate-General for Agriculture and Rural Development, Farm Economics Unit and in Annex A.4 Data from the agriculture statistical factsheets.

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

This section describes the drivers of demand for finance in the agriculture sector and analyses the met and unmet demand. It seeks to elaborate the main reasons for farm enterprises to request financing and identify the agricultural sub-sectors displaying the largest need for finance. This section also provides an analysis of the type of producers that face the greatest constraints to accessing credit. The analysis of the demand for agricultural finance is based on the findings from the *fi-compass* survey of 320 Austrian 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 Austrian agriculture sector

- The favourable development of the Gross Fixed Capital Formation (GFCF)[9] in recent years points to an investment active agriculture sector in Austria.
- Investment support is one of the priorities in the Austrian RDP 2014-2020, as 9.1% of its envelope is allocated for investments in agricultural holdings (M4.1) and 1.5% of the RDP benefits young farmers (M6.1).
- Access to finance does not constitute a major constraint for Austrian farmers, and financial institutions show liquidity.
- The dominant sub-sector of Austrian agriculture for which farmers demand finance is the dairy and cattle, which accounts for 58% of the loan volume in 2018.
- Within the intensive livestock sector, poultry is showing a growing demand for finance, whilst investments in the pig sector are stagnating, based on a mix of high production costs due to stringent standards and low market prices due to the impacts of the African Swine Fever.
- 17.9% of Austrian farmers applied for bank finance in 2017, which is significantly lower than the EU 24 average of 29.6%.
- Austrian farmers use bank loans mostly for investments in machinery, equipment and buildings, followed by permanent crops/orchards (fruits, viticulture) and purchase of animals. Following the abolishment of the dairy quota in 2015, the purchase and rent of land for grazing livestock has experienced growth.
- 21% of Austrian farmers considered that access to land for purchase or for rent is of concern, which is based on the decline of farmland due to the ongoing urbanisation.
- With regards to working capital, the mixed (EUR 11 300) and intensive livestock farms (EUR 8 700) have the highest demand, while the less-labour intensive arable crop farms have the lowest demand of EUR 4 100.
- **The total credit unmet demand for the agriculture sector is estimated at EUR 274 million**.
- There is a growing trend of young farmers that split-off part of their parent farms to form a new farm; this leads to challenges with lack of collateral at the time of applying for credit.
- While liquidity of banks is not an issue and access to finance does not seem to be problematic, there are still almost 2% of farmers that were discouraged from applying for loans, which invites to consider more awareness-raising and technical support for farmers and financial intermediaries.

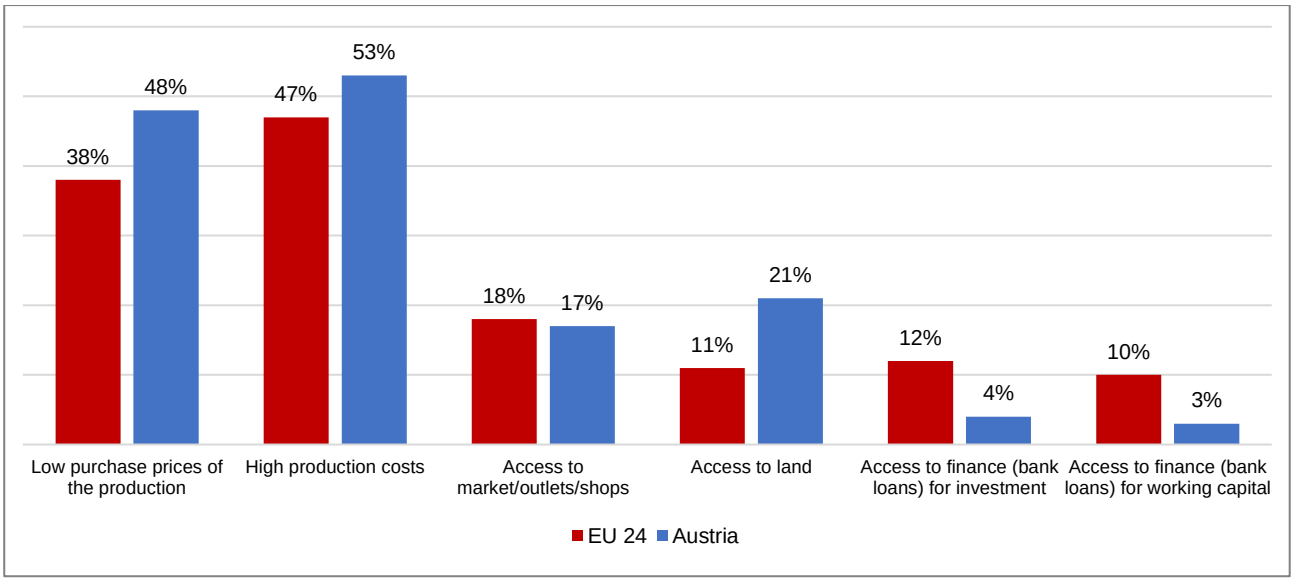
2.2.1 Drivers of total demand for finance

Increases in production costs challenge Austrian farmers. More than half of Austrian farmers responded to the *fi-compass* survey that the cost of production was their main concern in the last year, which is higher

9 Gross fixed capital formation consists of resident producers´ acquisitions, less disposals, of fixed tangible or intangible assets. This covers in particular machinery and equipment, vehicles, dwellings and other buildings.

than the average EU 24 respondents of 47% (Figure 3). Complementing the survey results, the Economic Accounts for Agriculture (EAA) reveals that the total working capital in 2018 is EUR 4.2 billion, which makes up 57% of the agriculture production value (output)[10]. During the last decade, production costs have increased by 21%. Animal feed alone accounts for 36% of the working capital, which correlates with the higher demand for finance of working capital within livestock sector. The highest use for working capital per farm is witnessed within the mixed farms (EUR 11 300) and intensive livestock farms (EUR 8 700), while less labour-intensive arable crop farms have the lowest amount of EUR 4 100[11]. Compared to the previous year, the need for working capital (input price index) increased by 3.3%[12].The main drivers behind this change are growing energy prices (+8.2%), fertilizers (+5.7%), animal feed (+5.5%), and the maintenance of machinery (+3.5%).

Figure 3: Difficulties experienced by farmers in 2017



Source: fi-compass survey.

Selling prices were also critical for 48% of Austrian farmers compared to 38% of those in the EU 24, especially the **low share of the producer price in the consumer price** that has been a subject of debate for years (Figure 3). Austrian farmers are concerned about earning a fair living in an environment of unpredictable production costs and selling prices and obtaining a fair price for their products through the supply chain. They wish to be recognised for the services (e.g. land management and environmental stewardship) they provide to society. Therefore, Austrian farmers make efforts to shortening the supply chain, in order to obtain a higher market price[13].

In addition, 21% of Austrian farmers expressed that access to land is a significant challenge, which is nearly twice as high compared to the EU 24 average of 11% (Figure 3). The ongoing urbanisation has led to an annual decline of farmland (2010: 8 760 ha, 2014: 6 570 ha, 2018: 3 796 ha)[14]. In addition, the abolishment of the dairy quota in 2015 has shifted dairy production from the mountains to more favourable areas. Consequently, dairy farmers are in search of additional land in order to comply with the legal requirements that restrict maximum livestock units per hectare and satisfy their animal feed demand in proximity to their farm[15].

10 Statistik Austria, May 2019, Economic Accounts for Agriculture 2018.
11 LBG Österreich GmbH, May 2019, Austrian Agriculture Accounting System.
12 Ministry of Agriculture, Regions and Tourism, 2019, Grüner Bericht.
13 Interview with the Chamber of Agriculture, June 2019.
14 Austrian Environment Agency, 2019, Development of annual usage of land, https://umweltbundesamt.at/umweltsituation/raumordnung/rp_flaecheninanspruchnahme/.
15 Interview with the Dairy Association, June 2019.

On the positive side, Austrian farmers seem to have less problems relating to access to finance, as just 4% of the respondents are constrained by access to finance for investments and 3% for working capital, in comparison to the EU 24 average of 12% and 10% respectively (Figure 3).

Overall, the Austrian farmers demand for finance is driven by:

(i) expansion of their agricultural activity (including purchase and rent of land);

(ii) investing in modernised production technologies; and

(iii) improving production standards in response to consumer demands and enabling them to compete in the EU and global markets[16].

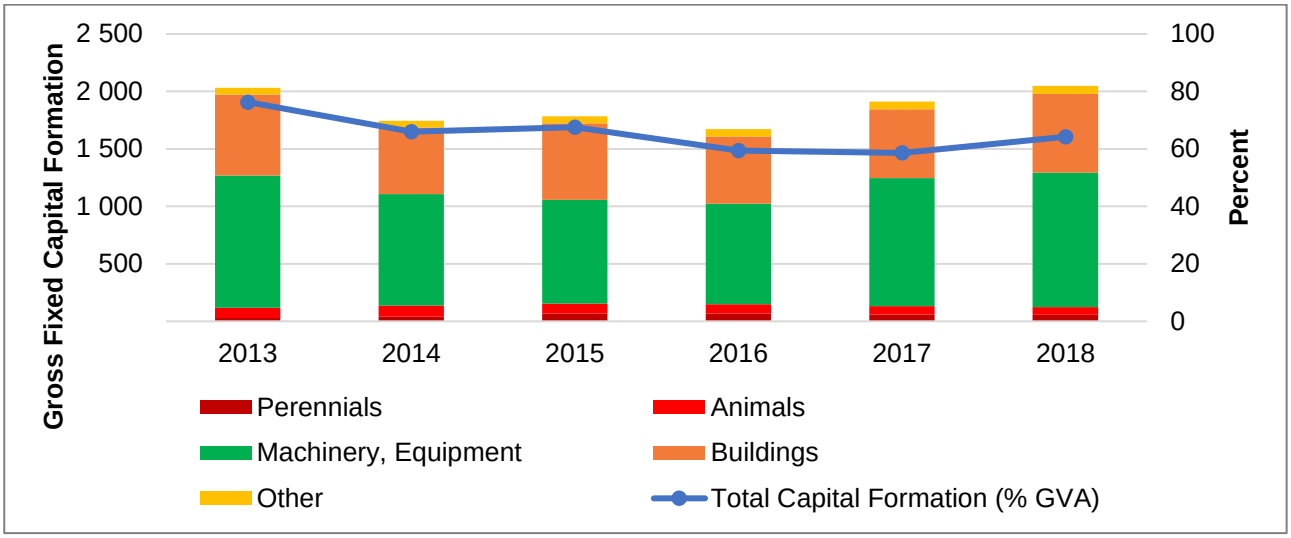
With regards to standards, Austria has one of the most stringent laws for animal welfare[17], which stimulates investments among farmers. In addition, the competition between wholesalers and the retail chains, in conjunction with the demand from the active non-governmental organisations' (NGO) sector has led to a continuous increase in production standards, especially pertaining to quality, safety, hygiene, and environmental standards.

Income diversification is a priority for Austrian farmers and impacts investments. While the deployment of digital technologies or adaptation to climate change plays a less significant role, Austrian farmers' investments are also driven by efforts for income diversification[18]. Besides focusing on investments for value-added activities, such as organic farming, Austrian farmers frequently invest in non-agriculture activities, such as agri-tourism or renewable energy facilities. These investments require medium and long-term finance for equipment, infrastructure and technical facilities, as well as for land purchase and the development of processing and value-added production. It also requires short-term financing for working capital for cultivation, growing crops, and rearing livestock.

The growth of the Gross Fixed Capital Formation (GFCF) in recent years points to an investment active agriculture sector in Austria (Figure 4). In fact, it is nearly twice as high compared to the EU 28 average (investing 33.6% of total agricultural GVA)[19]. The GFCF in Austrian agriculture for the year 2018 amounts to EUR 2 billion[20], which in relation to the total agricultural GVA (EUR 3.2 billion), implies that 64% of GVA was used for capital investments in physical assets. The total amount of write-offs in 2018 amounted to EUR 1.8 billion. The development of economic depreciation since 2013 reveals a slight increase of 3.8%, which implies that higher investments have been carried out in the past. The main depreciation is for non-agricultural assets, above all, machinery and equipment (55%), followed by buildings (39%). Depreciation on agriculture assets pertains mainly to permanent crops, but only accounts for 6% of total write-offs.

16 Interview with the Chamber of Agriculture, June 2019.
17 Interview with the Chamber of Agriculture, June 2019.
18 Interview with the Chamber of Agriculture, June 2019.
19 European Commission: Gross Fixed Capital Formation in Agriculture, updated 2017.
20 Statistik Austria: Economic Accounts for Agriculture, 2019.

Figure 4: Development of Gross Fixed Capital Formation by Austrian agricultural and non-agricultural assets 2013-2018, EUR million



Source: Statistik Austria, Economic Accounts on Agriculture, 2019.

Of the GFCF, the bulk of the investments were carried out on non-agriculture assets (e.g. machinery and buildings) in comparison to agricultural assets, such as fruit trees, permanent crops, and animals (Figure **4**). Within GFCF, investments in crop production are mainly made in perennials, such as in the fruit and wine sub-sectors. With regards to animals, investments are focused on those sub-sectors that lead to regular output (e.g. cows and breeding sows).

Variations in demand for finance between sub-sectors exist and depend on the region of production. Overall, investments in the grazing livestock (dairy) sub-sector dominate in the six Western and more mountainous provinces of Austria, while the demand for finance for wine and fruits and vegetables are prioritised in the Eastern part of Austria[21]. The demand for finance by sub-sector has various drivers:

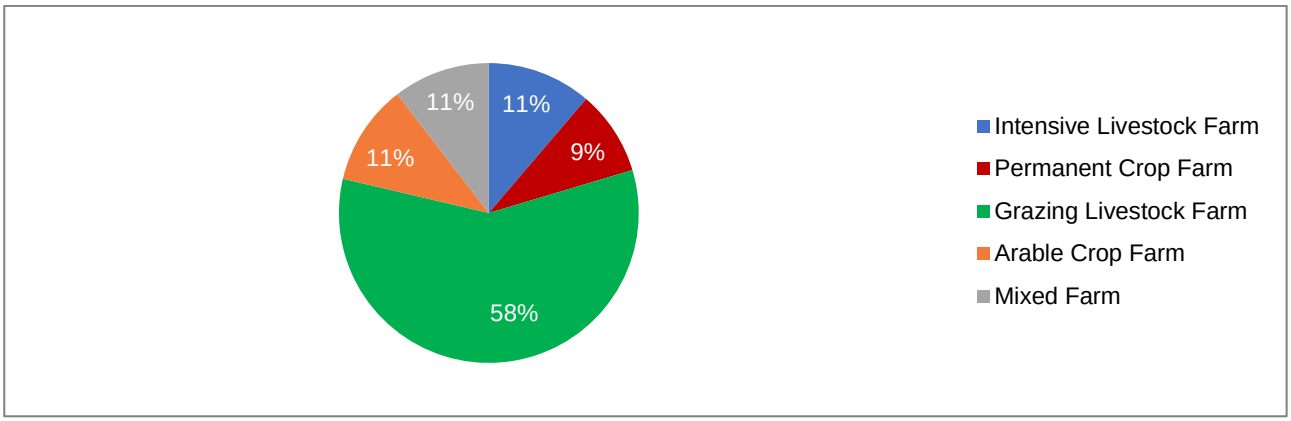
- The dominant sub-sector of Austrian agriculture for which farmers demand finance is the **grazing livestock (dairy) sub-sector** in six out of nine provinces[22]. The dominant role of this sub-sector is also reflected in total agricultural output (2018: 30.4%) and in growth of the production value within the dairy sector (+25% compared to the previous year). The main drivers behind this investment intensity are based on land purchase and rent as a consequence of the abolishment of the milk quota and shifting the dairy production in more favourable regions[23]. But also, ambitions for modernisation of improved efficiencies and complying with animal welfare, quality, hygiene and other standards are the main reasons for investments. Grazing livestock sub-sector accounts for 58% of the total liabilities (Figure 5).
- Within the **intensive livestock sector**, **poultry** is showing increasing demand for finance based on expansion of the sector due to the growing consumption rate[24]. Stringent standards on husbandry systems have also stimulated investments. Poultry production is showing the highest share of liabilities[25], as the business plan (cost/benefit) of the poultry sector is generally built on expected revenue streams that are less volatile than in other sectors, thereby lowering the risk premium and increasing borrowing capacity.
- Investments within the **pig sub-sector** have been stagnating. Traditional long-term investment plans (20-25 years) are restrained by regular discussions (every five years) on elevating stringent standards in the

21 In Burgenland, Lower Austria and Vienna, grazing livestock is the not the dominant sub-sector.
22 Interview with the Chamber of Agriculture and Raiffeisen Bank Upper Austria, Styria, Salzburg, May 2019.
23 Interview with the Dairy Association, June 2019.
24 Interview with the Chamber of Agriculture and Poultry Cooperative (Geflügelmastgenossenschaft), June/ September 2019.
25 LBG, 2019, Austrian Agriculture Accounting System.

sector. Most actual and impactful requests, partially coming from the NGOs, call for the adaptation of standards regarding group housing systems and emission ceilings[26]. While the sector is familiar with cyclical market prices, the sub-sector is still recovering from the African Swine Fever and its impact on the market demand and selling prices. Rather than catalysing investments, the lack of planning perspective, frequent changing environment with regards to standards are hampering pig farmers from seeking financing support.

- Within the **perennials**, the wine and fruit sub-sectors have revealed a growing investment demand in recent years, which is concentrated in the Eastern part of Austria. Changes in grape and fruit varieties following consumer trends are the main driver behind these investments[27].

Figure 5: Share of liabilities by farm type category in Austria in 2018

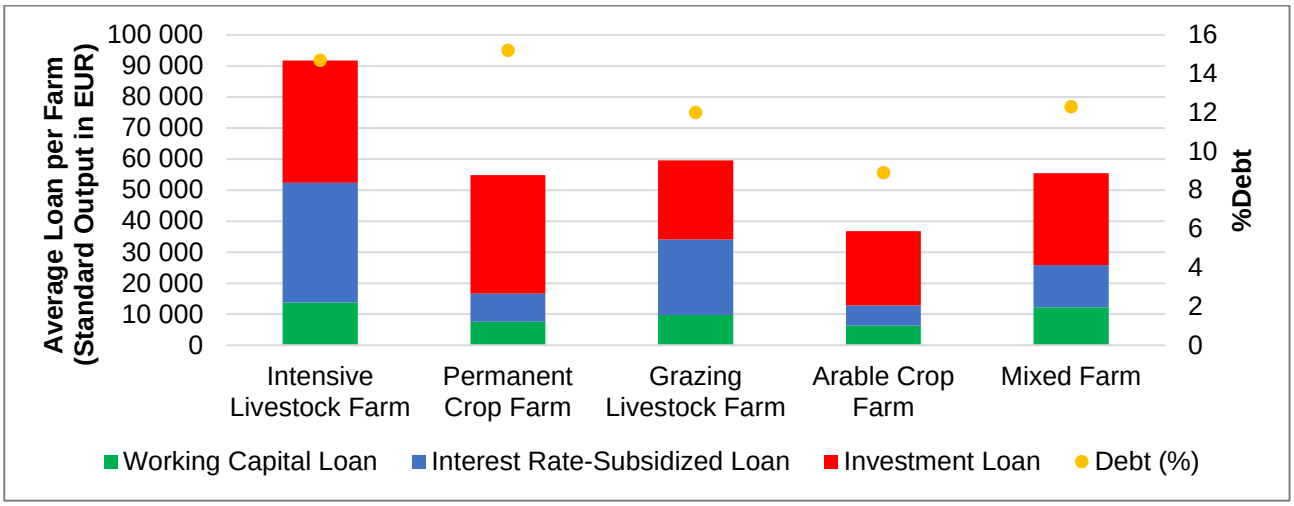


Source: Austrian Agriculture Accounting LTD, 2019.

Based on the review of the Austrian Agriculture Accounting System, the intensive livestock farms (poultry, pig sub-sectors) have the highest liabilities on their balance sheet (EUR 92 000) and a second highest debt of 12.8% (Figure 6)[28], which is mainly driven by investments in the poultry sub-sector in recent years[29]. The farms growing permanent crops, especially wine grapes and fruit have carried out investments, with an average liability of EUR 55 000 and highest debt of 15.2%. These dominant finance seeking sub-sectors receive the least Common Agricultural Policy (CAP) support. Arable crop farms on the other hand, benefiting most from direct payments, show the lowest liabilities (EUR 37 000) and a debt of 8.9%. While the grazing livestock is the second most investment intensive sub-sector with 20% of the total demand for finance in agriculture, the average livestock farmer demand for finance is EUR 60 000 and debt amounts to 12% (Figure 6). With little more than 50% of the total Austrian farms falling under this category, a significant share of farmers rear less investment and less labour intensive suckler cows and livestock farmers also lease less land (8.8 ha) compared to the average in the agriculture sector (10.8 ha), which impacts the average demand for finance.

26 Interview with the Association of Austrian Pig Producers, September 2019.
27 Interview with the Ministry of Agriculture, Regions and Tourism, 2019.
28 The degree of debt is measured by the share of borrowed capital to total capital.
29 LBG, May 2019, Austrian Agriculture Accounting System.

Figure 6: Average liabilities and debt per farm type category in Austria in 2018



Note: Standard Output ranges between EUR 15 000-350 000.

Source: LBG, Austrian Agriculture Accounting System, 2019.

The CAP is a vehicle for investment support. The review of the CAP is essential to this analysis, as direct payments (Pillar I) and the rural development grants (Pillar II) play an important role in stimulating demand for finance. Besides contributing to the beneficiaries' income, they also help in guaranteeing the repayment capacity of farmers.

In carrying out investments in the agriculture sector, Austrian farmers benefit from the financial inflows from the CAP. For the 2014-2020 programming period, Austria puts more emphasis on the Rural Development Programme (RDP) with 61.4% of total financial allocations (including national co-financing), compared to 38.6% for Pillar I. In total, nearly EUR 7.9 billion have been earmarked for the RDP over the seven-year period. While the RDP consists of over 50 measures, the following two measures are covered[30], as they particularly impact demand for finance for the agricultural production sector: sub-measure 4.1 (M4.1) on support for investments of agricultural holdings and sub-measure 6.1 (M6.1) on farm and business development, which benefits the start-up of young farmers[31]. With 9.1%, the share of investments in agricultural holdings (M4.1) takes a dominant role in total RDP volume.

Investment support is a priority under the RDP. At the end of October 2019, EUR 374.4 million have been paid to farmers for an overall investment volume of EUR 1.3 billion under M4.1[32]. 23 697 claims resulting in 959 applications for investment support from 12 672 farmers (9.6% of total farm population) were approved and granted. On the other hand, 663 claims and 1 020 applications were not granted, of which 258 claims with a potential demand for finance of EUR 4.9 million were rejected due to overshooting the budget and the remainder for not fulfilling the eligibility criteria. 78% of the investment support was granted for farm buildings, equipment and technical facilities, especially in the grazing livestock (dairy) sub-sector (Table 1).

30 RDP sub-measures 4.2 Support for investments in processing/marketing and/or development of agricultural products will be closer assessed in the agri-food section, and sub-measure 6.4 Support for investments in the creation and development of non-agricultural activities have also relevance to agriculture investments.

31 RDP sub-measures 6.3, 8.6, 16, and 19 are investment measures or have investment components, and thus subject to programming for financial instruments under EAFRD.

32 Ministry of Agriculture, Regions and Tourism, May 2019.

Table 1: Applications and volume of on-farm investment support (M4.1) by type of investments in Austria in 2014-2018

Type of Investment	Applications		Investment Support	
	Number	In % of total	EUR million	In % of total
Building investments including dairy facilities, feed plant, storage, silos, milk collecting and waste removal	11 275	47.6	304.9	81.4
Animal waste storage, composting facilities	3 062	12.9	10.8	2.9
Biomass facilities	2 182	9.2	10.8	2.9
Infrastructure facilities in mountainous regions incl. access to water and energy	453	1.9	10.0	2.7
Technical facilities for apiaries	23	0.1	0.1	0.0
Machinery and technical appliance for indoor work (not for fields)	4 889	20.6	22.4	6.0
Special machinery for mountain farming	670	2.8	8.0	2.1
Technical machinery that are eco-friendly	662	2.8	4.0	1.1
Irrigation	481	2.0	3.3	0.9
Glasshouses and foil cultivation	227	1.0	11.1	3.0
Assets to protect wine and fruit production	797	3.4	7.7	2.1
TOTAL	23 697	100	374.4	100

Source: Ministry of Agriculture, Regions and Tourism, 2019.

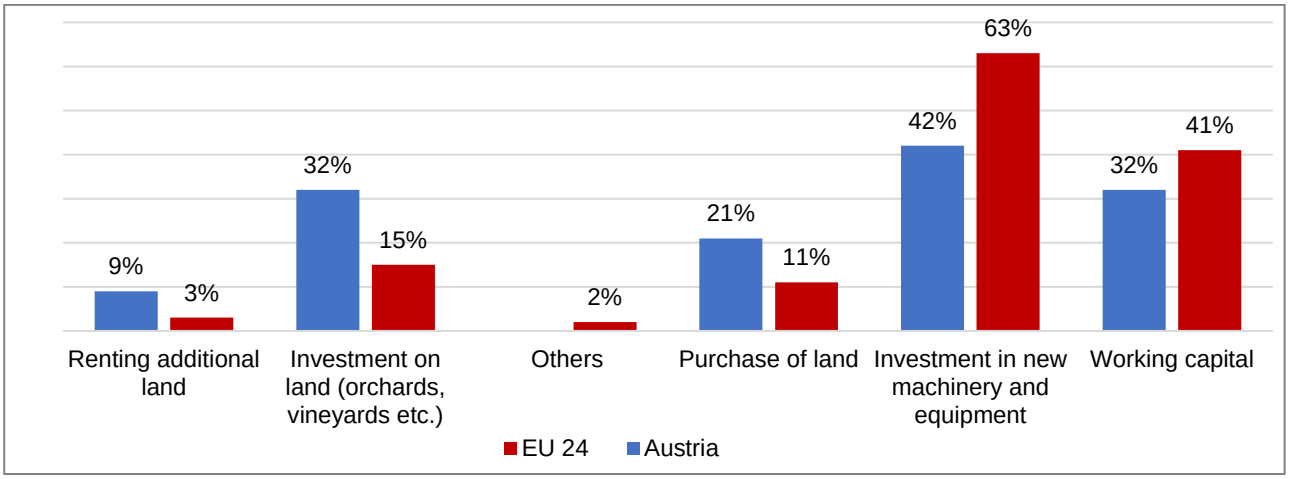
Note: The total amount requested is calculated based on all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not 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.

However, investment support has limitations. Overall, the share of public support (grant) to the investment varies between 50% in areas of natural constraint and 40% in other regions. Investment support is limited to EUR 400 000. In addition, EAFRD investment support (M4.1) in Austria does not support the purchase or rent of land as well as investments for animals or plantations (which are also not eligible for support through grants). Due to the high density of machinery in Austria, tractors, harvesters and other independent field machinery, irrespective if new or second hand, are not eligible for investment support. The only exception is if the farm is located in mountainous and thus, less favoured areas. For covering also these types of investments which are not eligible for grants, financial instruments could be used, especially following the changes in the EAFRD regulation after the Omnibus, which added significant flexibility. These will also remain eligible under EAFRD financial instruments for the post-2020 period where also purchase of land is envisaged to be facilitated for young farmers.

Public support for young farmers receives much attention. With regards to farm and business development, the Austrian RDP emphasises the need to contribute to the generational renewal in the agriculture sector. With M6.1, young farmers (taking over their family farms or new entrant start-ups) with a maximum age of 40 are supported in order to facilitate structural improvements of the new farm and entry of the (new) farmers into the business. The eligibility criteria are closely aligned with the investment support measure. By 2018, about 6 739 young farmers (around 23% of young farmers population) received EUR 52.6 million (1.9% of the RDP support) under M6.1. There are 201 claims that were rejected, but none because of budget overshoot.

The use of the bank loans in Austria reveals that farmers demand for finance usually complements investment schemes under the RDP[33]. However, as in the case of purchase for land, farmers often seek finance where the RDP investment support sub-measure (M4.1) does not provide any support. As mentioned above, the abolishment of the dairy quota in 2015 resulted in the Austrian dairy production moving away from the traditional mountainous areas to more favourable regions. Consequently, farmers have been trying to access land in their proximity, in order to provide for sufficient feed and comply with livestock units per hectare requirements. The use of loans to purchase and rent land is therefore twice as high in Austria compared to the EU 24 (Figure 7).

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



Source: fi-compass survey.

Austrian farmers are well informed on financial options. Austria has a strong and integrated agriculture knowledge and innovation system (AKIS). Based on the decentralised structure of the agriculture extension services (i.e. the proximity of the District Chambers of Agriculture to the farming population), the Austrian farmers are well informed on public support schemes, provided under the CAP or the national funded measures. This local service is also beneficial to inform farmers on agriculture finance and their responsibility to provide information and evidence of ownership (land lease, title and registration) that are required as part of their application for collateralised loans. Some of the District Chambers of Agriculture include well-structured information on options for financial products[34].

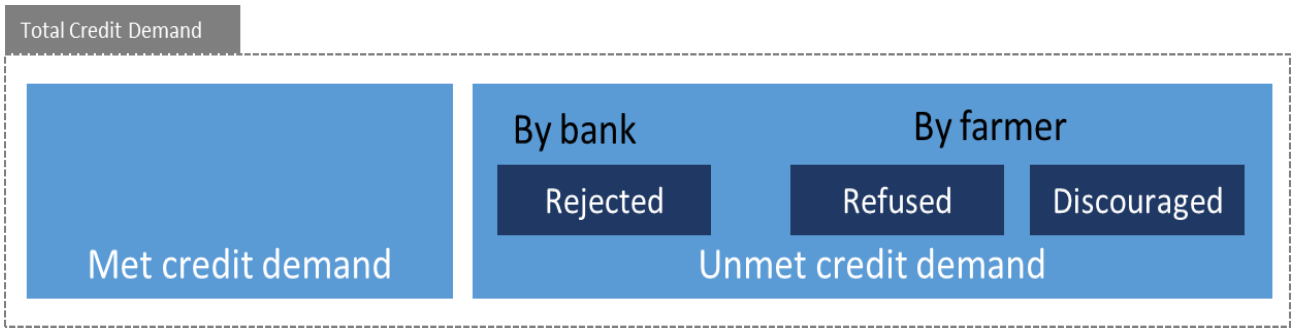
33 Chamber of Agriculture, May 2019.

34 Provincial Chamber of Agriculture of Burgenland, 2019, https://bgld.lko.at/kreditformen-und-welcher-kredit-wofür+2500+2546601.

2.2.2 Analysis of the demand for finance

The potential total demand for finance combines both, met and unmet demand. The met demand consists of the value of all applications for finance which were accepted by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial institutions, offers of credit refused by farmers, alongside cases when farmers are discouraged from applying for credit due to an expectations of rejection or refusal (Figure 8).

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



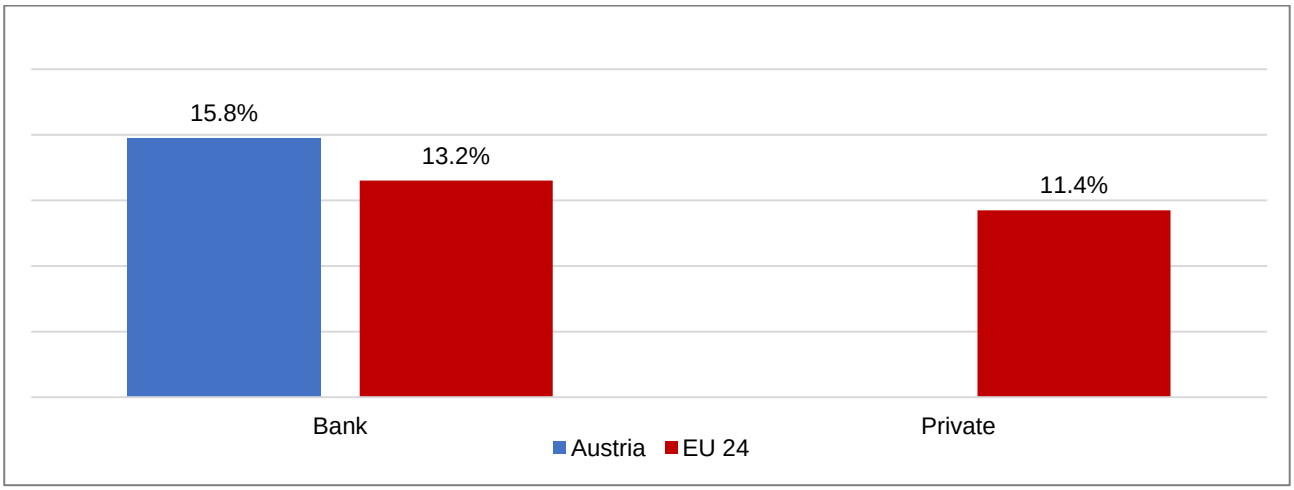
Source: Ecorys, 2019.

Based on the results of the *fi-compass* survey, the unmet demand for the agriculture sector in Austria is estimated at EUR 274 million.

The low interest rate environment since 2010 has catalysed farmers to seek financing support for investment (see section 2.3.1.3). Nevertheless, based on the *fi-compass* survey, only 17.9% of Austrian farmers responded that they applied for finance from financial institutions in 2017, which is significantly lower compared to the EU 24 average of 29.6%.

15.8% of Austrian farmers responded in the *fi-compass* survey that they seek finance exclusively from banks. The fact that Austrian farmers do not seek finance from private sources corresponds with the Federal Banking Act, which regulates the source of financing. In contrast, farmers in other EU member states (11.4% on average in the EU 24) still rely on private resources, which, for instance, can come from family members and friends (Figure 9). Austrian farmers also seek multiple financial institutions in order to receive a second opinion, although, based on the *fi-compass* survey, the share of farmers that consulted just one or two banks to obtain a loan is higher in Austria in comparison with the EU 24 average. For example, for long-term loans 100% of Austrian farmers consulted no more than two banks against 81% of the EU 24 average. For short and medium-term loans, the percentage of Austrian farmers consulting no more than two banks was 92% and 98% respectively against an EU 24 average of 83% for both products.

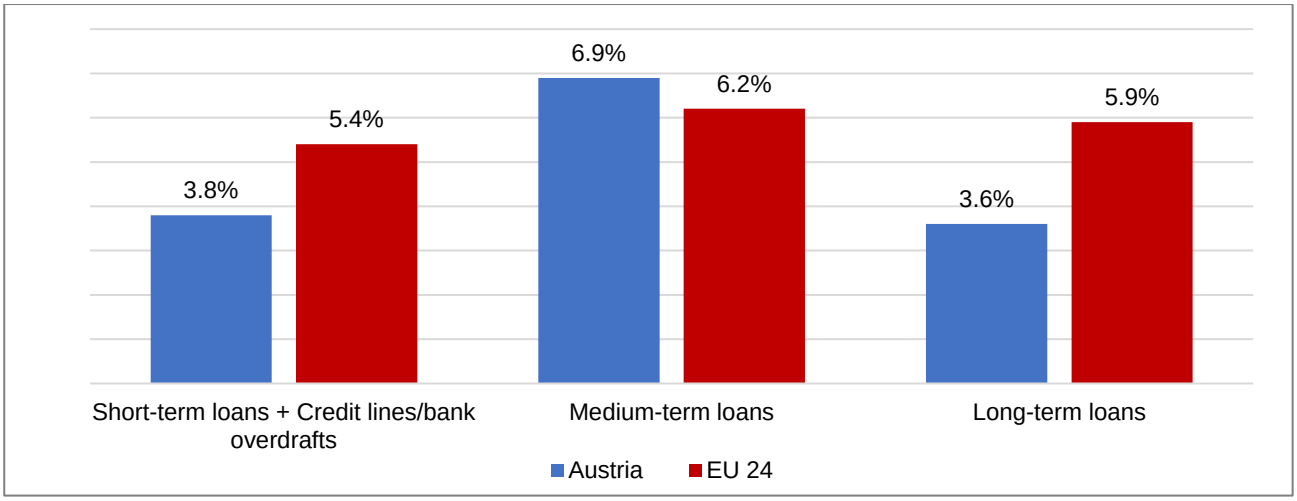
Figure 9: Austrian farmers applying for finance in 2017



Source: fi-compass survey.

Austrian farmers seek investments mostly with medium and long-term maturity. Based on the *fi-compass* survey, the most attractive maturity for Austrian farmers is that of medium-term loans. In fact, 6.9% of Austrian farmers applied for loans with a duration of 18 months to five years. Short-term loans and credit lines (up to 18 months) were asked for by 3.8% of farmers, while long-term loans (longer than five years) by 3.6% (Figure 10). This is around half of the EU 24 average (5.4% for short-term and 5.9% for long-term loans). However, in interviews carried out with leading Austrian banks and The Chamber of Agriculture, farmers most often seek finance for capital investments with long-term maturity and credit lines are most commonly provided for short-term maturity[35]. The breakdown of the liabilities in the Austrian agriculture accounting system would point towards loans with long-term maturity as the main source of finance[36].

Figure 10: Austrian farms applying for finance by financing product, 2017



Source: fi-compass survey.

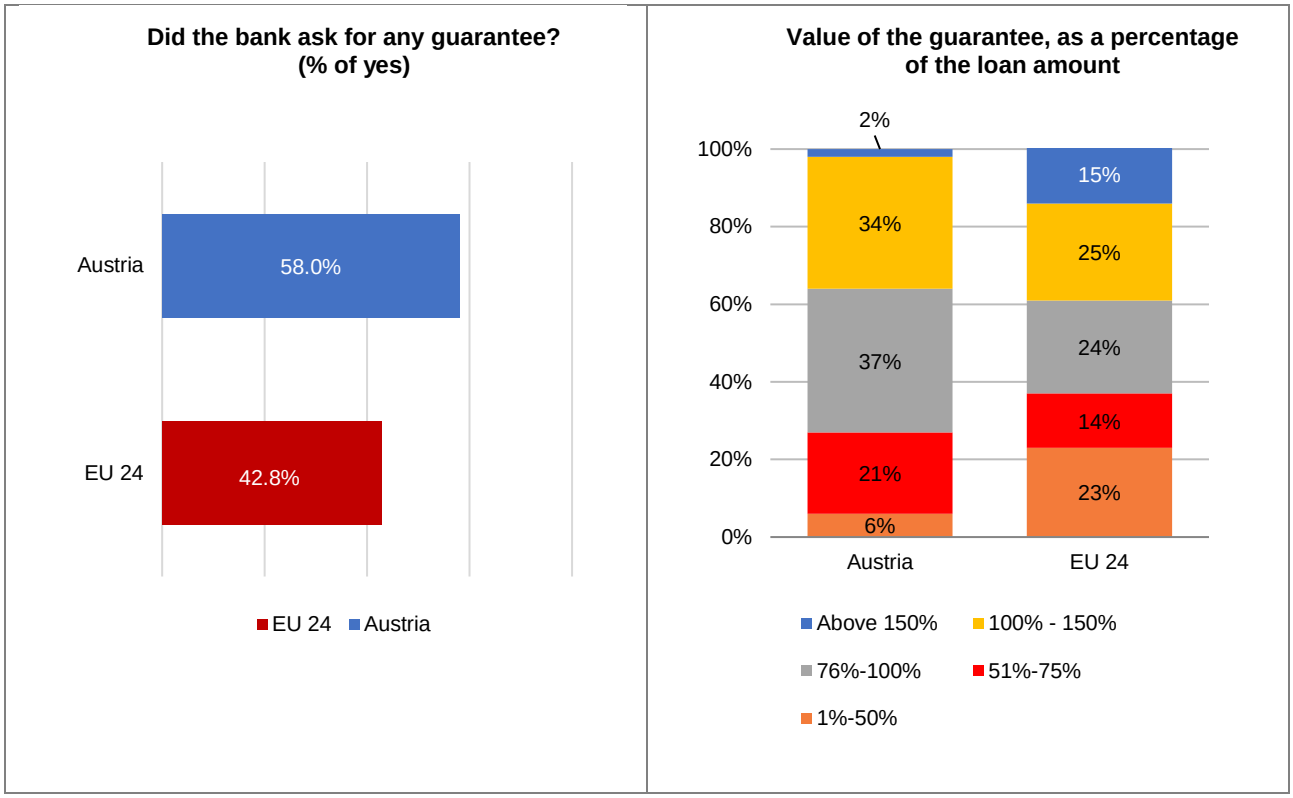
The request for guarantees has significant impact on Austrian farmers. 58% of Austrian farmers replied in the *fi-compass* survey that the banks requested collateral, which is significantly higher compared to the EU 24 average of 42.8% (Figure 11). In addition, all surveyed Austrian farmers responded that their own personal

35 Interviews with Raiffeisen Bank Upper Austria, Salzburg, Styria, Chamber of Lower Austria and Landeskulturfonds Tyrol, 2019.

36 LBG, June 2019, Austrian Agriculture Accounting System.

assets were used as collateral. As the *fi-compass* survey confirms, the collateral is the main reason for the rejected loan application. The interviews confirmed that using public funds to support guarantees is subject of discussion but has not yet stimulated policy decision.

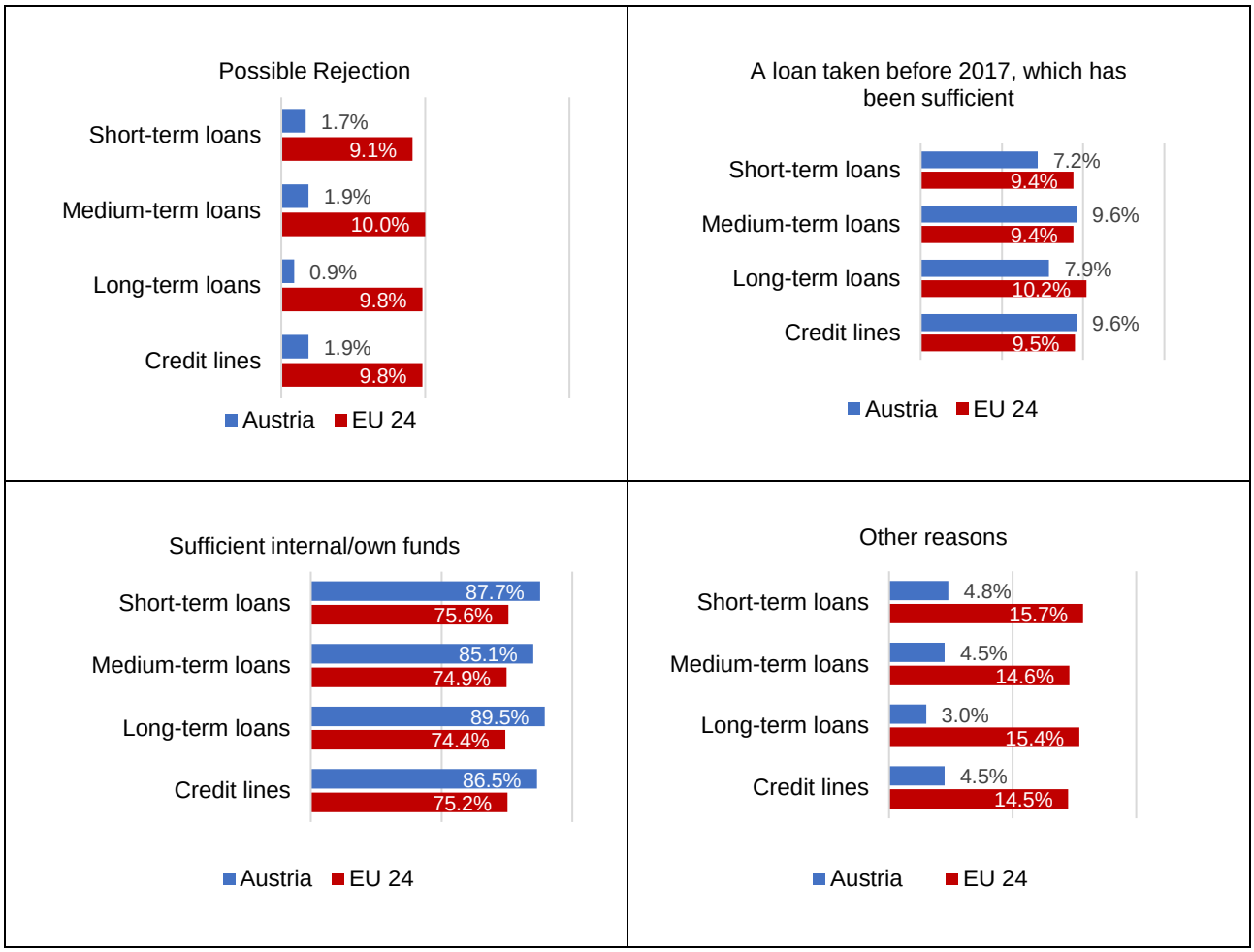
Figure 11: Information related to guarantees requested by Austrian agricultural producers, 2017



Source: fi-compass survey.

Austrian farmers responded in the *fi-compass* survey that the main reason for not applying for a loan in 2017 was due to insufficient own resources or an earlier loan covered their needs (Figure 12). While responses show little variation between maturities of the financial product, only a marginal share of less than 2% of Austrian farmers did not apply due to possible rejection. Less than 0.6% reported to have been rejected by the bank.

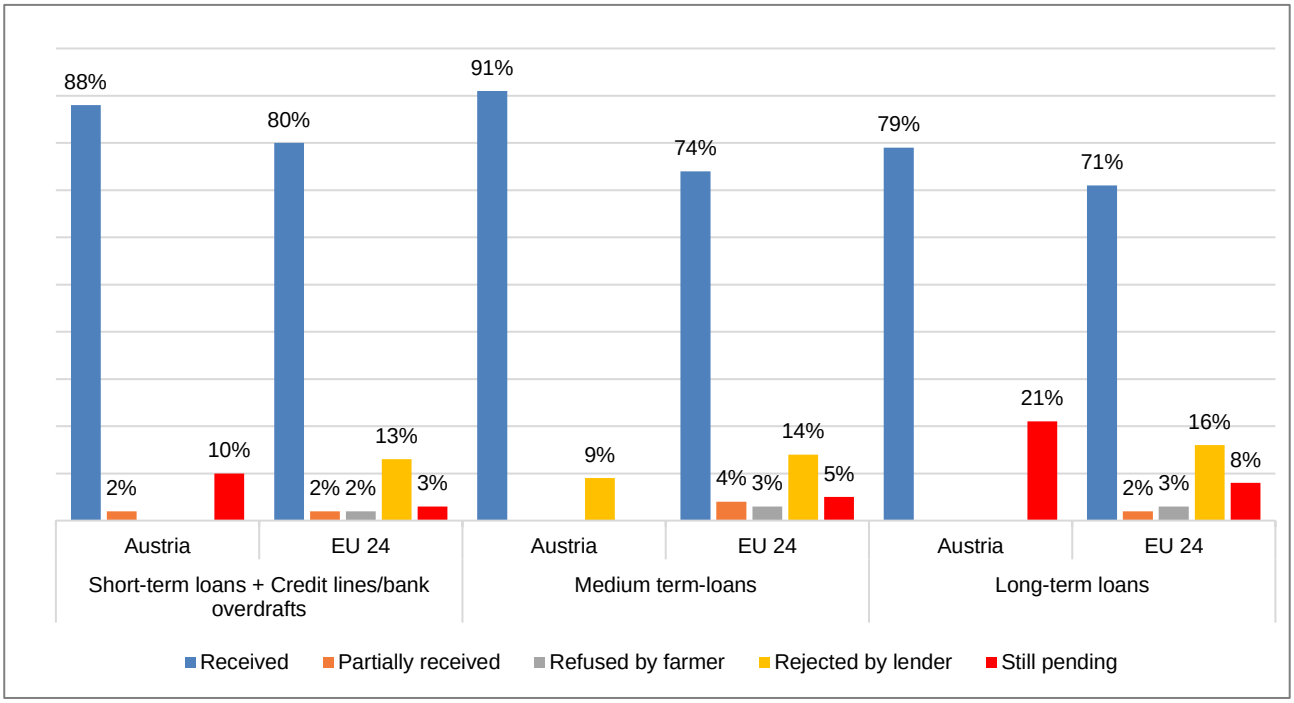
Figure 12: Reasons for not applying for loans in the agriculture sector in 2017



Source: fi-compass survey.

Based on the *fi-compass* survey, **Austrian farmers were more discouraged from applying for a loan rather than being rejected by the bank**. Based on the *fi-compass* survey, around 79% of Austrian farmers received at least part of the amount requested in their loan application (Figure 13). The percentage of applications approved was the highest with medium-term loans (91%), followed by short-term loans (88%). The loans' approval rate was higher compared to the EU 24 average for all maturities.

Figure 13: Results from applications for finance in the agriculture sector in 2017



Source: fi-compass survey.

Small-sized farms are more affected from the unmet demand. And from the financial products that are commonly rejected, the majority are medium-term loans. Small-sized farms that had been discouraged to apply may be tied to lack of knowledge and familiarity with the banking system which prevents viable enterprises to apply for finance. The interviews revealed that Austrian farmers often come to banks for an informal discussion before applying for a loan[37]. By reviewing the business plan and also the credit history, small-sized farms are often recommended not to apply as their business proposition would challenge them to cover the loan. This review and discussions often take place parallel or simultaneously with the District Chamber of Agriculture.

The *fi-compass survey* revealed that 100% of rejected farmers in Austria responded that the rejection was based on missing collateral. In addition, the following reasons have been shared during the interviews for rejected loan application or discouragement for applying for a loan[38]:

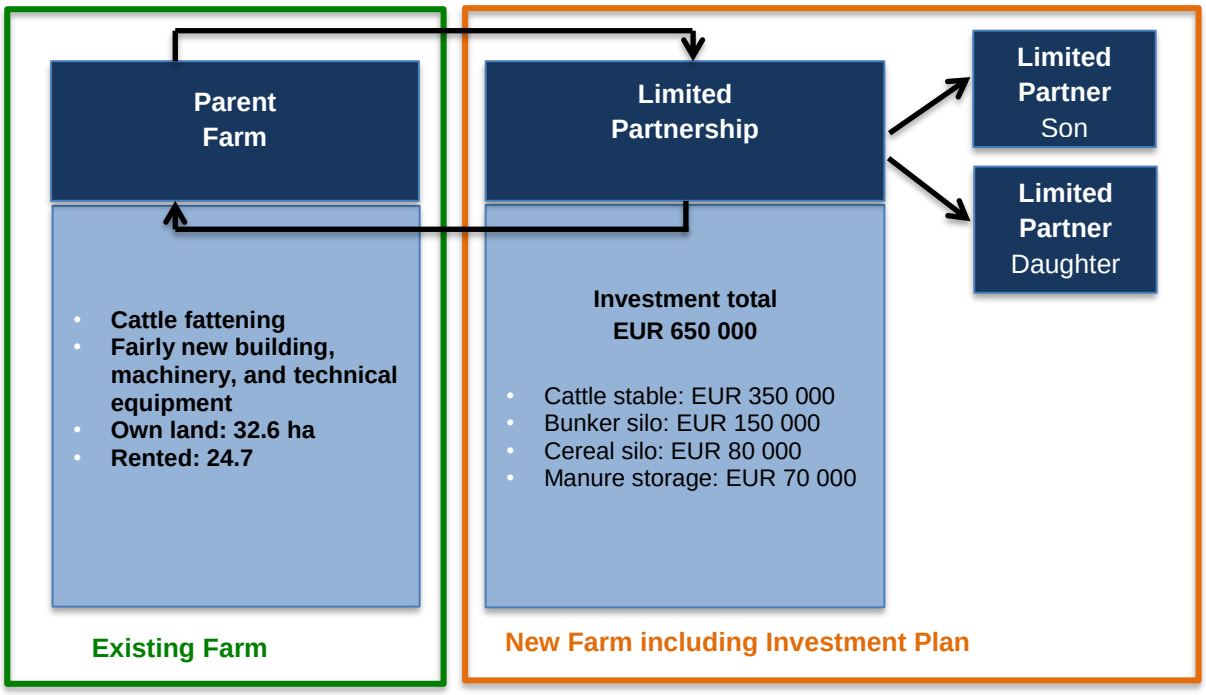
- Poor credit history;
- Existing debt;
- Non-convincing business plan; and / or
- Poor operational constellation of the farm[39].

The unmet demand for finance based on rejections was nearly the same between young and older farmers in Austria, a result from the *fi-compass* survey also confirmed during the interviews[40] carried out. As none of the young farmer respondents had been discouraged from a loan application, the total unmet demand for young farmers is exclusively based on rejections, adding up to EUR 102 million, which is 37% of total unmet demand (EUR 274 million). Interviews confirmed that due to the social policy, the exiting parents receive a regulated retirement, and thus, young farmers are generally not confronted with significant additional financial needs due to the full transfer of physical assets. However, due to the overall age average of Austrian farmers, there is a growing trend where the children of farmers wish to establish their own farm enterprise before the

37 Interview with Raiffeisen Regional Bank Mödling, May 2019.
38 Interview with the Chamber of Agriculture of Lower Austria, June 2019.
39 The overall orientation and set-up of the farm is not considered to be viable.
40 Raiffeisen Bank Upper Austria, May 2019.

parents depart from their farming activity and enter retirement. Instead of the classical intergenerational transfer of farm assets, part of the parent farm is separated, and the children form a limited partnership (Figure 14). In this case, the start-up requires significant financing and the RDP measure does not satisfy the needs. From the fictitious example provided below, the business plan of the limited partnership requires investments of EUR 650 000. 50% of the investment (EUR 325 000) could be covered through RDP support (sub-measures 4.1 and 6.1), EUR 162 500 could be covered through the interest rate subsidised loan, EUR 81 250 by a regular investment loan, and the remainder would have to come from own resources[41]. This situation is challenging, as banks request the parent farm to be used as collateral.

Figure 14: Young farmers limited partnership model in Upper Austria



Source: Raiffeisen Bank Upper Austria, 2019.

41 Raiffeisen Bank Upper Austria, May 2019.

2.3 Analysis on the supply side of finance to the agriculture sector

This section provides an overview of the financial environment in which the agriculture sector in Austria operates. It describes the main financial products offered, including any currently operating a 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.

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

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

- From a long list of almost 20 financial intermediaries in the agriculture sector, the Raiffeisen Bank enjoys the market dominance in eight out nine provinces.
- There are three types of financial products offered by banks to the Austrian agriculture sector, of which two address capital investments and one type supports working capital.
- Guarantees are not part of the financial institutions' portfolio in the agriculture sector and EAFRD-funded financial instruments were never set up by the Austrian Managing Authority. However, a national funded subsidised interest rate loan programme is in place and has a long tradition.
- The total outstanding loan volume for agriculture in 2018 is calculated in the range of EUR 6.3 billion, of which 64% are investment loans, 19% are interest rate subsidised investment loans and 17% are loans for working capital.
- The two loans for capital investments are mainly offered with long-term maturity (5-20 years), but 10-15% are offered as medium-term loans; loans for working capital are mainly short-term maturity (12, 15 or 18 months).
- Interest rates for agriculture loans vary from a maximum 1.5% for the interest rate subsidised investment loan, 2-4% for the regular investment loans and 2.5-5% for working capital loans.
- Approximately 30-40% of the loan volume is allocated to young farmers.

2.3.1 Description of finance environment and funding availability

This section provides an overview on the finance providers in the Austrian agriculture sector. In addition, the section shed light on the financial products available in the Austrian market to finance agricultural activities. Finally, a description on the trends of the financial market is provided.

2.3.1.1 Finance providers

The Austrian banking landscape consists of over twenty institutions that provide financial services for the agriculture sector. It is dominated by the Raiffeisen Bank. The history of Raiffeisen, Austrian agriculture and the emergence of agricultural cooperatives go hand-in-hand. Raiffeisen enjoys the first-mover-advantage. Today, with its legal form of decentralised cooperative structure, Raiffeisen is the largest bank with Austrian ownership and the 1 593 Raiffeisen outlets in the 2 096 municipalities enable proximity to the farming population. In eight out of the nine Provinces of Austria, Raiffeisen enjoys a market share of 80-90% in the agriculture sector and only in Vienna, the leading bank with comparable market share is the Volksbank.

Besides Raiffeisen, other dominant banks offering financial products to farmers are the Volksbank (Gärtner Bank), followed by the Erste Bank. The rest of the financial institutions play an insignificant role in financing the agriculture sector as their offer is mostly limited to few financial products only. At the same time, Raiffeisen and Volksbank offer all financial products (loans for investment and working capital) described in the subsequent section. Also, whilst there are over twenty banks in Austria offering at least one financial product to the agriculture sector, some of the banks only operate in few limited Provinces or districts within a Province (Table 2).

Table 2: List of Austrian banks in agriculture and their geographical area of work

Name of Financial Institution	Geographical Area of Work
Raiffeisen Bank	All nine provinces
Erste Bank	All nine provinces
Volksbank (Gärtnerbank)	Vienna, Lower Austria and Burgenland
Uni Credit-Bank Austria	All nine provinces
BKS Bank	Styria and Carinthia
Volkskreditbank Linz	Upper Austria
Landeskulturfonds Tirol	Tyrol
BAWAG PSK	Vienna, Lower Austria and Burgenland
Commercialbank Mattersburg	Burgenland
Oberbank	Upper Austria
Marchfelderbank Gänserndorf	Lower Austria
Dolomitenbank Osttirol	Tyrol
Bankhaus Spängler	Vienna, Lower Austria
Hypobank Burgenland	Burgenland
Anadi Bank	Carinthia
Hypobank Niederösterreich	Lower Austria
Hypobank Oberösterreich	Upper Austria
Hypobank Salzburg	Salzburg
Hypobank Tirol	Tyrol
Hypobank Vorarlberg	Vorarlberg

Source: Ministry of Agriculture, Regions and Tourism, 2019.

2.3.1.2 Finance products

Overall, Austrian farmers are offered by the banks three main financial products for both investment and working capital financing. **Public supported guarantees are not part of the banks' portfolio in the agriculture sector as there is no such offer**. The Austrian Government never set up EAFRD funded financial instruments to help its farmers further. The three main types of loan products available to farmers can be differentiated based on the purpose, maturity and interest rate (Table 3).

Table 3: Overview of financial products offered to Austrian farmers

Type of Product		Purpose	Maturity	Interest Rate
(i)	**Interest Rate Subsidised Loans**	Capital investment	Mostly medium and long-term, some short-term loans	Maximum EURIBOR 6-month + 1.5%
(ii)	**Investment Loans**	Capital investment	Mostly medium and long-term, some short-term loans	2-4%
(iii)	**Working Capital Loans**	Working capital	Short-term credit line	2.5-5%

Source: Raiffeisen Bank Upper Austria, May 2019.

(i) Interest Rate-subsidised Investment Loans

Austria has never programmed any EU expenditure for financial instruments in its RDPs. But, as a top-up measure to the co-financed RDP 2014-2020, the Federal Ministry of Agriculture, Regions and Tourism is financially supporting the interest rate for investments loans (not working capital) to improve the performance and sustainability of agriculture holdings. This is done through the principle of reimbursement to the national partner banks based on the allocated loan amount to the farmers. All nationally operating banks meeting the relevant criteria are eligible to participate. While fully supported under the national budget, the farmer eligibility criteria for the interest rate subsidised loans are aligned with the conditions stipulated in the RDP. However, there are no obligations for farmers to apply for investment support, in order to obtain this loan. The scope of the interest rate subsidised loan is restricted to investments in buildings and structural facilities (e.g. silo, stable, manure storage). Investment support for agricultural vehicles, machinery and purchase of land is not eligible under this loan scheme.

There are over 20 financial institutions that offer interest rate subsidised loans to 25 549 final recipients with an outstanding loan volume of EUR 1.03 billion. The Raiffeisen Bank has the leading market share, with 73% of the final recipients and a 70% of the outstanding loan volume[42]. Both the Erste Bank and the Landeskulturfonds in Tyrol manage around 9% of the final recipients, followed by the Volksbank with nearly 5%. The remaining institutions manage less than 1% of the final recipients each (Table 4).

Table 4: Breakdown of interest rate subsidised investment loan by financial institution, beneficiary and outstanding loan volume on June 30, 2018

Financial Institute	Number of Final recipients	Share (in %)	Outstanding Loan Volume (EUR)	Share (in %)
Raiffeisen Bank	18 755	73.41	719 975.877	70.06
Erste Bank	2 342	9.17	93 698.654	9.12
Landeskulturfonds	2 294	9.37	121 823.857	11.85
Volksbank	1 198	4.69	60 541.144	5.89
BKS Bank	70	0.27	3 406.925	0.33
Uni-Credit	89	0.35	3 254.232	0.32
Volkskreditbank	179	0.70	7 582.158	0.74
BAWAG PSK	31	0.12	687.446	0.07
Commerzialbank	18	0.07	647.904	0.06
Oberbank	72	0.28	2 554.133	0.25
Marchfelder Bank	56	0.22	2 076.853	0.20
Dolomitenbank	44	0.17	1 933.077	0.19
Bankhaus Spängler	7	0.03	184.090	0.02
Hypo Burgenland	53	0.21	1 639.205	0.16
Anadi Bank	149	0.58	3 831.992	0.37
Hypo NÖ	21	0.08	997.028	0.10
Hypo OÖ	11	0.04	388.384	0.04
Hypo Salzburg	25	0.10	1 008.891	0.10
Hypo Tirol	6	0.02	169.677	0.02
Hypo Vorarlberg	29	0.11	1 294.199	0.13
TOTAL	**25 549**	**100**	**1 027 695.724**	**100**

Source: Federal Ministry of Agriculture, Regions and Tourism, 2019.

42 Ministry of Agriculture, Regions and Tourism, 2019.

(ii) Investment Loans

Investment loans play the dominant role on the Austrian financial market for agriculture. Within the three financial products, the investment loans for capital formation on agricultural assets (e.g. permanent crops and animals) or non-agricultural assets (machinery, equipment, buildings and structural facilities) account for more than half of the total loan volume in 2017[43]. This loan is most commonly applied in conjunction with approved investment support under the RDP. These investment loans are generally offered with long-term maturity, averaging between 10 and 15 years. The interest rate varies from bank to bank, ranging from 2% to 4%.

(iii) Working Capital Loans

To support day-to-day operations, providing a loan in the form of a credit line for working capital has a long tradition in Austrian agriculture. Offered with short-term maturity of 12, 15, or 18 months duration, this overdraft facility can be used to overcome seasonal or cyclical challenges quite common in agriculture. Similar to a regular bank account, the credit line for working capital enables daily withdrawals and deposits. Due to its short duration, the interest rate for this type of financial product is usually higher compared to the other two types of loans.

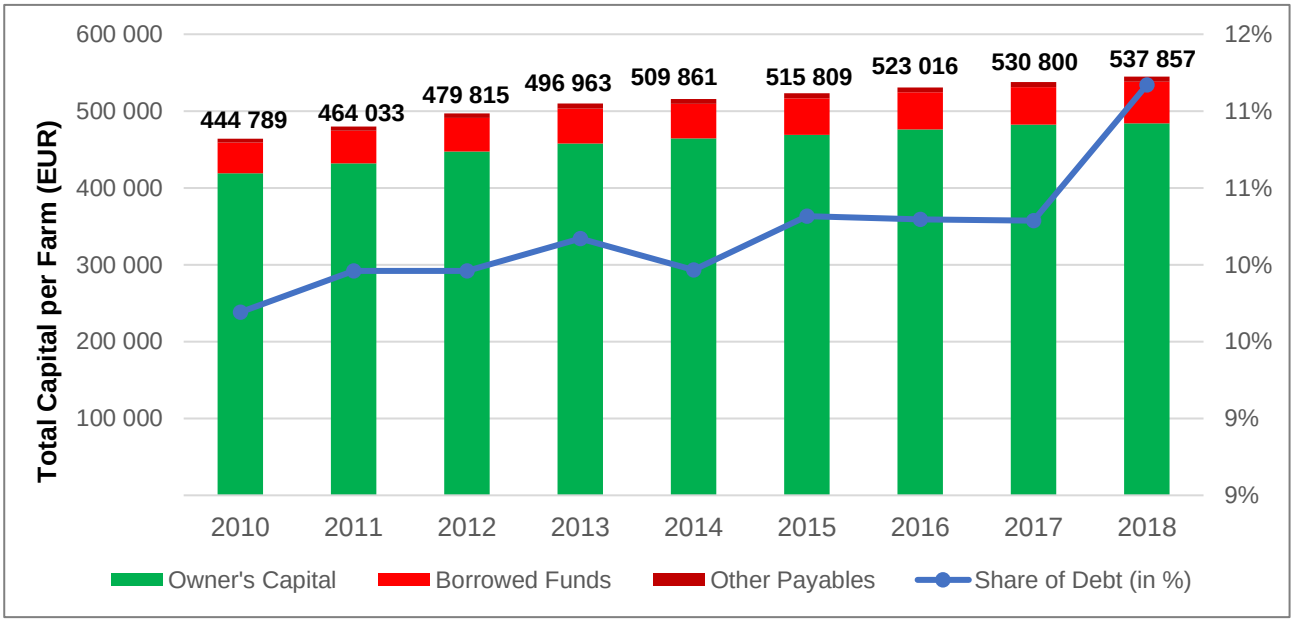
2.3.1.3 Description of the financing market

With the exception of the larger financial institutions like Raiffeisen, most banks have limited knowledge of the agricultural practices, costs, and risks. Still, there is overall no liquidity constraint on the supply side of Austrian banks for agriculture. The smaller banks have limited tools to support sustainable agriculture financing requirements and enable consultations and thorough assessments of the business plans prepared by the farmer prior to their application for a loan. Every farmer, independent of their farm size (in physical or economic terms), is encouraged to visit financial institutions, often benefiting from expert discussions on the basis of the business plan[44]. The local agriculture extension services (District Chamber of Agriculture) are closely affiliated with local financial institutions, thereby supporting farmers with their business plans and investment decisions.

The low interest rate environment since 2009 has also catalysed investments in the Austrian agriculture sector, as reflected in the level of indebtedness. The share of debt capital in total farm capital grew from 9.5% in 2009 to 11.3% in 2017 (Figure 15). In 2018, the bulk of the debt comes from loans and the rest from receivables and payables to the warehouse, cooperative or tax office.

43 Interview conducted with Raiffeisen Upper Austria, May 2019.
44 Raiffeisen Bank Upper Austria, May 2019.

Figure 15: Development of debt in Austrian agriculture 2009-2018 in % of total farm capital



Source: Report on the Situation of Austrian Agriculture and Forestry, 2019.

The banks' conditions on collateral do not completely discourage farmers from applying for loans, which is also reflected in the results from the *fi-compass* survey and presented in Figure 12 (see section 2.2.2)[45]. While Austrian farmers responded that in 58% banks requested collateral (Figure 11), the banks interviewed stated that approximately 25% of loans are granted in agriculture without collateral. This is especially done in cases where (i) the loan volume is lower than EUR 50 000, (ii) the farmer has a positive credit history, and (iii) is trusted based on the frequent business at the regional bank[46].

All Austrian farmers responded in the *fi-compass* survey that private collateral was used as guarantee. In those cases, an entry of property rights in the register (mortgage) by a notary is the most frequent collateral. Also, the use of life insurance and other investment documents can be used as security. Since guarantees are not eligible for public support for the existing financial products, banks commonly request the parent farm to be used as a collateral for a loan request, in cases where the young farmer splits off part of the land of the parents to start their own business (Figure 14).

2.3.2 Analysis of the supply of finance

In the analysis of the supply side of finance in the agriculture sector in Austria, data received from interviews with the financial institutions is used. However, as this data is limited to just some of the Austrian provinces, the underlying assumption in the quantification calculations is that the provinces of Lower Austria, Upper Austria and Styria provide 60% of the total supply. Also, the breakdown of liabilities displayed in FADN supports these calculations.

The only financial product, for which comprehensive information is available, is the interest rate subsidised investment loan, as the Federal Ministry of Agriculture, Regions and Tourism has the overview of the financial flows. In 2017, the total outstanding loan volume for the interest rate subsidised investment loan was EUR 1 billion (Table 4). In the national budget, EUR 130 million are earmarked every year for this loan scheme and the volume is divided between the nine provinces with an allocation formula agreed with the provincial governments (Table 5). The uptake was low in 2014 yet compensated in subsequent years. On average, there are 1 500 final recipients yearly. The interest rate is calculated based on EURIBOR and adding a maximum of 1.5%. The share of the subsidised interest rate can vary between 36% and 50%, if the farmer

45 Interview conducted with Raiffeisen Bank Upper Austria, May 2019.
46 Raiffeisen Bank Upper Austria, May 2019.

is located in an area of natural constraints. These loans are most commonly offered with long-term maturity, with the majority being provided for the duration beyond 10 years. Only in rare cases, medium-term loans with less than five years are offered.

Table 5: Development of subsidised loan volume by province in Austria in 2014-2018, EUR million

Year	2014		2015		2016		2017		2018	
Province	Final recipients	Volume	Final recipients	Volume	Final recipients	Volume	Final recipients	Volume	Final recipients	Volume
Burgenland	4	0.4	0	0	27	2.7	36	5.2	37	3.2
Carinthia	51	4.1	6	0.3	244	23.8	145	11.8	200	19.2
Lower Austria	0	0	233	27.3	451	38.5	390	35.8	595	37.6
Upper Austria	190	14.5	3	0.4	763	65.0	403	33.4	329	27.6
Salzburg	71	9.2	115	15.5	141	11.4	178	12.2	75	6.0
Styria	4	0.3	148	15.4	450	42.0	306	28.2	332	27.5
Tyrol	11	0.4	162	18.5	162	17.5	111	13.1	99	12.9
Vienna	6	0.7	0	0	7	1.3	8	1.9	7	0.9
Vorarlberg	35	3.9	42	4.1	33	4.0	41	5.2	47	5.6
TOTAL	**372**	**33.5**	**709**	**81.5**	**2 278**	**206.2**	**1 618**	**146.8**	**1 721**	**140.5**

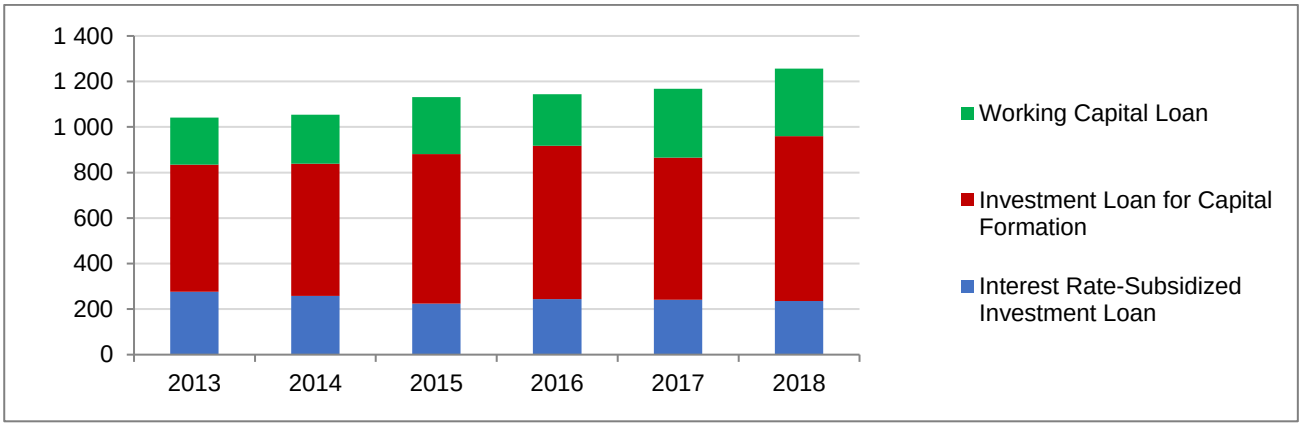
Source: Federal Ministry of Agriculture, Regions and Tourism, 2019.

The total outstanding loan volume is estimated at EUR 6.3 billion. Based on the interviews carried out, the Raiffeisen Bank in the Provincial State of Upper Austria, which has a market share of 84.7% (20 102 accounts of the 23 727 registered farms) within the provincial state, provided the most comprehensive and evidence-based data on financing in the Upper Austria agriculture sector. Generating 24% of the Austrian agricultural output and having 21% of Austrian farms managing 20% of the total UAA, it is conceivable that approximately 20% of the volume of loans supplied to Austrian agriculture producers is provided in Upper Austria. As of December 31, 2018, the total loan volume to Upper Austrian farmers amounted to EUR 1.3 billion, of which 18.7% is for the interest rate subsidised investment loan, 23.5% for working capital loans, and 57.8% for the traditional investment loan for capital formation. The interview with the Raiffeisen Bank in the Provincial State of Styria revealed similar total outstanding loan volume of EUR 1.2 billion. Considering that the total outstanding loan volume for the agriculture sector in Upper Austria in 2018 was EUR 1.3 billion and considering that Upper Austria is responsible for around 20% of the total loan volume, leads to an estimation of the outstanding loan volume for Austrian agriculture of EUR 6.3 billion.

The development of the total outstanding loan volume for the agriculture sector in Upper Austria for the period 2013-2018 reveals a continuous increase. The loan volume in 2018 increased by 7.6% compared to the previous year (Figure 16). The maturity of working capital loans in Upper Austria is short-term, and can vary between 12, 15 or 18 months. The interest rate for working capital loans currently varies between 3 and 3.5% and the average loan volume is EUR 57 200. The individual average size loan amount for the interest rate subsidised loan can vary between EUR 15 000 and EUR 240 000, as stipulated in the regulation. On average, the average loan amount size since 2014 has been EUR 84 000. Both the interest rate subsidised

and the regular loan for capital investments are of long-term maturity, that is, with the duration varying between 5 and 20 years. The interest rate for the investment loan varies between 2 and 2.5%.

Figure 16: Development of the total outstanding loan volume by financial product in Upper Austria in 2013-2018, EUR million

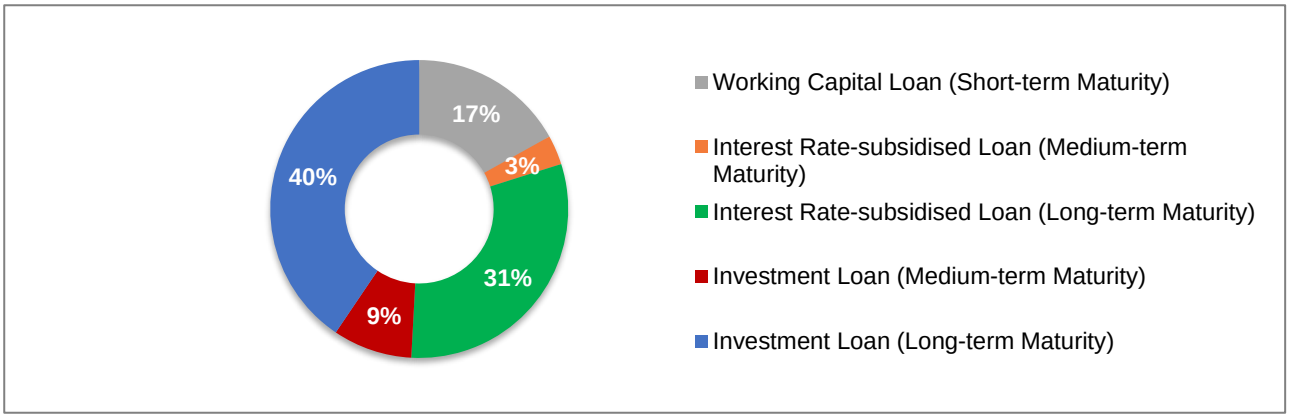


Source: Raiffeisen Bank in Upper Austria, 2019.

Loans offered to young farmers and new entrants represent 30-40% of total loans[47]. Generally (more than 95% of the cases), young farmers usually do not have additional financial needs when taking over the farm from their parents as their parents obtain social equity (pensions) and as the transfer of the farm to a young farmer has limited taxation implications, such as inheritance tax.

In Austria, the average amount of liability per farm up to 2018 is EUR 54 091[48]. Of this overall loan volume, 49% are regular loans for capital investments, 34% are interest rate subsidised loans, and 17% are working capital loans. Within the regular investment loans, 81.6% are long-term loans and 18.4% are of medium-term maturity. Short-term loans (17%) are only captured for the purpose of working capital. Within the interest rate subsidised investment loans, 89.1% fall under long-term loans and 10.9% are of medium-term maturity (Figure 17). Based on FADN, the share of liabilities on capital investment is 83%, while that of the working capital is 17%.

Figure 17: Breakdown of outstanding loan volume by financial products and maturity in Austria in 2018



Source: LBG, Austrian Agriculture Accounting System, 2019.

47 Raiffeisenbank of Upper Austria, Salzburg and Styria; Volksbank, May 2019.
48 LBG, 2019, Austrian Agriculture Accounting System.

2.4 Financing gap in the agriculture sector

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

Key elements of the financing gap in the Austrian agriculture sector

- Total financing gap of Austrian agriculture for 2017 is estimated between EUR 145 million and EUR 246 million.
- Small-sized farms are most affected by the financing gap.
- The financing gap is mainly the result of unmet demand for medium and long-term loans.
- 38% of the total financing gap impacts young farmers.
- The main constraint in access to finance is the lack of collateral for guarantees.
- Lack of collateral seems to constrain in particular young farmers establishing a new enterprise from a part of their parents' land, as the bank requires them to use their parents' farm as collateral.
- To address the financial gap, introducing public support for guarantees in the agriculture sector, which is currently not available in Austria, should be considered.

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

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

All the calculations are based on the results of the *fi-compass* survey for Austrian farms and statistics from Eurostat (see Annex A.5 TG I: *fi-compass* surveyfor more information). The methodology used for calculating the gap is described in Annex A.3 Methodology for financing gap calculation.

The financing gap arises from unmet financing demand from economically viable farms[49]. The unmet demand for finance includes:

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

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

- The **lower bound** gap is calculated under the hypothesis that only enterprises which reported a stable (non-negative) turnover growth 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 growth can be considered as viable.

The financing gap for the Austrian agriculture sector is calculated between EUR 145-246 million (Table 6). The financing gap mainly concerns small-sized farms, which account for over 90% of Austria's farming population. On the other hand, larger commercial farms are only marginally affected by the financing gap. Long-term loans are mostly affected by the financing gap (Figure 18). This coincides with the share of loan

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

volume provided by the financial intermediaries (long-term loans account for 75% of total supplied loan volume) and type of loans where high guarantees are more often requested.

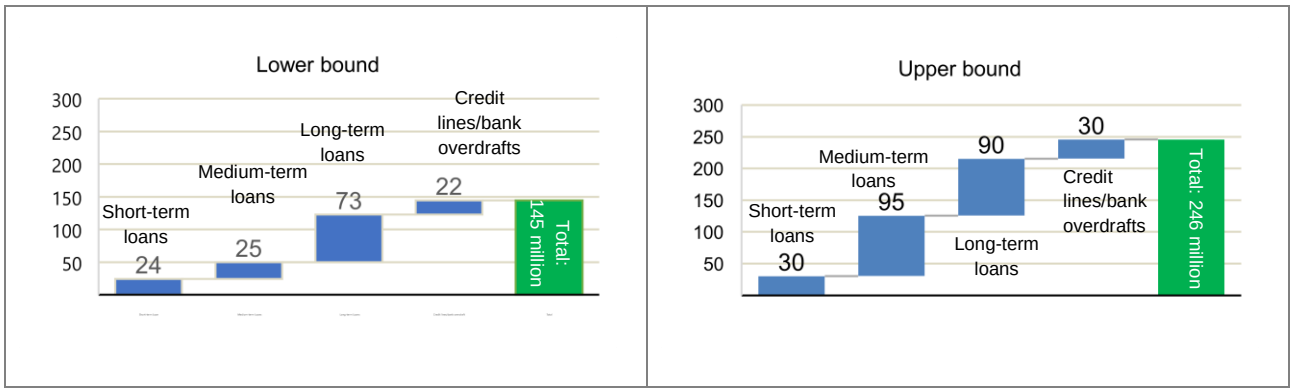
Table 6: Financing gap by farm size and product, 2017, EUR million

		Total	Short-term Loan	Medium-term Loans	Long-term Loans	Credit lines/ bank overdrafts
Upper bound	Small-sized farms	**127.5**	14.2	52.0	47.0	14.2
	Medium-sized farms	**99.9**	13.4	36.8	38.0	11.7
	Large-sized farms	**18.2**	2.7	6.4	4.7	4.3
	Total	**245.5**	**30.4**	**95.2**	**89.7**	**30.2**
Lower bound	Small-sized farms	**73.8**	11.4	13.9	38.2	10.3
	Medium-sized farms	**59.9**	10.8	9.8	30.9	8.5
	Large-sized farms	**10.9**	2.2	1.7	3.8	3.1
	Total	**144.6**	**24.4**	**25.4**	**72.9**	**21.9**

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

General drivers of the financing gap can be attributed to small-scale farmers that do not submit a loan application due to discouragement of a possible rejection. This might be due to lack of financial knowledge and familiarity with the banking system, although this report shows that farmers in Austria already have access to information and advice for their investment plans. Some small-sized farms do not benefit from CAP support, which could contribute to their income and increase their repayment capacity, thus having lower access to finance. In fact, 17% of Austrian farms are not registered in the Integrated Administration and Control System (IACS)[50]. The other reason for not applying for a loan may also be the consequence of preliminary informal meeting with banks, which may discourage farmers from applying due to weaknesses in their business plan or their credit history.

Figure 18: Financing gap by product in the agriculture sector, 2017, EUR million



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

50 Integrated Administration and Control System (IACS) is a complex IT-based framework to administer, control and execute agriculture and rural development support schemes.

An additional component of the financing gap is constituted by loans applications rejected by the bank or loan offers refused by farmers due to their terms and conditions. This portion of the gap is relatively small in Austria, and this result is in line with results from interviewees, which did not indicate major difficulties in access to finance for farmers. At the same time, this gap is significant for some categories of farmers, in particular young farmers, with limited availability of collateral. About 38% of the financing gap might be attributed to young farmers (Table 7). Young farmers that take a share of land from the still managed parent farm are confronted with significant barriers, as the banks request the parent farm to be used as collateral. As 22% of Austrian farmers are categorised as young farmers and 38% of the overall financing gap affect these new entrants, point to the fact that they are more affected by the gap than older farmers. In addition, it is worth noting that the gap for young farmers is entirely due to rejected applications, since based on results of the *fi-compass* survey, the percentage of young farmers discouraged from applying for finance is not significant, probably reflecting a higher level of knowledge and familiarity with the banking system in comparison to their older colleagues.

Table 7: Share of financing gap impacting young farmers in Austria in 2017, EUR million

	Financing Gap	Young Farmers Gap	Share of Total Gap
Small-sized Farms	127.5	48.1	38% within upper boundary
Medium-sized Farms	99.9	38.1	
Large-sized Farms	12.1	7.0	
Upper Boundary	**245.5**	**93.1**	

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

Over the coming years, the influence from various drivers will influence the evolution of the financing gap. There may be an increase of demand for finance in furthering the development on adding value as well as for income diversification to the Austrian farm. However, on-farm investments that aim at shortening the supply chain stand in opposition to the trend of export growth of Austrian agri-food products. Furthermore, the agriculture sector is losing attraction to financing institutions due to the fact that other economic sectors in the Austrian economy are more attractive from a financial point of view than the small-scale agriculture sector.

2.5 Conclusions

The agriculture sector in Austria shows a positive attitude towards investment. In carrying out investments, Austrian farmers benefit from the financial inflows from the CAP. Results from the study indicate that access to RDP resources and the demand for bank finance are correlated and these two sources of financing are often complementary in investment operations.

However, the study shows that there is a financing gap estimated between EUR 145 million and EUR 246 million. Around 52% of the gap value relates to small-sized farms (below 20 ha) and around 38% to young farmers. In terms of financial products, almost 75% of the gap relates to medium and long-term investment loans. While there are several reasons for the gap, the lack of collateral might affect Austrian farmers, notably young farmers that take over part of their parents holding.

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

- A guarantee instrument based on EAFRD resources may complement the support currently provided through the public interest rate subsidy scheme, supporting access to finance for farmers (young farmers or small-sized farms in particular) who lack sufficient assets to be used as collateral.
- The combination of the guarantee instrument with technical support for the development of the business plan, together with a more general action of information and awareness raising may also be beneficial.

The use of financial instruments might also help to attract new financial intermediaries in the sector, potentially creating more competition for the benefit of the farmers.

3. PART II: AGRI-FOOD SECTOR

3.1 Market analysis

The Austrian agri-food sector is a large player in the manufacturing industry, whilst its enterprises are typically of small-scale size. The manufacture of food products dominates with a share of 8% to the GVA and employs 11% of the manufacturing sector[51], while the manufacture of beverages contributes 3% to the GVA and employs 1.4% of the manufacturing industry. However, the manufacture of beverages is growing faster than the food production, producing 34% of the 2018 total agri-food turnover of EUR 18.1 billion. In total, the sector comprises 3 900 enterprises[52] and employs 79 000 people.

Key elements on the Austrian agri-food sector

- Out of 3 899 enterprises, 93% (3 612) are categorised as small-sized firms (under 50 employees).
- The agri-food sector is divided in 30 branches, of which bakery accounts for 46% of the agri-food enterprises, followed by meat processing (23%), the manufacture of beverages (11%), and 4% in dairy production.
- Of the 79 000 employees within the agri-food sector, 43% are employed in the bakery's manufacture, followed by 23% for the meat processing, 12% for beverage production, and 7% for dairy production.
- The sector generated a turnover of EUR 18.1 billion in 2018. The beverage sector contributes 34%, followed by the meat processing sector (25%), the bakery manufacture (16%), and dairy production (15%).
- The agri-food production in 2018 benefitted from favourable productivity conditions and recorded a 2.4% increase compared to the previous year, while the price situation limited turnover growth.
- Exports of high value and processed agri-food products are the main driver for growth in the agri-food sector.
- However, increasing labour costs, a concentrated retail sector[53], and higher food prices compared to the EU average affect competitiveness of the agri-food sector.

The competitiveness of the Austrian agri-food sector is affected by cost and price pressures. Since joining the EU in 1995, the agri-food sector has managed to face the fierce competition on the EU single market and successfully undertook a structural transformation. Since 2010, increases in the number of enterprises (between 3.1-4.7% annually) and employees have been recorded[54]. While the small-sized enterprises show flexibility and reveal advantages for the production of regional specialties, growth in labour costs have led to low labour productivity in the agri-food sector. At the end of the supply chain, the Austrian retail sector shows higher concentration compared to the other EU member states, as 87.4% of the agri-food sectors' sales is generated by three retail chains[55]. As a result, Austria has the third highest price level for food and beverages in the EU with 125% price-level of EU average[56]. Austrian prices are ranked first on meat and second on bread

51 Statistik Austria, 2017, Structural Business Statistics, https://www.statistik.at/web_de/statistiken/wirtschaft/produktion_und_bauwesen/leistungs_und_strukturdaten/index.html.

52 Eurostat, 2019, Structural Business Statistics, https://ec.europa.eu/eurostat/web/structural- business- statistics/data/database.

53 The three retail chains Rewe-group, Spar-group, and Hofer.

54 Statistik Austria, 2017, Structural Business Statistics, https://www.statistik.at/web_de/statistiken/wirtschaft/produktion_und_bauwesen/leistungs_und_strukturdaten/index.html.

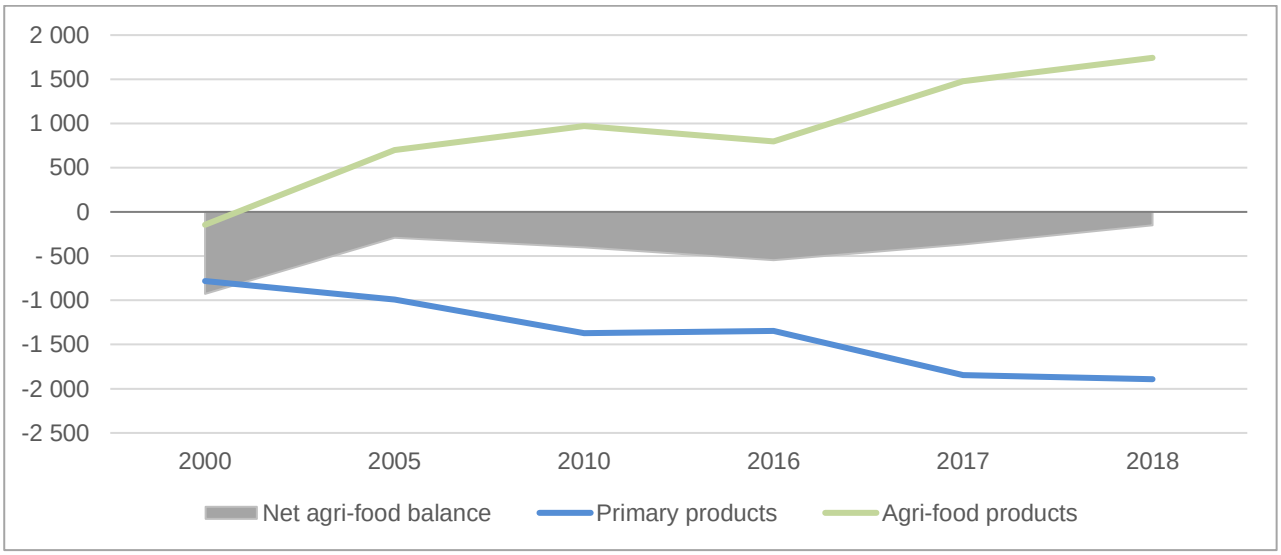
55 Interview with the AgrarMarkt Austria Marketing LTD, October 2019.

56 Eurostat, 2019, Consumer Price Levels in 2018, https://ec.europa.eu/eurostat/documents/2995521/9832355/2-20062019-AP-EN.pdf/6dbde954-2750-46fa-9cb5-84eff9eda121.

products and non-alcoholic beverages. These high retail prices are not reflected in farm and agri-food prices. Since 2001, consumer prices have grown by 45%, whilst agri-food production prices have grown only by 23%.

Austrian agri-food exports are on the rise, but trade deficits persist. Whilst the value of agri-food exports in 2018 recorded a 3.5%[57] increase compared to the previous year, imports of agriculture primary products are generally outpacing exports of high value processed agri-food commodities (Figure 19). Consequently, the agri-food trade balance still records a deficit of EUR 0.15 billion[58] in 2018. Agri-food trade has a long tradition within the EU, as 75% of the Austrian agri-food export value is generated with destination to other EU member states. However, with the exception of Red Bull, the Austrian agri-food sector is missing prominent brands in Europe's top 20 list.[59]

Figure 19: Development of agri-food trade in Austria in 2000-2018, EUR million



Source: Federal Ministry of Agriculture, Regions and Tourism, Grüner Bericht, 2019.

57 Ministry of Agriculture, Regions and Tourism, 2019, Grüner Bericht.
58 Trade deficit concentrates on NACE 10 & 11, thus excludes fish and tobacco from tariff numbers 1-24.
59 UniCredit Bank Austria, April 2019Branchenbericht Nahrungsmittel und Getränkeerzeugung.

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 enterprises which face more constraints in accessing credit. The examination of the demand for agri-food finance is based on the findings from Agri-food survey results of 50 Austrian enterprises, as well as interviews with key stakeholders in the agri-food sector, combined with national statistics.

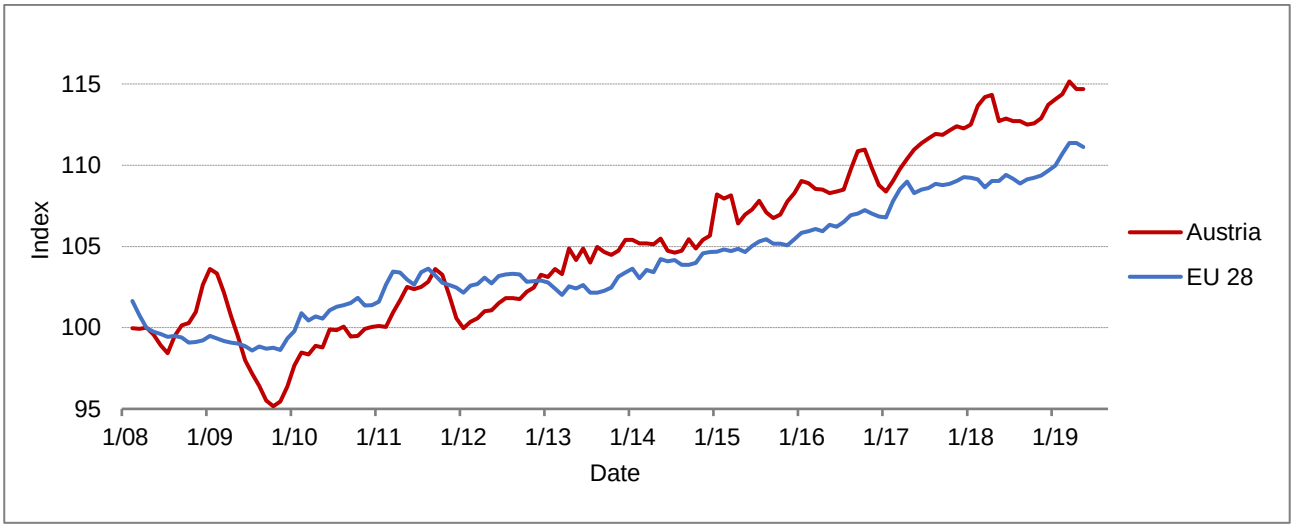
Key elements on finance demand from the Austrian agri-food sector

- 66% of Austrian agri-food enterprises state that the production costs in 2018 impact their business compared to the previous year.
- While exports are the main driver for investments, the demand for finance is reflected in the agri-food enterprises' ambition to compete on the global market, by investing in (i) efficiency of production, (ii) product expansion, or (iii) promotion activities.
- The agri-food sector is considered as investment active. In 2017, 16% of the GVA (EUR 6.1 billion) at factor costs were allocated for investments.
- The dominant branch of the agri-food sector, which demands finance, is the manufacture of dairy products.
- The agri-food sector is attracting more new entrants every year, pointing to limited entry barriers.
- 12% of the Agri-food survey respondents see access to finance as a challenge, driven mainly by the request for collateral.
- The total demand for finance for the year 2018 was calculated at EUR 562 million, of which EUR 195 million or 35% were not met.
- There is little correlation between grants for the RDP sub-measure (M4.2.1) on supporting investments in marketing/processing and the demand for finance, as public support is limited.
- 34% of Austrian agri-food enterprises applied for finance in 2018, which is significantly lower than the EU 24 average of 46%.
- Insufficient own capital and securities prevent Austrian agri-food enterprises from seeking finance.

3.2.1 Drivers of total demand for finance

The growth of the Austrian agri-food sector is in sync with the EU 28 average. The Austrian agri-food sector has successfully adapted to the price and cost pressures on the single market following EU accession. Recovering from the initial losses of market shares in the first few years of EU membership, the Austrian agri-food enterprises are not only back on track, but the sector has even partially managed to generate a tangible growth advantage over the EU 28 average (Figure 20). Since 2008, the production output of the Austrian agri-food sector has grown by 14% compared to just 9% in the EU 28 average.

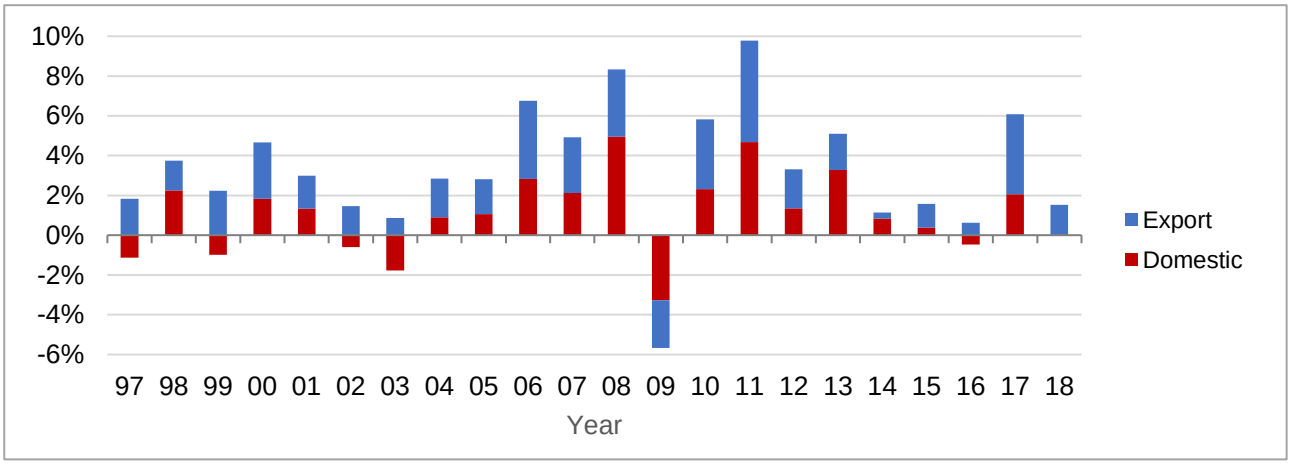
Figure 20: Development of the Austrian and EU 28 agri-food production 2008-2019, 2008=100%



Source: Statistik Austria, 2019.

Agri-food exports are the main driver behind the sectors' growth. While the overall turnover of the Austrian agri-food sector has grown by 20% during the last 10 years (2009-2019), the turnover growth from exports has doubled during the same time span[60]. Revenues obtained from exports are the main reason for turnover growth in the agri-food sector (Figure 21). In fact, with the example of the dairy manufacturing and beverage industry, turnover growth is mainly driven by sales on export markets.

Figure 21: Development of Austrian agri-food turnover based on domestic sales vs export revenues, 1997-2018



Source: Statistik Austria[61], 2019.

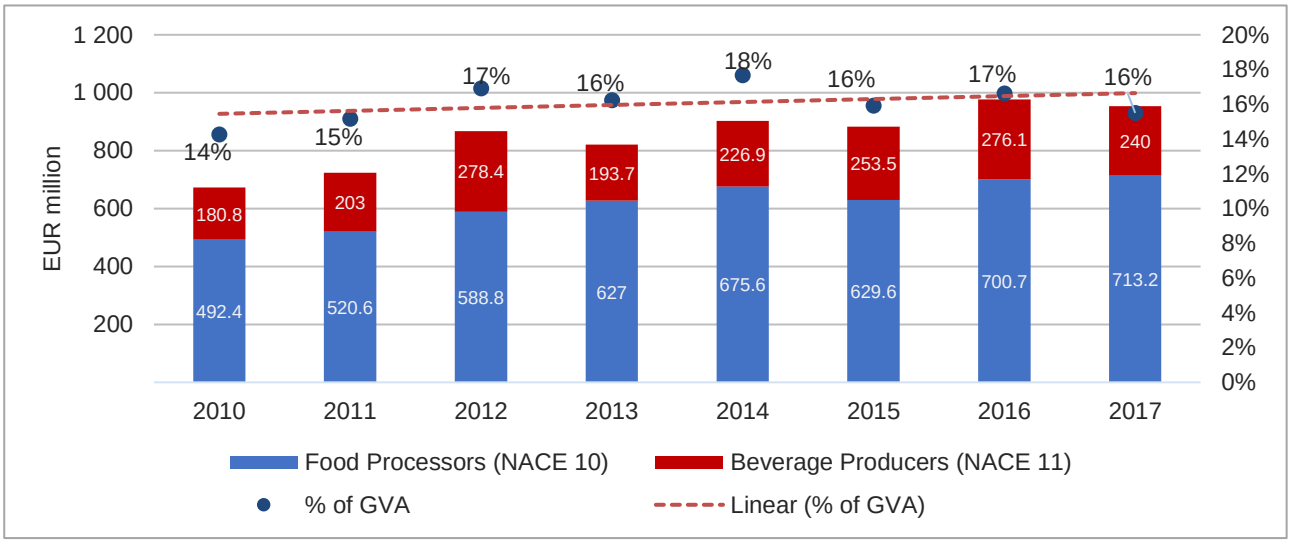
The prospects of agri-food exports translate into growing investments (Figure 22). Both, food processors and beverage producers are showing growing commitment to investments. This is reflected in absolute terms and as a share in investments of GVA. Since 2010, the investment volume has increased by 36% and reached nearly EUR 1 billion in 2017. The food manufacturing industry is the dominant branch within the agri-food sector, which also is reflected by 75% of the annual investment volume. While the Austrian enterprises are

60 UniCredit Bank Austria, April 2019, Branchenbericht Nahrungsmittel und Getränkeerzeugung.

61 Statistik Austria, 2019, http://www.statistik.at/web_de/statistiken/wirtschaft/produktion_und_bauwesen/konjunkturdaten/absolutdaten/index.html.

mainly categorised as small-sized, the agri-food sector is considered as investment active. In 2017, 16% of the GVA (EUR 6.1 billion) at factor costs were allocated for investments.

Figure 22: Development of investments of Austrian food processors and beverage producers and in % of GVA, 2010-2017



Source: Statistik Austria, Structural Business Statistics, 2019.

With the overall objective to participate on agri-food export markets, the following investment drivers stand out[62]:

(i) Improving productivity and efficiency by means of automatised technologies;

(ii) Expansion into new products and/or product differentiation, in order to respond to consumer trends; and

(iii) Promotion activities on domestic and international markets (incl. branding strategies).

These drivers are reflected in the share of investment volumes (Table 8). In both food and beverage sub-sectors, nearly two thirds of the investment volume are used to modernise the agri-food enterprises with state-of-the-art machinery and technical equipment. Improving labour productivity and strengthening the yielding capacity[63] are the fundamental reasons behind the enterprises investing in machinery and equipment. With regards to physical assets, investing in new buildings or rehabilitating existing production sites are also a priority for the agri-food enterprises. Within the category of investments on intangible assets, software and concessions play a more significant role within the beverage producing branch.

62 Interview with the Chamber of Commerce, September 2019.

63 Yielding capacity in this context refers to maximizing output based on resources applied.

Table 8*:* Types of investments within Austrian food processing and beverage branches in 2017, EUR million

Types of investment	Food Processing		Beverages	
	Investment volume	Share (in %)	Investment volume	Share (in %)
Machinery and technical equipment	478.6	67.2	140.1	58.4
New buildings	164.5	23.1	39.2	16.3
Maintenance of old buildings	5.6	0.8	2.6	1.1
Purchase of property	6.4	0.9	2.2	0.9
Transportation and logistics	25.7	3.6	7.1	3.0
Minor value assets	14.9	2.1	10.9	4.5
Software	7.9	1.1	13.5	5.6
Concessions and licenses	8.5	1.2	24.4	10.2
Total	**712.1**	**100**	**240.0**	**100**

Source: Statistik Austria, Structural Business Statistics, 2019.

Variations in demand for finance between the food and beverage branches exist. While the Austrian agri-food sector differentiates between 30 branches, the four branches of meat manufacturing, dairy manufacturing, bakery manufacturing, and beverages are further analysed due to their contribution with regards to turnover, number of companies and employees:

- The **meat manufacturing industry** comprised 890 enterprises including 130 slaughterhouses, employing 18 300 workers and generating a turnover of EUR 4.6 billion in 2018. The meat industry has been impacted by stagnating consumption since 2000 and high production costs[64]. Still, based on the trend towards high value meat products (e.g. organic), the meat sector is still recording growth. Following the opening of the Eastern European market in 2004, especially large-scale enterprises (above 250 employees) were able to double their contribution to the industry's turnover from 21% to 42% in 2016 (last survey). During the same time span, productivity measured in GVA per AWU has grown to EUR 50 000 (EU 28 average in 2016: EUR 38 000).
- In 2017, the meat manufacturing industry invested EUR 143.2 million, which is 14.6% of the total agri-food investments in that year[65]. The type of demand for finance depends on the size of the enterprise[66]. Large-scale enterprises strive to invest in new technologies, with the aim to improve standards and increase productivity. Machinery that lead to automatisation are quite common, such as slicing or packaging machinery. Small-sized enterprises often invest to maintain their existing production, but also show smaller investments in software, websites and other office applications.
- The **dairy manufacturing industry** included 160 enterprises, employing 5 900 workers and generated a turnover of EUR 2.8 billion in 2018. Within the agri-food sector, the dairy manufacturing industry has the largest enterprises and largest production concentration[67]. The market leader 'Berglandmilch' processes 40% of the Austrian milk alone. The top three dairies are responsible for 55% of the industry's turnover, the top 10 generate 91% of the turnover in the Austrian dairy sector[68]. Whilst domestic milk consumption is stagnating since 2002, the industry benefits from growing exports to neighbouring countries, as 45% of the Austrian dairy production is exported.

64 UniCredit Bank Austria, April 2019, Branchenbericht Nahrungsmittel und Getränkeerzeugung.
65 Statistik Austria, 2019, Structural Business Statistics.
66 Interview with the Chamber of Commerce, September 2019.
67 UniCredit Bank Austria, April 2019, Branchenbericht Nahrungsmittel und Getränkeerzeugung.
68 Interview with the Austrian Dairy Association, September 2019.

Whist the dairy industry has a share of 50% of own capital, the industry dominates the demand for finance, as annually up to EUR 150 million are invested in the sector. In 2017, the dairy industry invested EUR 120.7 million, which is 12.3% of the total agri-food investments in that year[69]. The main drivers for investments are:

(i) product differentiation (e.g. organic, fresh milk and GMO-free labelling);

(ii) addressing standards to remain competitive; and

(iii) automatisation of filling and cheese-cutting machinery[70].

- The **bakery industry** comprised 1 700 mostly small-sized enterprises, employing 34 000 workers and generated a turnover of EUR 2.9 billion in 2018. Product differentiation towards high value, healthy and regional produces is the current trend[71]. In addition, consumer demand for bread and bakery snacks is also impacting the industry positively. Long life bakery goods are also performing on the export markets.

  In 2017, the bakery industry invested EUR 152.8 million, which is 15.6% of the total agri-food investments in that year[72]. The range of investments within the small-scale bakery industry fall generally in the category of minor value assets and can vary between:

  (i) maintenance and improvements on production facilities;

  (ii) investing in a cash register;

  (iii) technical appliances like an oven or a refrigerator[73].

  Often, small-sized enterprises demand finance for working capital in order to satisfy their demands. Larger investments would usually include modernisation efforts of the production facility. Logistics are often outsourced and lead to subsequent demand for finance.

- The **beverage industry** included 430 enterprises, employing 9 300 workers and generated a turnover of EUR 6.2 billion in 2018. During the last decade, the beverage industry grew faster than the food manufacturing industries, mainly based on the energy drink (e.g. Red Bull) boom. Several of the Top 10 Austrian agri-food enterprises are affiliated with the beverage industry (Table 9). While the per capita consumption of alcoholic beverages (wine and beer) and soft drinks has declined[74], the industry is benefitting from growing exports. In 2017, the beverage industry invested EUR 265.9 million, which is 27.2% of the total agri-food investments in that year[75]. The demand for finance of the beverage industry aims mainly at automation of bottling and filling plantations but also investments in building infrastructure.

69 Statistik Austria, 2019, Structural Business Statistics.
70 Interview with the Austrian Dairy Association, September 2019.
71 UniCredit Bank Austria, April 2019, Branchenbericht Nahrungsmittel und Getränkeerzeugung.
72 Statistik Austria, 2019, Structural Business Statistics.
73 Interview with the Bakery Association of the Chamber of Commerce, September 2019.
74 Beverage Association, 2019.
75 Statistik Austria, 2019, Structural Business Statistics.

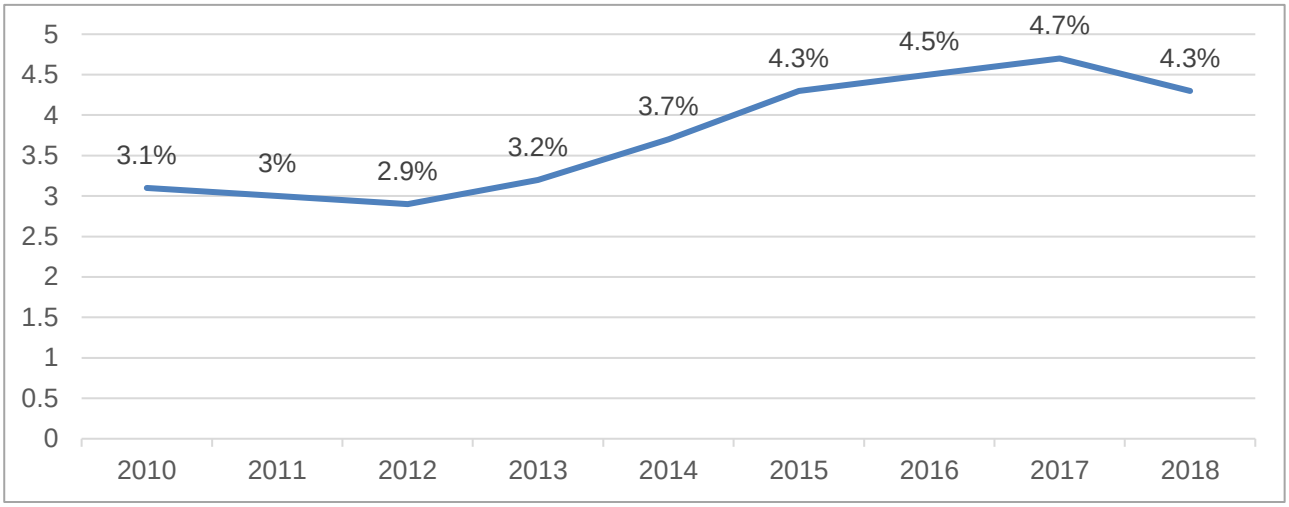
Table 9: Austria's Top-10 food and beverage producing enterprises, 2018

Name	Turnover 2018 (EUR million)	Branch
Red Bull	3 430	Beverage industry
Agrana	2 566	Sugar, starch, and beverage industry
Leipnik Lundenburger	1 061	Bakery and beverage industry
Berglandmilch	910	Dairy manufacturing industry
Vivatis	882	Food industry
Rauch	902	Beverage industry
Brau Union	732	Beverage industry
Marcher Norbert	404	Meat manufacturing industry
Mars Austria OG	390	Sweets, dog/cat food industry
Coca Cola Austria	355	Beverage industry

Source: UniCredit Bank Austria, Branchenbericht Nahrungsmittel und Getränkeerzeugung, April 2019.

Agri-food exports are also attracting new entrants in the sector. Based on the statistics from the Chamber of Commerce, the share of new entrants has been growing during the last decade[76]. This also coincides with the overall growth in Austrian agri-food enterprises[77]. In 2018, the share of new entrants of the total number of enterprises of the Austrian agri-food industry was 4.3%, which is an increase of nearly 39% compared to 2010 (Figure 23). More than 93% of these new entrants are categorised as small-sized enterprises. The bakery industry attracts most start-ups and usually these have less than ten employees per company.

Figure 23: Development of new entrants in Austrian agri-food sector, 2010 – 2018, in % of total enterprises



Source: Chamber of Commerce, 2019.

The EU CAP, notably the Austrian RDP, supports agri-food enterprises in carrying out investments, but it does not have that strong link to bank loans and financing. For the 2014-2020 programming period, EUR 118 million (1.5% of the total RDP budget) are earmarked for support of investments in processing, marketing and development of agricultural produce (M4.2.1). The original RDP budget allocated EUR 85 million for M4.2.1. Under the budget ceiling that supports processing and marketing activities of agri-food enterprises, the nine provincial governments of Austria have EUR 4.25 million to support small-scale cooperation projects with an anticipated investment volume up to EUR 300 000. Recently, the managing

76 Chamber of Commerce, 2019, Lebensmittelgewerbe und Nahrungs- und Genussmittelindustrie: Branchendaten.
77 UniCredit Bank Austria, April 2019, Branchenbericht Nahrungsmittel und Getränkeerzeugung.

authority for the programme increased the budget of the sub-measure by EUR 37 million (leading to EUR 118 million) by introducing a special call procedure that targeted the following objectives:

(i) improve the competitive position of dairy and meat manufacturing industries on new export markets; and

(ii) support cross regional restructuring activities in the dairy sector.

The dairy and milling branches are the largest beneficiaries. This is reflected in the budget allocations, as 20.9% is foreseen for the milling branch and 17.9% for the dairy sector (Table 10). Until September 2019, 25% of the M4.2.1 payments (EUR 49.1 million) went to the milling and dairy branches. Also, 90 projects or 35% of the total projects benefited from these two branches. With regards to the RDP export call procedure, 83% of the budget was allocated to the dairy sector[78]. Generally, the beverage (energy drinks, lemonades and beer) and bakery branches are excluded from the RDP sub-measure 4.2.1, as they are considered as secondary processing category or too far from agricultural primary production[79].

Table 10: Budget and payments for sub-measure M4.2.1 by branches in Austria, as of end September 2019

	Budget Allocation		Payments		Recognised	
Branch	Volume (EUR million)	Share (%)	Volume (EUR million)	Share (%)	Costs (EUR million)	**Number of Projects**
Milling	16.9	20.9	12.2	25.0	143.3	60
Meat	12.5	15.4	5.5	11.1	113.8	36
Poultry/eggs	3.0	3.7	1.9	3.9	22.5	9
Vegetables	7.5	9.3	3.2	6.6	46.6	27
Livestock	2.1	2.6	2.1	4.3	12.9	8
Dairy	14.5	17.9	11.2	22.9	113.7	30
Fruits	4.2	5.2	2.9	5.9	29.2	21
Oilseeds	2.9	3.6	1.3	2.7	18.7	8
Seeds	0.6	0.8	0.6	1.3	5.1	6
Wine	12.8	15.8	5.8	11.7	97.9	44
Flowers	0.4	0.5	0.4	0.9	3.6	2
Herbal plants	1.8	2.2	1.5	3.0	8.7	6
Potatoes	1.7	2.1	0.4	0.8	14.9	5
Total	81	100%	49.1	100%	630.8	262

Source: Federal Ministry of Agriculture, Regions and Tourism, October 2019.

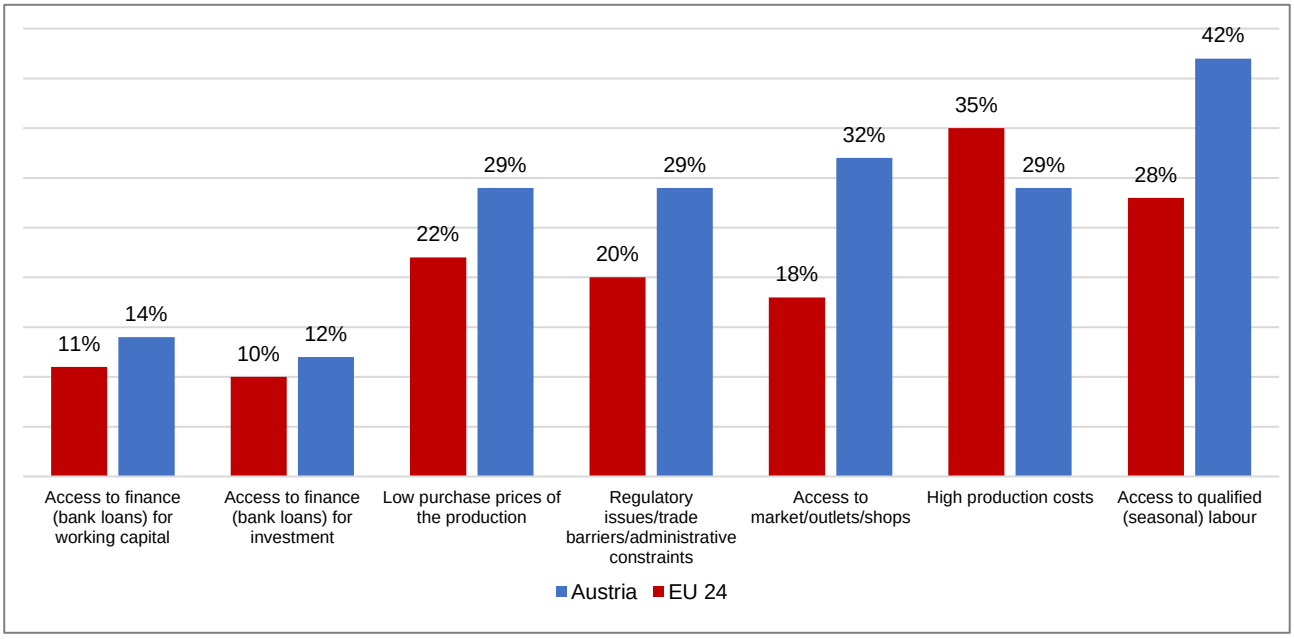
Note: The total amount requested is calculated based on all received applications before any administrative check regarding eligibility or selection criteria to have taken place. Applications that have not been approved could have been non-eligible, and/or with insufficient or missing information not 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.

Public support for processing and marketing only covers small share of the total investments. Unlike agriculture, where RDP support catalyses bank loans, only a small fraction of agri-food enterprises are able to complement their bank applications with RDP support[80]. On top of that, 69 projects have been rejected by the competent authority Austria Wirtschaftsservice GmbH (AWS) with a total investment volume of EUR 135.3 million and anticipated financial support of EUR 18.6 million[81]. Of those, 55 projects were rejected due to missing documents and 14 rejected projects were based on non-compliance with eligibility criteria.

78 Federal Ministry for Sustainability and Tourism, June 2019.
79 Interview with the Austria Wirtschaftsservice GmbH, October 2019.
80 Interview with the Ministry for Sustainability and Tourism, 2019.
81 Austria Wirtschaftsservice GmbH, October 2019.

The main difficulties with a negative implication for the sector's demand for finance are the access to qualified labour and the access to markets (Figure 24). More than one third of the agri-food enterprises faced these problems in Austria, against an EU 24 average of 28% and 18%, respectively. With regards to the difficulties in accessing qualified labour, interviews confirm the deficit of (seasonal) employees faced by Austrian enterprises operating in food processing[82]. A remarkable share of Austrian enterprises is also challenged by low purchase prices. Although producer price index of output in manufacture of food products and beverages in 2018 was higher than in the previous years, purchasing prices relative to firms' costs were lower[83]. The Agri-food survey shows that while selling price increased for nearly half of the enterprises, an increase in production costs was experienced by two thirds of the Austrian enterprises. About 29% of Austrian enterprises responded in the Agri-food survey that trade barriers challenge them to access prosperous international markets. Austrian agri-food enterprises also responded that they are more constrained to access finance compared to the EU 24 average. Especially with regards to investment loans, 12% of the Austrian enterprises are constrained, while 14% responded being confronted by challenges with regards to working capital.

Figure 24: Difficulties experienced by agri-food enterprises in 2018

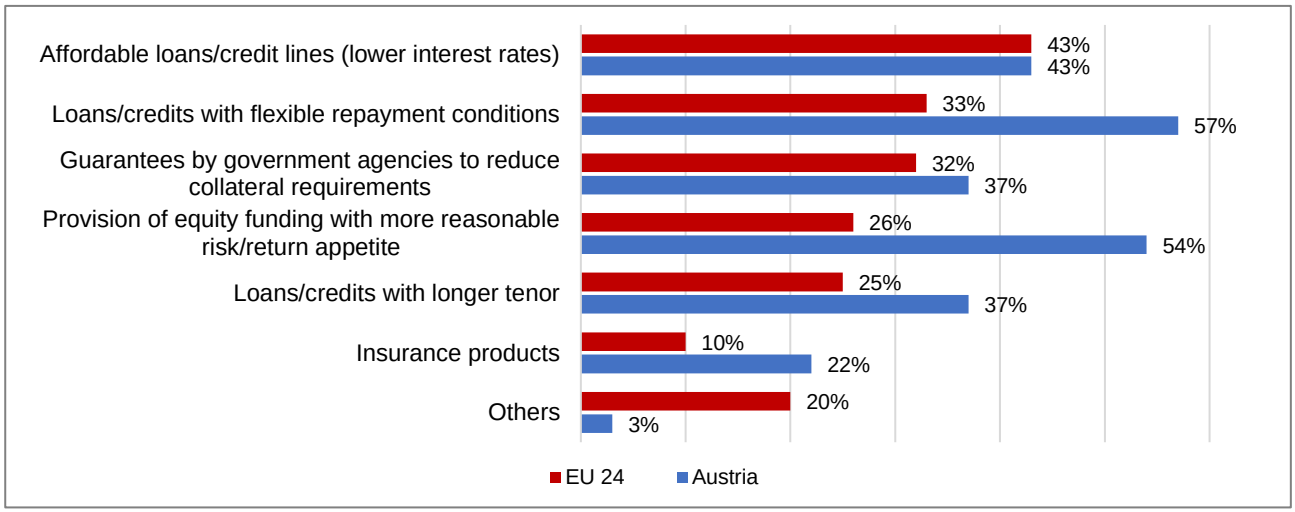


Source: Agri-food survey.

More than half of Austrian agri-food enterprises consider that more flexibility is needed on loan repayment conditions (Figure 25). Popular possible solutions also include provision of equity funding which have been mentioned by more than half (54%), affordable loans/credit lines with lower interest rates (43%), loan/credit schemes with longer tenor (37%), as well as public guarantees to reduce collateral requirement (37%). Interviews with financial institutions confirm that insufficient own capital and securities prevent Austrian agri-food enterprises from seeking finance[84]. Austrian enterprises see a larger potential in alternative solutions, such as insurance products and loans with longer tenor, compared to the EU 24 average.

82 Interview with the Chamber of Commerce, October 2019.
83 UniCredit Bank Austria, April 2019, Branchenbericht Nahrungsmittel und Getränkeerzeugung.
84 Interview with Austria Wirtschaftsservice GmbH, October 2019.

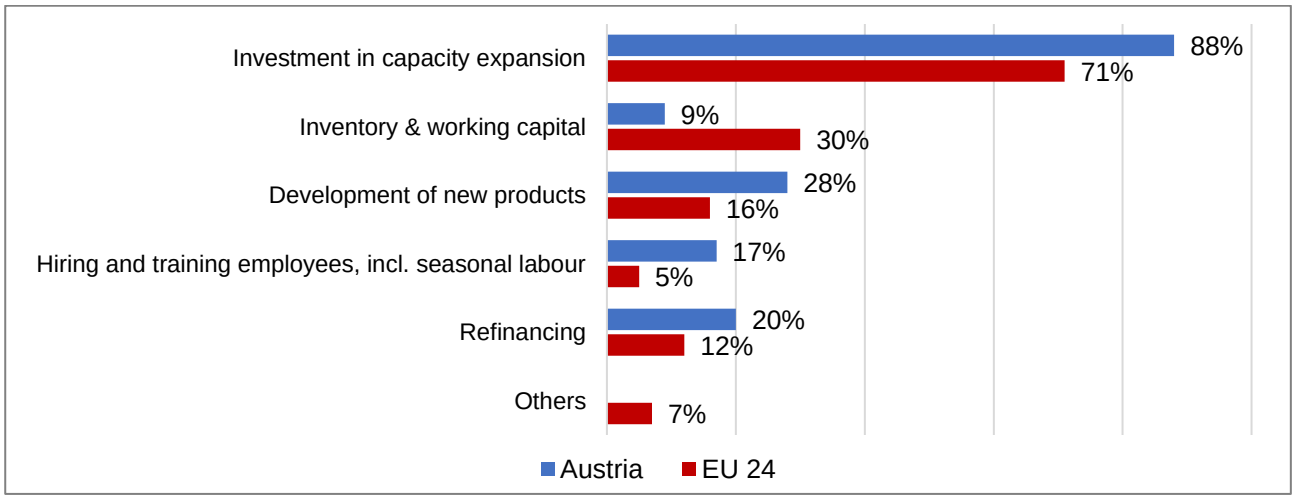
Figure 25: Solutions to reduce difficulties in accessing finance, 2018



Source: Agri-food survey.

Investments in capacity expansion is the dominant driver for seeking finance. 88% of the Austrian enterprises responded in the Agri-food survey that their finance applications were used for investments in capacity expansion, which is significantly more than the EU 24 average of 71% (Figure 26). About 28% of the Austrian enterprises responded that developing new products plays also a significant role, which is nearly twice as high compared to the EU 24 average. However, only 9% of the Austrian respondents consider the need to finance inventory and working capital as a reason to seek finance, which is much lower compared to the EU 24 average of 30%.

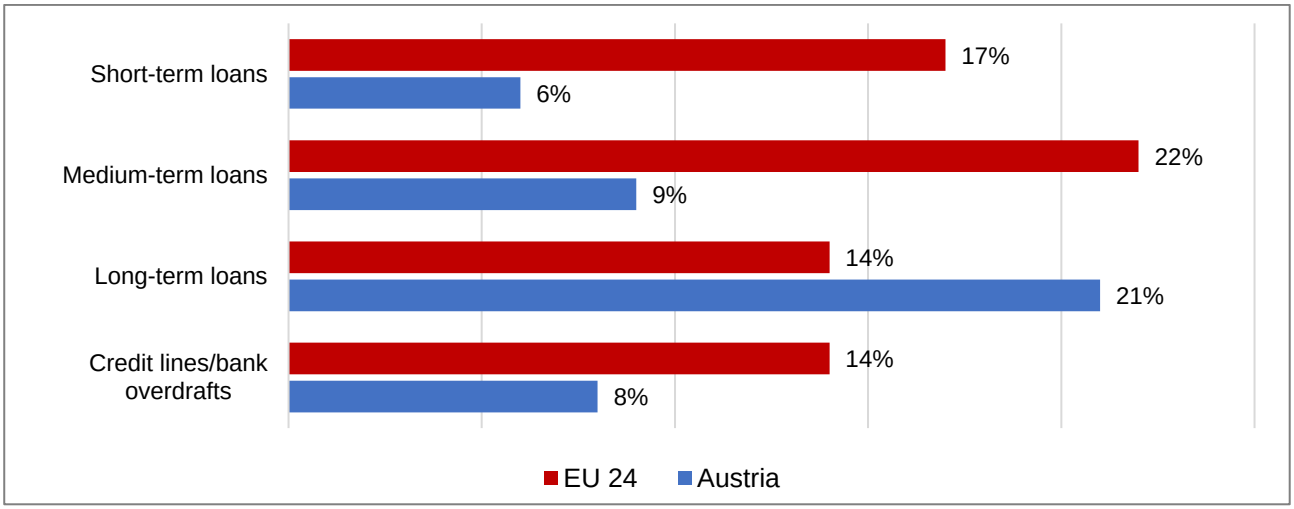
Figure 26: Purpose of bank loans in the agri-food sector in 2018



Source: Agri-food survey.

Consequently, Austrian enterprises mainly seek investments with long-term maturity. Capacity expansion and developing new products call for long-term investment planning. Based on the Agri-food survey, 21% of Austrian enterprises applied for loans with a duration beyond five years (Figure 27). This is significantly higher compared to the EU 24 average of 14%. Medium-term loans had been the second most attractive maturity with 10% of the finance applications. Short-term loans and credit lines for working capital (up to 18 months) are in lesser demand, with just 7% of the finance applications.

Figure 27: Austrian agri-food enterprises applying for finance in 2018, by financing product



Source: Agri-food survey.

3.2.2 Analysis of the demand for finance

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

Based on the Agri-food survey, the unmet demand for the agri-food sector in Austria is estimated at EUR 195 million.

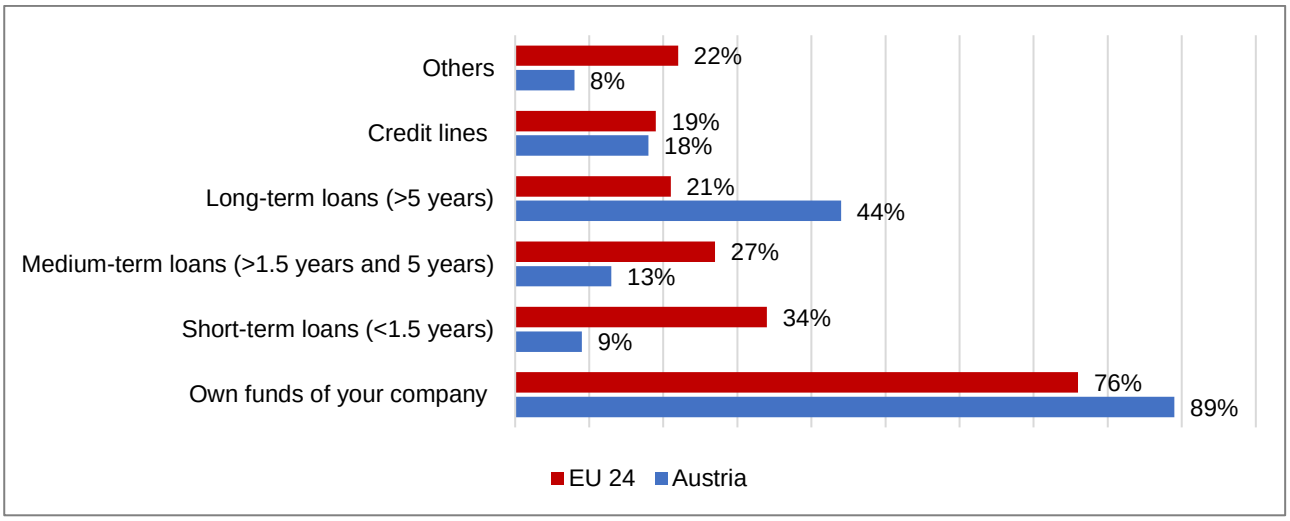
While Austrian agri-food enterprises have high equity ratios, there is still sizeable demand for finance. Generally, based on the larger enterprises in the beverage industry, there is a higher equity ratio of 28.6% compared to enterprises of the food producing industries (20.3%)[85]. Small-sized enterprises of the beverage industry have an equity ratio of just 10.4%, while large-sized enterprises are in command of 62.8% of own capital. Similar variation in the food producing enterprises, where small-sized enterprises have an equity ratio of just 5.5%, while large-scale enterprises have 42%. Variations also exist between branches, as the dairy branch is in command of an equity ratio of 50%[86]. Based on the Agri-food survey, 34% of Austrian agri-food enterprises applied for finance from financial institutions in 2018, which is significantly lower compared to the EU 24 average of 46%.

The most important source of finance for Austrian agri-food enterprises is their own funding. According to the Agri-food survey, 89% of enterprises in Austria (compared to 76% in the EU 24 average) rely on their own funding as the main source of finance (Figure 28). Generally, the Austrian banks request an equity share to be eligible for a loan. Financing of a company's needs without their own funds is only possible in case of other loans (for example, private loans and loans from a parent company). With regards of other sources of finance, long-term loans are the most important (44%) and turns out to be higher compared to the EU 24 average. This is also in line with the indication from the Agri-food survey that long-term loans are the most requested financial products (Figure 27). Credit lines also seem to be an important source of finance (18%), in line with EU average.

85 Austrian National Bank, 2019, JahresabschlusskennzahlenÖsterreich, Eigenkapitalquote (equity ratio), https://www.oenb.at/jahresabschluss/ratioaut.

86 Interview with the Dairy Association, September 2019.

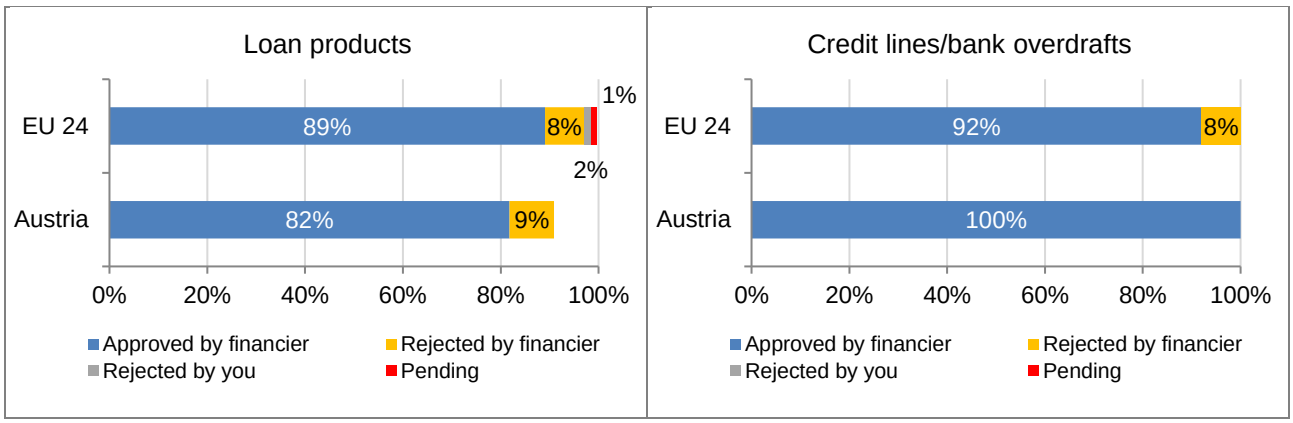
Figure 28: Most important financing instruments to agri-food enterprises in 2018



Source: Agri-food survey.

Nevertheless, there is an unmet demand. Based on the Agri-food survey, 9% of loan applications (short, medium and long-term loans aggregated) were rejected by banks (Figure 29). This rejection rate is in line with the EU 24 average. In 2018, the Survey on the Access to Finance of Enterprises (SAFE)[87] recorded even a higher rejection rate, with 15% loans application by all economic sectors fully or partially rejected. No rejections have been reported with reference to credit lines.

Figure 29: Results from loans' applications in the agri-food sector in 2018



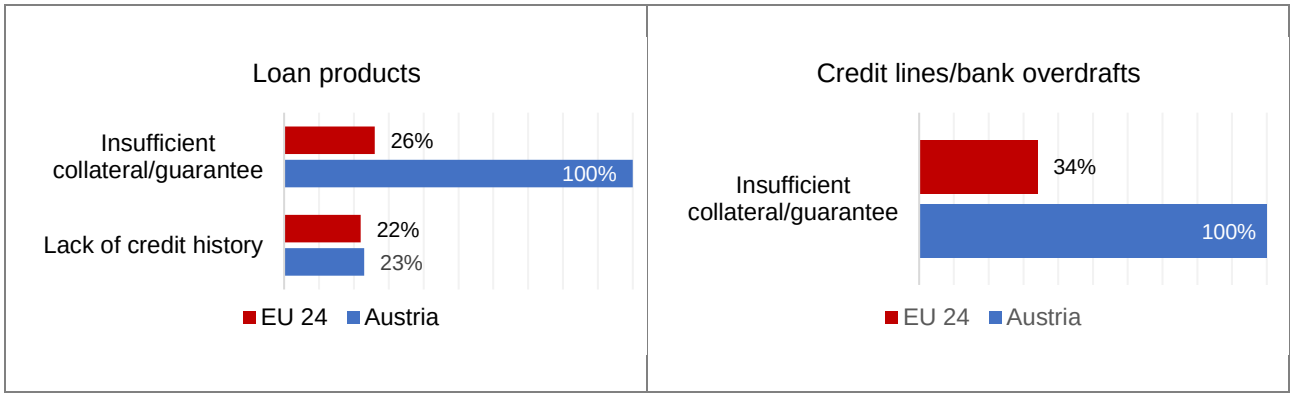
Note: The percentage might not sum up to 100% because of 'do not know/NA' answers

Source: Agri-food survey.

Lack of collateral and poor credit history are main reasons for discouragement and rejections of applications (Figure 30). Enterprises are often discouraged to apply based on the stringent requirements for collateral. Nearly in two thirds of the cases, where finance is in demand, the financial institutions request a guarantee[88]. In addition, interviews revealed that many enterprises do not apply for finance based on previous informal discussions with the financial institutions[89].

87 Survey on the Access to Finance of Enterprises (SAFE), 2018, https://ec.europa.eu/docsroom/documents/32767.
88 Interview with the Austria Wirtschaftsservice GmbH, October 2019.
89 Interview with the Austria Wirtschaftsservice GmbH, October 2019.

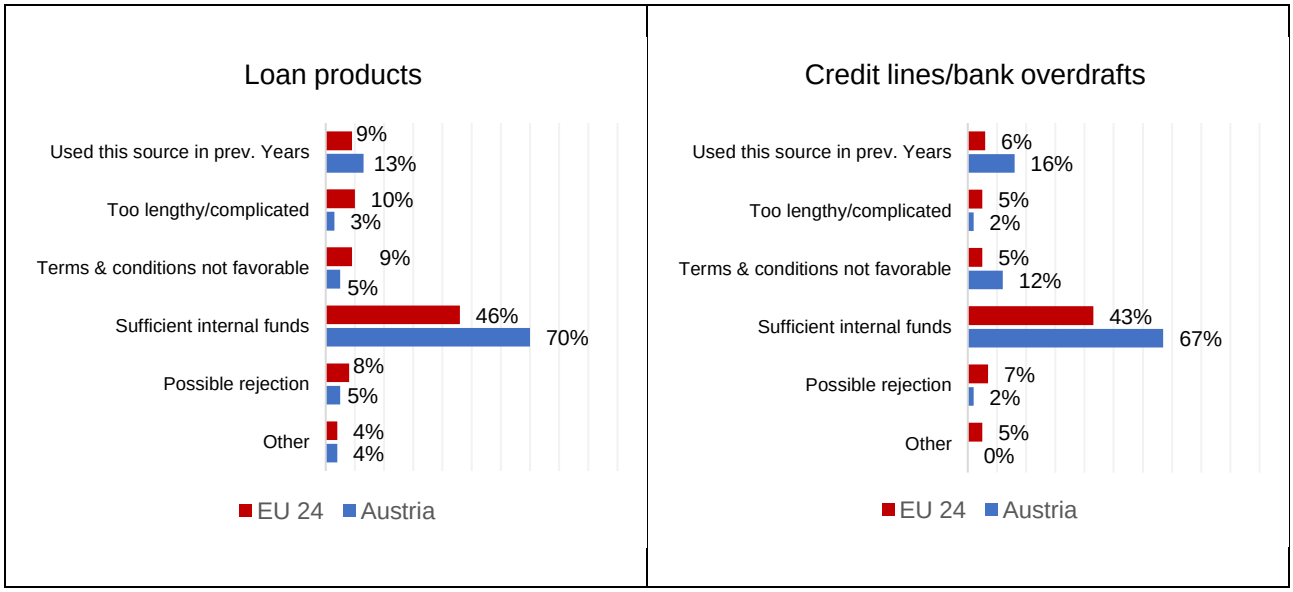
Figure 30: Reasons for loans' rejection in the agri-food sector in 2018



Source: Agri-food survey.

The key reason for an agri-food firm for not applying for financing is the sufficient level of internal funds. For those Austrian enterprises that did not apply for finance, more than two thirds responded in the Agri-food survey they had their own sufficient sources and 31% stated that long-term loans had already been applied in previous years. Compared to the EU 24 average, a higher share of Austrian agri-food enterprises responded that they have their own sufficient resources (Figure 31). Only part of the enterprises do not ask for finance from banks due to the fear of being rejected. With regards to credit lines and bank overdraft, 12% did not apply for finance due to unfavourable conditions, which is commonly the higher interest rate[90]. This is more than twice as high compared to the EU 24 average.

Figure 31: Reasons for not applying for loans in the agri-food sector in 2018

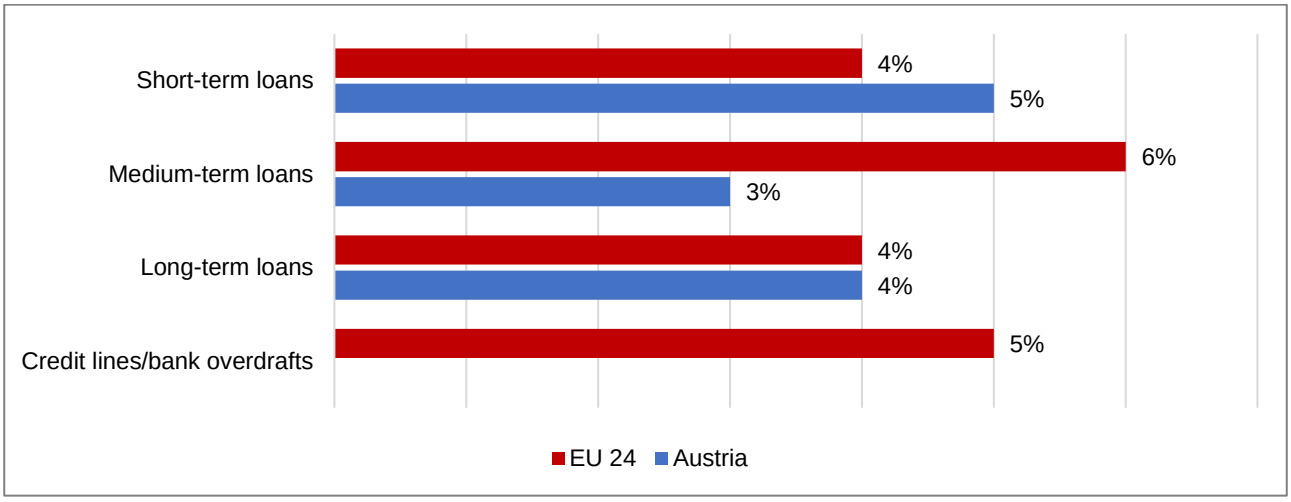


Source: Agri-food survey.

Some Austrian agri-food enterprises lack knowledge of their financing options (Figure 32). Overall, between 3% and 5% of the Austrian enterprises responded that the main reason for not applying for different types of finance is based on their limited knowledge of their opportunities. This points towards the need for targeted information campaign to respond in full to the existing demand for finance.

90 Interview with Raiffeisenbank Upper Austria, October 2019.

Figure 32: Limited knowledge on financial options as the main reason for an agri-food enterprise for not applying for different types of finance



Source: Agri-food survey.

Small-sized enterprises are more affected from the unmet demand. Based on the financial products where especially small-sized enterprises are commonly discouraged, the majority of unmet demand is based on long-term loans. Small-sized enterprises, such as in the bakery industry, that had been discouraged to apply may be linked to lack of knowledge and familiarity with the banking system, which prevents viable enterprises to apply for finance. The interviews with the stakeholders revealed that enterprises often come to banks for informal discussion before applying for a loan[91]. By reviewing the business plan and also the credit history, small-sized enterprises are often recommended not to apply, as their business proposition would challenge them to cover the loan.

91 Interview with the Austrian Wirtschaftsservice GmbH, October 2019.

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

This section provides an overview of the financial environment in which the agri-food sector in Austria 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 Austrian agri-food sector

- While the financial landscape is comparable with regards to agriculture loans, there are additional financial intermediaries that offer guarantees and equity investment solutions in the agri-food sector.
- EAFRD funded financial instruments do not exist on the market. However, a national funded subsidised interest rate loan programme is in place and has a long tradition.
- Contrary to agriculture, agencies and specialised bodies offer various guarantee instruments for agri-food businesses willing to take a loan.
- Whilst the outstanding loan volume is growing, the increase in assets of the enterprises is helping reduce the share of liabilities with banks.
- The total outstanding loan volume was EUR 2.1 billion in June 2019, of which 86% are for the food industry and 14% for the beverage producers.
- Loans for capital investments are mainly offered with long-term maturity (5-20 years), but 15% are offered as medium-term loans.
- 80% of the loans' rejections are based on insufficient collateral.

3.3.1 Description of finance environment and funding availability

3.3.1.1 Finance providers

In addition to the banks described in the agriculture sector, other financial bodies support the agri-food sector with specific products such as guarantees. The financial institutions described in section 2.3.1.1, which offer loans for investments and working capital in the agriculture sector, also provide comparable financing to the Austrian agri-food sector. The Raiffeisen Bank is again the market leader and has a market share beyond 70% for loans managed in the agri-food sector. But as the Austrian agri-food sector also benefits from the additional financial products of guarantees and equity investments, there are the following additional financial intermediaries that have partially only regional coverage:

(i) **Austria Wirtschaftsservice GmbH (AWS)**: as the Austrian Federal Promotional bank, the AWS is owned by the Federal Ministry for Digital and Economic Affairs and the Federal Ministry for Transport, Innovation and Technology[92]. The AWS activities cover the whole Austrian territory and their mission is to support innovative start-ups and help to grow enterprises with loans, guarantees, grants and equity. Within the agri-food sector, AWS deals with the authorisation of payments for the RDP sub-measure M4.2.1, but the enterprises also benefit from interest rates subsidised loans under the European Recovery Program (ERP) Fund (see below), as well as guarantees.

(ii) **Kreditgarantie und Unternehmensbeteiligungsgesellschaft (KGG-UBG)**: concentrating their activities on the Province of Upper Austria, the KGG-UBG works closely with the Provincial Government, the Chamber of Commerce and the banks (all from Upper Austria)[93]. Providing guarantees and equity investment solutions are their primary activities within the agri-food sector.

92 Austria Wirtschaftsservice GmbH, 2019, https://www.aws.at/suche/?tx_kesearch_pi1%5Bsword%5D=clients.
93 Kreditgarantie und Unternehmensbeteiligungsgesellschaft: Unternehmen, https://www.kgg-ubg.at/unternehmen.

(iii) **NÖ Bürgschaften und Beteiligungen GmbH (NOEBEG)**: similar to the KGG-UBG, but focused on the Province of Lower Austria, the NOEBEG offers guarantees and equity investment solutions, primarily to small agri-food enterprises. Supporting start-ups play a marginal role.

(iv) **Wiener Kreditbürgschafts-und Beteiligungsbank AG (WKBG)**: concentrating their activities on the Province/City of Vienna, the WKBG also offers guarantees and equity solutions to SMEs[94].

These loan guarantee companies work closely with the banking sector in their respective region. As the banks are commonly requesting guarantees for the investment loans, they often send their clients (enterprises) to respective loan guarantee companies. As part of the above referenced loan guarantee companies (ii-iv) only cover three provinces, the AWS has a broader coverage in Austria.

3.3.1.2 Finance products

Banks offer comparable financial products to agri-food businesses and for the agriculture sector. Generally, banks offer loans for investments and for working capital. Whilst all maturities are offered, long-term investment loans are the most common product for Austrian agri-food enterprises[95]. Loans for working capital, which are mostly offered with short or medium-term maturity, are not as popular as in the agriculture sector. Loans are typically secured by collateral, such as a mortgage or guarantees.

Subsidised loans to support start-ups, growth and innovation of small agri-food enterprises. Within the Marshall-Plan[96], the US created the European Recovery Program (ERP). The AWS manages the ERP, which enables low and stable interest rate conditions for long-term maturity (6-18 years)[97]. The loan volume varies between EUR 10 000-300 000. The interest rate is 0.5% within the first five years, then 0.75%. The objective of the ERP loans is to support future oriented enterprises that stimulate the creation of employment. The low interest rate loans are used to support investment and will not be granted to refinance existing debts. The ERP loans are funded under a special fund, and therefore do not impact the national budget.

Loan guarantee companies offer a wide range of financial solutions that complement banks. The Austrian agri-food enterprises benefit from a wide range of guarantee and equity investment solutions. Whilst conditions between financial institutions vary, the following product options stand out:

(i) Standard guarantees

The purpose of the guarantees is to facilitate access to bank loans by compensating missing securities requested by the banks (Figure 33). For investment or working capital loans between EUR 25 000 and EUR 1 million, up to 80% of the loan volume is secured through the guarantee[98].

94 Wiener Kreditbürgschafts- und Beteiligungsbank AG, Finanzierungsschwerpunkte. https://www.wkbg.at/finanzierungsschwerpunkte/.

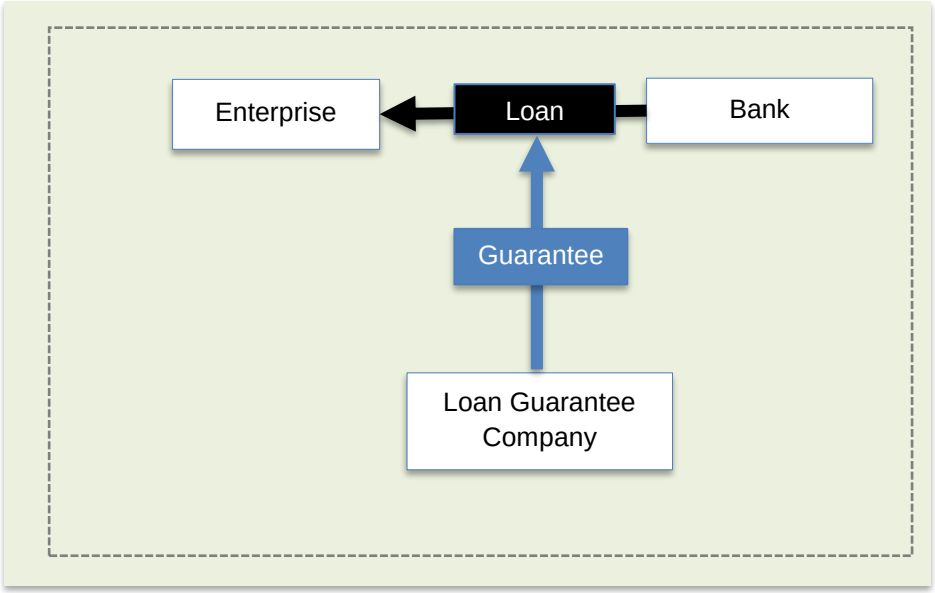
95 Interview with the Raiffeisen Bank Upper Austria, and Austria Wirtschaftsservice Gmbh, September and October 2019.

96 The US Marshall Plan was originally developed to help 16 western European countries' recovery following World War II.

97 Austria Wirtschaftsservice GmbH, https://www.aws.at/suche/?tx_kesearch_pi1%5Bsword%5D=kreditkonditionen.

98 KGG-UGB, Angebote Standardbürgschaften, https://www.kgg-ubg.at/angebote/standardbuergschaft.

Figure 33: Standard guarantee scheme

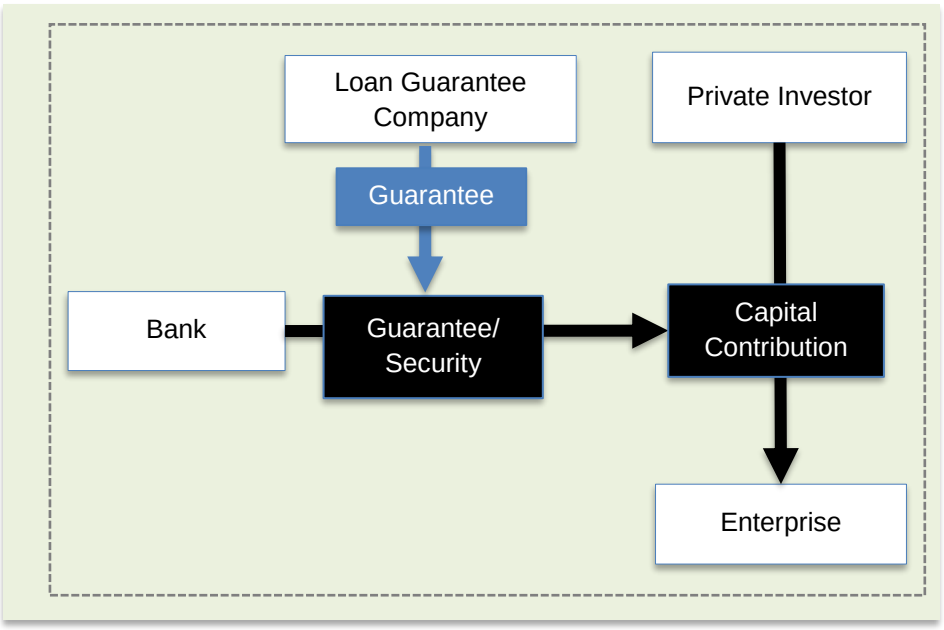


Source: KGG-UGB, Angebote Standardbürgschaften[99].

(ii) Guarantee for equity capital

Similar to the standard guarantee, but in this case the loan guarantee company covers up to 80% of the private investors' capital contribution (Figure 34).

Figure 34: Guarantee for equity capital scheme



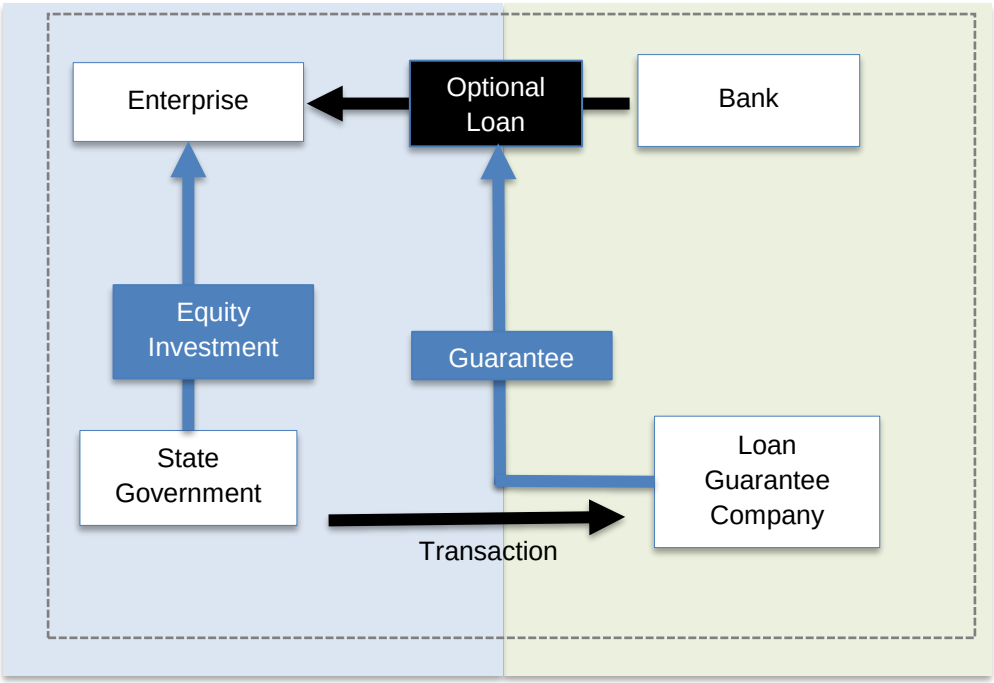
Source: KGG-UGB, Angebote Eigenkapitalgarantie[100].

99 KGG – UBG, 2019, https://www.kgg-ubg.at/angebote/standardbuergschaft.
100 KGG – UBG, 2019, https://www.kgg-ubg.at/angebote/eigenkapitalgarantie.

(iii) Capital contribution

In order to strengthen the capital base of the enterprise, the loan guarantee company functions as a silent partner and thus not only improves cash flow, but also increases the rating for more favourable loan conditions (Figure 35). In addition, equity investments improve the overall rating of the enterprise, leading to better conditions on interest rates in case of loans[101].

Figure 35: Equity investment scheme



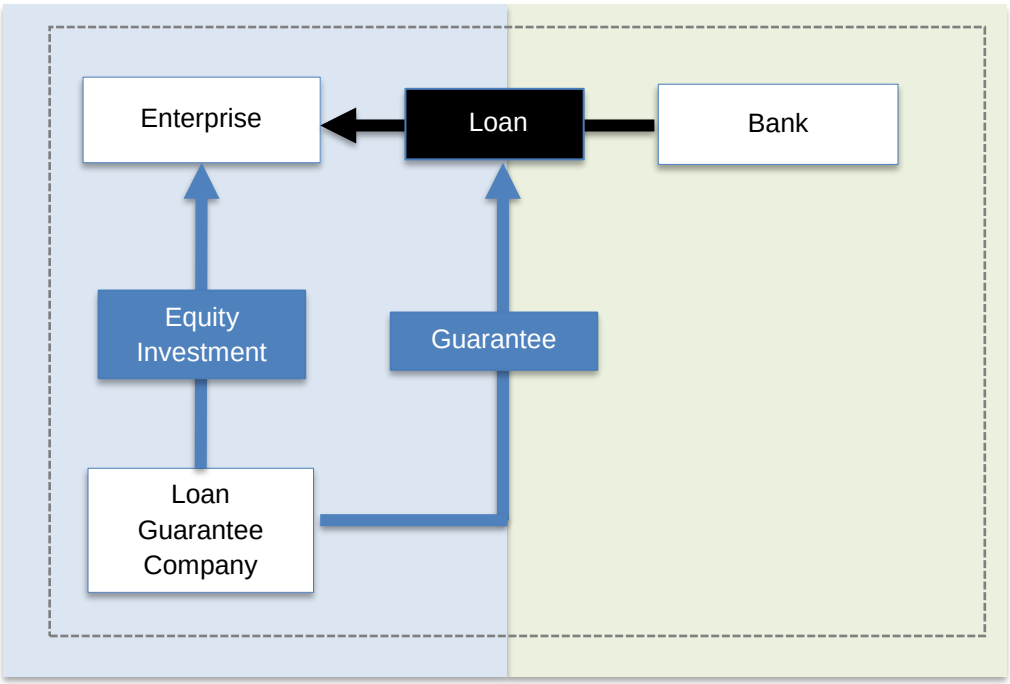
Source: KGG-UGB, Angebote Standardbeteiligungen[102].

101 Interview with KGG-UGB, November 2019.
102 KGG – UBG, 2019, https://www.kgg-ubg.at/angebote/standardbeteiligung.

(iv) Start-up fund

To support start-ups within their first six years, the Provincial Government functions as a silent partner, and thus helps attract banks for favourable loan conditions that can be secured through guarantees (Figure 36).

Figure 36: Start-up fund



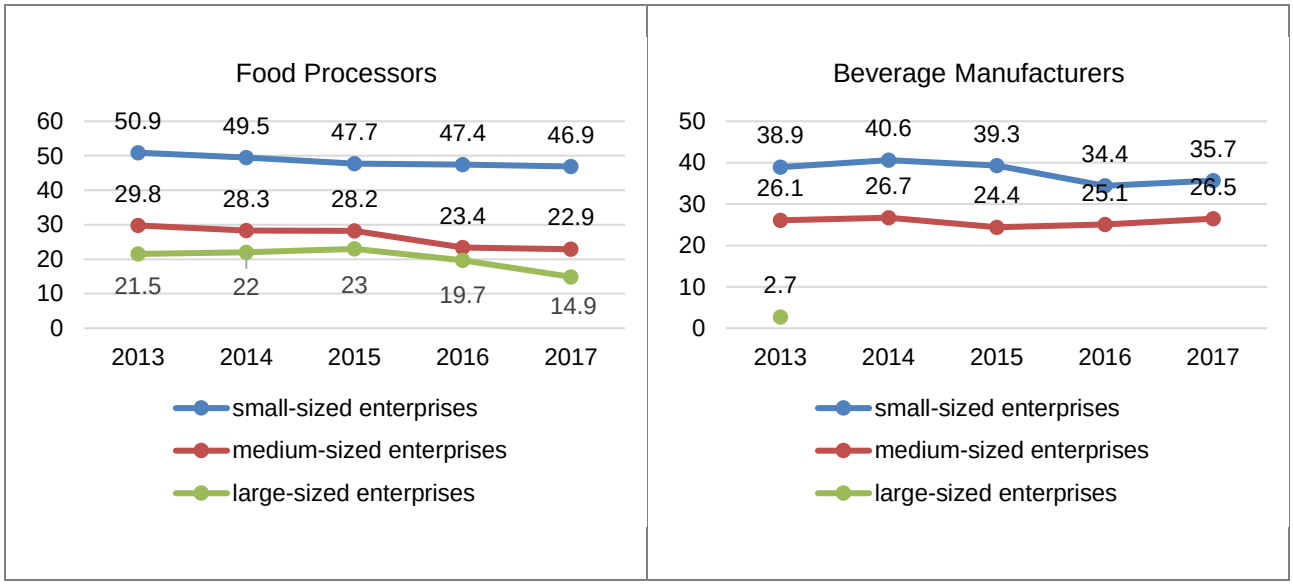
Source: KGG-UGB, Angebote OÖ Gründerfonds[103].

3.3.1.3 Description of the financing market

The consolidated liabilities to assets ratio with the banking sector are on a decline. The Austrian agri-food industry has benefitted from the growing demand of food and beverage products, especially on the international markets[104]. This has also stimulated increases in production. Consequently, agri-food enterprises have been able to pay off loans in recent years. Independent of the size of the enterprise, the bank liabilities to assets ratio has decreased since 2013 (Figure 37). The small-sized enterprises still show the highest share of liabilities in both the food producing and beverage manufacturing industries.

103 KGG – UBG, 2019, https://www.kgg-ubg.at/angebote/ooe-gruenderfonds.
104 UniCredit Bank Austria: Branchenbericht Nahrungsmittel und Getränkeerzeugung, April 2019.

Figure 37: Development of liabilities to assets ratio with banks 2013-2017, in %

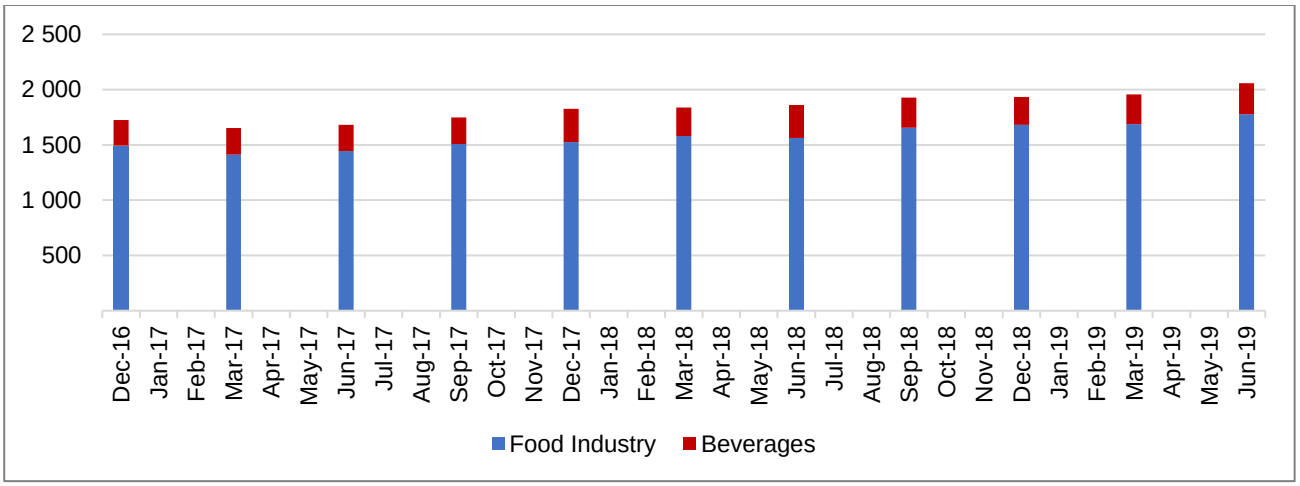


Source: Austrian National Bank, Konjunkturdaten, 2019.

3.3.2 Analysis of the supply of finance

The total outstanding loan volume is estimated at EUR 2.1 billion. Based on the Austrian National Bank, the outstanding loan volume is continuously increasing (Figure 38). The food producing industry accounts for 86% of this volume, while the beverage manufacturers covers 14%. Since December 2016, the outstanding loan volume has increases by 19%. Considering the decline of the liabilities to assets ratio of Austrian enterprises (Figure 37), this implies that their overall assets are growing.

Figure 38: Development of the outstanding loan volume for the Austrian agri-food sector, 2016-2019, EUR million



Source: Austrian National Bank, November 2019.

The ERP loans account for 15-20% of the annual loan volume. Between 80-100 agri-food enterprises benefitted from EUR 58 million to EUR 91 million in the years 2015-2018 (Table 12). The bakery industry is the largest beneficiary of this interest rate subsidised loan, receiving between 18-20% of the ERP loan volume. Also, the beverage industry has received between 5-7% of the annual ERP loan volume. As the AWS manages the authorisation of RDP sub-measure M4.2.1, the ERP fund and guarantees, it can be noted that 30% of agri-

food enterprises that receive a grant under M4.2.1 also apply for an ERP loan and 20% apply for a guarantee[105].

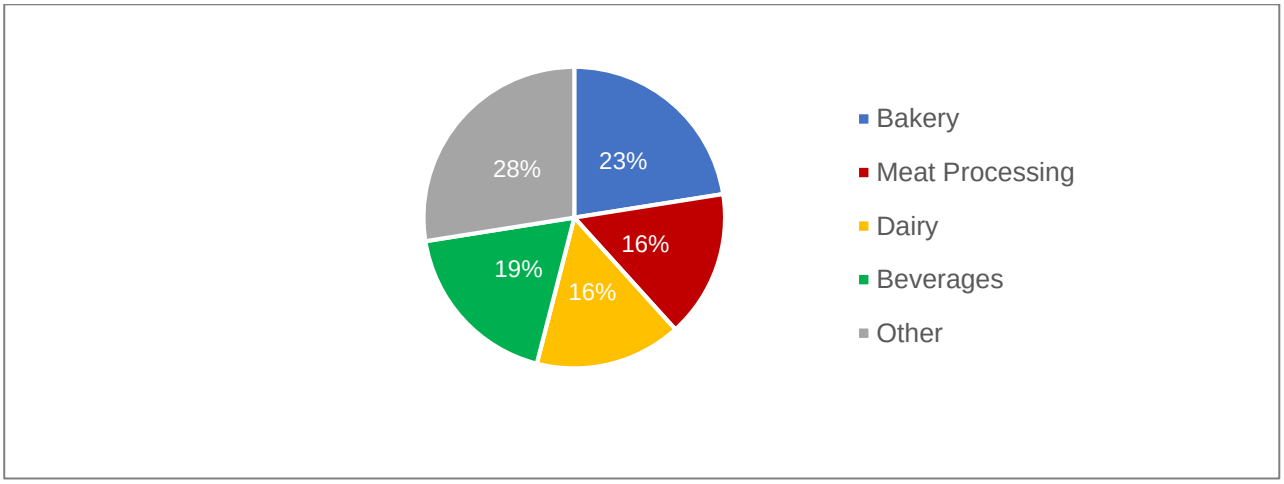
Table 11: Development of ERP loans 2015-2018, EUR million

	2015	2016	2017	2018
Number of enterprises	94	87	107	98
Loan volume (EUR million)	65.3	67.5	91.8	58.9

Source: Austria Wirtschaftsservice LTD, 2019.

The uptake of loans can vary significantly between branches. The outstanding loan volume at the Raiffeisen Bank in Upper Austria[106] (market share beyond 80% in the province) reveals an investment dynamic in agri-food sector. The highest share of the outstanding loan volume is accounted by the bakery branch with 22.5% of the outstanding loan volume of EUR 399 million (Figure 39). The beverage, dairy and meat processing branches have nearly the same share of outstanding loan volumes. The total number of loans at Raiffeisen in Upper Austria pertaining to the agri-food sector is 5 583[107], which is a multiple to the number of enterprises, as larger enterprises are accustomed to having numerous loans at the same time. Of these, 3 195 or 57% are short-term maturity (working capital or investment loans), 850 or 15% are for investment loans with medium-term maturity, and 1 538 or 28% are for long-term investment loans. In 2018, of the 325 applications, only one new entrant within the bakery branch was registered.

Figure 39: Outstanding loan volume in Upper Austria by branch in %



Source: Raiffeisenbank Upper Austria, September 2019.

Lack of collateral is the main reason for rejections. In the interviews carried out with the financial institutions, it became evident that lack of collateral, securities and guarantees are the main obstacle preventing Austrian agri-food enterprises to increase their investments. The WKBG was able to state that 80% of rejections are based on lack of proper securities[108]. Other reasons for loan rejections mentioned are insufficient own capital and a non-plausible pay off plan for the loan[109].

105 Interview with Austria Wirtschaftsservice LTD, November 2019.
106 Raiffeisen Bank Upper Austria was used, as it was difficult to obtain information from the other provincial banks.
107 Interview with Raiffeisen Bank Upper Austria, September 2019.
108 Interview with the WKBG, September 2019.
109 Interview with the NOEBEG, September 2019.

3.4 Financing gap in the agri-food sector

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

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

- Total financing gap of the Austrian agri-food sector for 2018 is estimated at EUR 175 million.
- Two thirds of the financing gap mainly concern small-sized enterprises.
- Almost 64% of the gap relates to long-term investment loans.
- The main constraint in access to finance is the lack of collateral and limited availability of equity.
- A public guarantee system has never been offered to Austrian agri-food enterprises.
- To address the financial gap, introducing EAFRD (public) support for guarantees in the agri-food sector could be considered.

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 Austrian firms (see Annex A.6 TG II: Agri-food surveyfor more information). The methodology used for calculating the gap is the same as the methodology used for the agriculture sector (see Annex A.3 Methodology for financing gap calculation).

The financing gap arises from unmet financing demand from economically viable firms[110]. The unmet demand for finance includes:

(i) lending applied for but not obtained; or

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

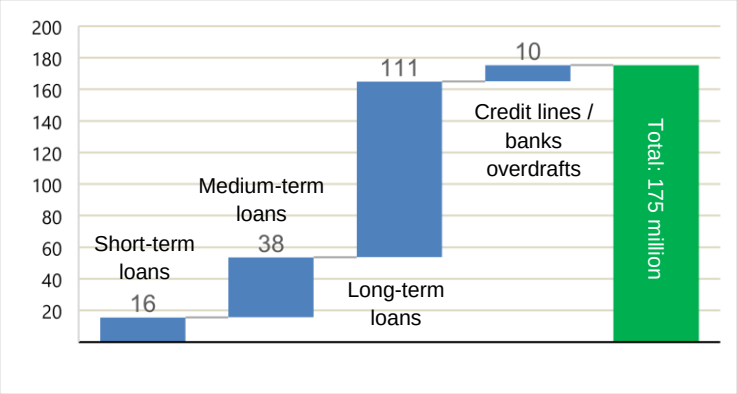
(iii) lending not applied for due to expected rejection.

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

The financing gap for the Austrian agri-food sector is estimated at EUR 175 million (Figure 40). However, unmet financing needs are concentrated in specific segments of the sector. Around 66% of the gap value relates to small-sized enterprises (below 50 employees). In terms of financial products, almost 64% of the gap relates to long-term investment loans. Important constraints also exist for large-sized enterprises and in accessing short-term financing (Table 12).

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

Figure 40: Financing gap by product in the agri-food sector, 2018 (EUR million)



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

This financing gap is comprised of separate components:

- The first component of the financing gap is constituted by the estimated value of loan applications submitted in the past year by viable enterprises which were rejected by banks, or which translated into loan offers refused by the applicants due to non-acceptable lending conditions. According to the interviews and the SAFE survey[111], the actual rejection rate can be much higher and impact the two thirds of small-sized enterprises even more (Table 12). This suggests that this component of the gap might be underestimated.
- The second component of the gap relates to the estimated value of loan applications that are not submitted by enterprises considered viable due to discouragement by a possible rejection. The Agri-food survey results reveal that this part of the financing gap is dominating.

Table 12: Financing gap by firm size and product, 2018, EUR million

	Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Small-sized firms	**116.4**	9.6	25.3	74.6	6.8
Medium-sized firms	**41.5**	4.9	8.8	25.4	2.3
Large-sized firms	**17.4**	1.2	3.8	11.2	1.2
Total	**175.3**	**15.7**	**37.9**	**111.3**	**10.3**

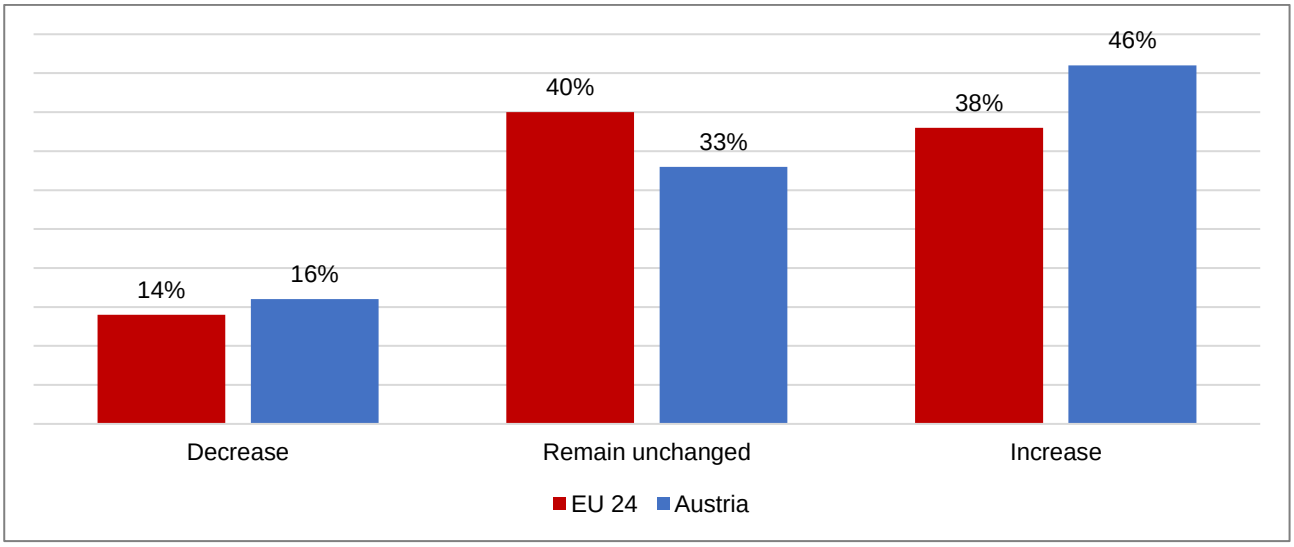
Source: Calculation based on results from the Agri-food survey.

The main reason for the rejection of investment loan applications is insufficient own capital, as banks require their own financial contribution to reduce moral hazard. This impacts on the level of collateral, which is insufficient and listed as another reason for rejections. Obtained qualitative information reveals that the discouragement is mainly related to bank requirements, in particular related to the request for collateral.

Over the coming years, the financing gap could persist. Especially the prospects on the Eastern European markets could dampen the export drive of Austrian agri-food enterprises. On the other hand, the re-opening of the Russian market or tapping new markets could be the leverage to balance out slower traditional market developments. All in all, market development is the carrot in staying attractive for financing institutions and nearly half of the Austrian enterprises responded that they expect an increase in financial resources within the next two-three years (Figure 41).

111 Survey on the Access to Finance of Enterprises (SAFE), 2018, https://ec.europa.eu/docsroom/documents/32767.

Figure 41: Agri-food companies' expectations on future financing needs, 2018



Source: Agri-food survey.

3.5 Conclusions

This report has identified a number of constraints, on both the demand and the supply side of the market, which cause viable loan applications by agri-food enterprises to be rejected, refused or discouraged. The main problems relate to the insufficient contribution of own funding and the lack of sufficient collateral. Excessive requirements for loans (especially regarding collateral), might discourage enterprises from applying to finance.

The study shows that there is a financing gap estimated at EUR 175 million. Around 66% of the gap value relates to small-sized enterprises (below 50 employees). In terms of financial products, almost 64% of the gap relates to long-term investment loans. While there are several reasons for the gap, insufficient own capital and collateral might affect Austrian smaller enterprises most.

Currently, with the exception of the ERP, the main financial products in the Austrian agri-food sector are funded from national sources. As national budget possibilities are reviewed, introducing public supported financial instruments have been subject of discussion for some time.

Several **recommendations** for public interventions could be considered by the Austrian RDP Managing authority:

- Significant problem for enterprises in the agri-food sector is providing sufficient collateral. While several financial intermediaries offer a wide range of guarantee options, the agri-food enterprises are challenged with not having enough of own capital. This suggests to further reflect on the possibility to bolster the current guarantee offering, possibly in synergy with current instruments and avoiding duplications.
- Significant obstacle, especially for start-ups and new entrants, is the low level of own funds and equity that limits their creditworthiness. Therefore, it is worth considering improving equity financial instruments (e.g. some type of acceleration funding or venture funding) in the agri-food sector as the existing equity financial instruments are more indented for other industries.
- Considering the market dominance of one bank, it can be assumed that financial instruments might stimulate interest from new operators, providing a broader choice to Austrian agri-food enterprises.

ANNEX

A.1 References

1. European Commission, DG AGRI, June 2019, Statistical Factsheet for Austria, https: //ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agri-statistical-factsheet-at_en.pdf.
2. Eurostat, 2016: Farm Structure Survey, https://ec.europa.eu/eurostat/documents/2995521/9028470/5-28062018-AP-EN.pdf/8d97f49b-81c0-4f87-bdde-03fe8c3b8ec2.
3. Eurostat, 2017, Agricultural Output.
4. Federal Ministry for Sustainability and Tourism: Report on the Situation of Austrian Agriculture and Forestry 2018, https://gruenerbericht.at/cm4/jdownload.
5. *fi-compass*, 2019, Survey on financial needs and access to finance, Study report, https://www.fi-compass.eu/publication/brochures/survey-financial-needs-and-access-finance-eu-agricultural-enterprises.
6. *fi-compass,* 2016, Methodological handbook for implementing an ex-ante assessment of agriculture financial instruments under the EAFRD, https://www.fi-compass.eu/publication/manuals/manual-methodological-handbook-implementing-ex-ante-assessment-agriculture.
7. *fi-compass, Country data for Austria,* https://www.fi-compass.eu/financial-instruments/austria.
8. LBG GmbH: Austrian agricultural accounting system.
9. Statistik Austria, 2018: Economic Accounts on Agriculture.
10. Unikredit/Bank Austria, 2019: Branchen Bericht der Nahrungsmittel- und Getränkeerzeugung.

A.2 Stakeholders interviewed

Type of Organization	Name of Institution	Address and Website
Government	Federal Ministry of Agriculture, Regions and Tourism	Stubenring 1, 1010 Vienna www.bmlrt.gv.at
Professional Organisation	Chamber of Agriculture	Schauflergasse 6, 1015 Vienna www.lko.at
Professional Organisation	Chamber of Agriculture from Lower Austria	Wiener Strasse 64, 3100 St. Pölten www.noe.lko.at
Professional Organisation	Chamber of Agriculture from Burgenland	Esterhazystrasse 15, 7000 Eisenstadt www.bgld.lko.at
Professional Organisation	Chamber of Commerce	Wiedner Hauptstr. 63, 1045 Vienna www.wko.at
Professional Organisation	Association for Food and Beverage Industry	Zaunergasse 1-3, 1030 Vienna www.wko.at
Professional Organisation	Austrian Dairy Association	Friedrich-Wilhelm-Raiffeisen-Platz 1, 1020 Vienna www.voem.or.at
Professional Organisation	Association for Austrian Pig Producers	Dresdner Strasse 89/19, 1200 Vienna www.schweine.at
Bank	Raiffeisenlandesbank Oberösterreich	Europaplatz 1a, 4020 Linz www.rlbooe.at
Bank	Raiffeisenlandesbank Wien-Niederösterreich	Friedrich-Wilhelm-Raiffeisen-Platz 1, 1020 Vienna www.rlbnoe.at
Bank	Raiffeisenregionalbank Mödling	Hauptstrasse 27-29, 2340 Mödling www.rrb-moedling.at
Bank	Raiffeisenverband Salzburg	Schwarzstrasse 13-15, 5020 Salzburg www.rvs.at
Bank	Raiffeisenlandesbank Burgenland	Raiffeisenstrasse 1, 7000 Eisenstadt www.rlb-burgenland.at
Bank	Raiffeisenlandesbank Steiermark AG	Kaiserfeldgasse 5, 8010 Graz www.raiffeisen.at/rlbstmk

Type of Organization	Name of Institution	Address and Website
Bank	Raiffeisenlandesbank Tirol	Adamgasse 1-7, 6020 Innsbruck www.rlb-tirol.at
Bank	Landeskulturfonds of the Tyrolean Provincial Government	Wilhelm-Greil-Strasse 9, 6020 Innsbruck www.tirol.gv.at
Bank	Volksbank (Gärtnerbank)	Kagraner Platz 48, 1220 Vienna www.volksbankwien.at
Bank	Erste Bank Sparkasse	Am Belvedere 1, 1100 Vienna www.sparkasse.at
Bank	Bank Austria	Rothschildplatz 1 1020 Vienna www.bankaustria.at
Bank	Austria Wirtschaftsservice LTD	Walcherstrasse 11a, 1020 Vienna www.aws.at
Research	Austrian Institute for Regional Studies	Franz-Josefs-Kai 27, 1010 Vienna www.oir.at
Research	LBG Austria	Boerhaavegasse 6 1030 Vienna www.lbg.at
Research	Institute for Economic Planning	Arsenal Objekt 20, 1030 Vienna www.wifo.ac.at
Research	Federal Institute for Agricultural Economy	Dietrichgasse 27, 1030 Vienna www.agraroekonomik.at
Research	Statistik Austria	Guglgasse 13, 1110 Vienna www.statistik.at

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[112] 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:

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

Step 2: Number of farms rejected or discouraged

$\boldsymbol{N.of\ Farms\ in\ unmet\ demand_{ij}^{Viable}}$: In order to get the number of farms constrained in accessing financing, we multiply total share of viable respondents with unmet demand from the survey sample (Step 1) by the total farm population from Eurostat by farm-size.
For TG I, this total population is adjusted by removing farms having a Standard Output (SO) below EUR 8 000 or EUR 4 000 or EUR 2 000, depending on the Purchasing Power Parity Index (PPI) of the country. The

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

EUR 8 000 or 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 index. This value might be further adjusted based on the results of the analysis.

Step 4: Financial gap across farm size and product type
The financing gap is obtained by multiplying the amount of loans (Step 3) by the total number of farms facing constrained access to credit as calculated in Step 2.
Note: when the survey sample size allows, an indicative breakdown of the gap will be provided for young farmers per member state. The breakdown is obtained from the age ratio within rejected loan applications.

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

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

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

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

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

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

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

For Austria, Table 13 and Table 14 report the elements used in the calculation of the financing gap for the agricultural and agri-food sector, respectively.

Table 13: Elements for the calculation of the financing gap in the Austrian agriculture sector

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdraft
Lower bound: farms with a non-negative turnover growth and no cost increase	Share of respondents rejected by creditor or farmer	0.00%	0.00%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	1.19%	0.59%	0.59%	1.19%
	Total (sum of rejected and discouraged)	***1.19%***	***0.59%***	***0.59%***	***1.19%***
Upper bound: farms with a non-negative turnover growth	Share of respondents rejected by creditor or farmer	0.00%	0.59%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	1.48%	1.64%	0.73%	1.64%
	Total (sum of rejected and discouraged)	***1.48%***	***2.23%***	***0.73%***	***1.64%***
Total unmet demand: all farms	Share of respondents rejected by creditor or farmer	0.00%	0.59%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	1.48%	1.78%	0.87%	1.93%
	Total (sum of rejected and discouraged)	***1.48%***	***2.37%***	***0.87%***	***1.93%***
Farms with constrained access to finance, **lower bound**	Small-sized farms	601	300	300	601
	Medium-sized farms	447	223	223	447
	Large-sized farms	31	15	15	31
Farms with constrained access to finance, **upper bound**	Small-sized farms	-	8227	4965	4113
	Medium-sized farms	-	1585	957	793
	Large-sized farms	-	223	135	112
Standard loan application size	Small-sized farms	EUR 18 553	EUR 45 005	EUR 124 119	EUR 16 750
	Medium-sized farms	EUR 23 507	EUR 42 776	EUR 134 773	EUR 18 580
	Large-sized farms	EUR 69 330	EUR 108 856	EUR 242 673	EUR 98 952

Source: fi-compass survey.

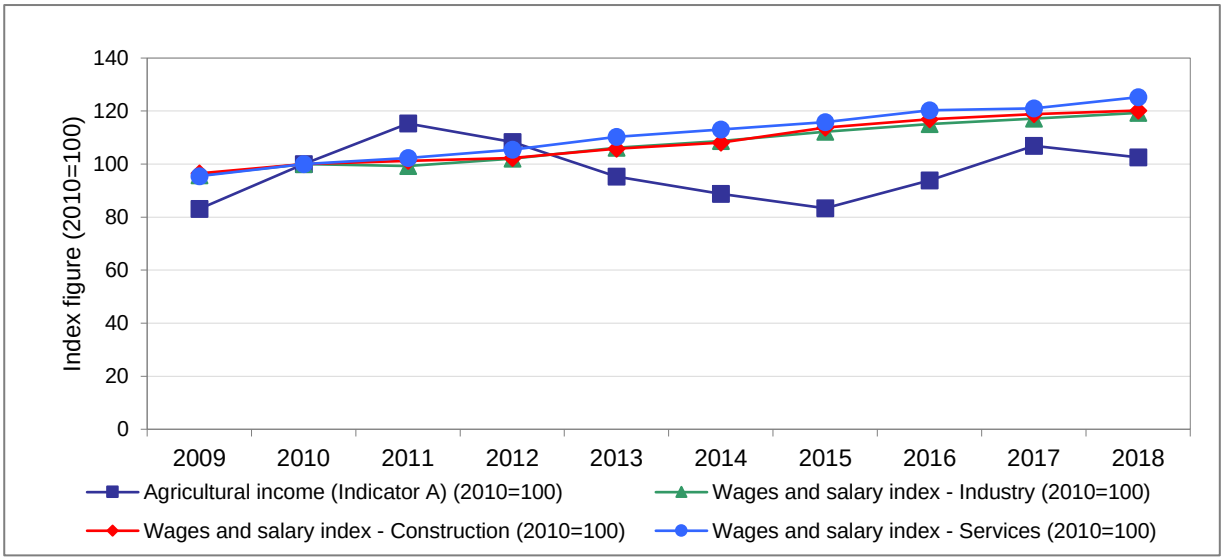
Table 14: Elements used for the calculation of the financing gap in the Austrian agri-food sector

		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%	0.88%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	3.01%	4.91%	6.03%	1.90%
	Total (sum of rejected and discouraged)	***3.01%***	***5.79%***	***6.03%***	***1.90%***
Total unmet demand: all firms	Share of respondents rejected by creditor or firm	0.00%	3.89%	0.00%	0.00%
	Share of respondents that have not applied because of possible rejection	3.01%	4.91%	6.03%	1.90%
	Total (sum of rejected and discouraged)	***3.01%***	***8.80%***	***6.03%***	***1.90%***
Firms with constrained access to finance	Small-sized firms	109	209	218	68
	Medium-sized firms	7	13	14	4
	Large-sized firms	2	3	3	1
Standard loan application size	Small-sized firms	EUR 218 471	EUR 432 183	EUR 1 075 358	EUR 460 775
	Medium-sized firms	EUR 1 802 138	EUR 941 756	EUR 2 282 639	EUR 800 089
	Large-sized firms	EUR 7 638 599	EUR 4 303 216	EUR 28 676 331	EUR 19 297 966

Source: Agri-food survey.

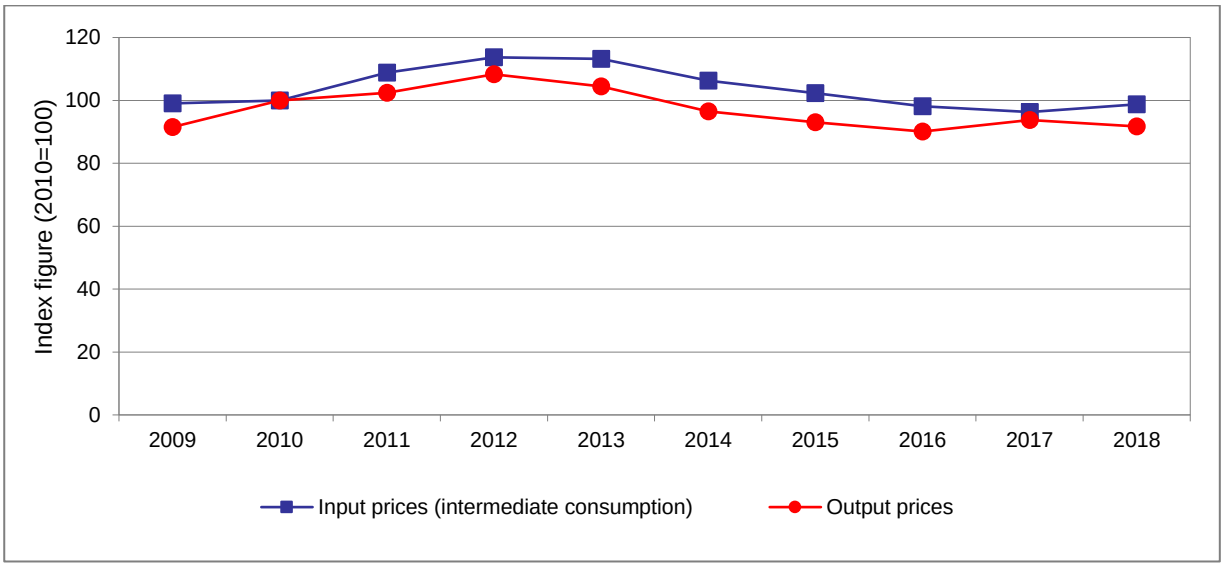
A.4 Data from the agriculture statistical factsheets

Figure 42: Evolution of agricultural income compared to wages and salaries in other sectors, 2009-2018



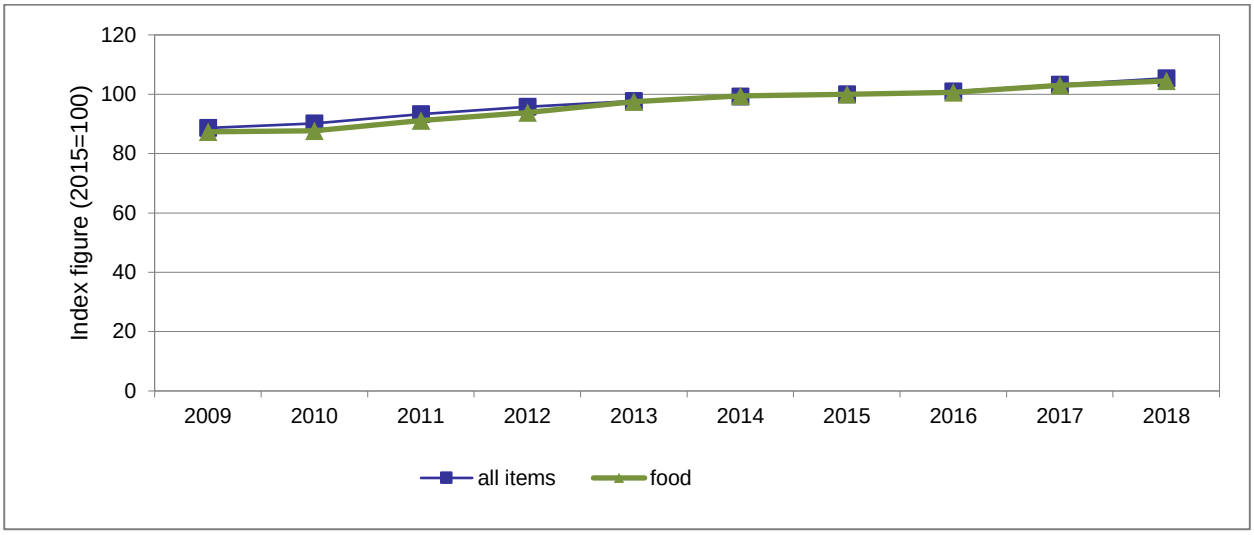
Source: European Commission, DG AGRI, June 2019, Statistical Factsheet for Austria.

Figure 43: Evolution of agricultural input and output prices, 2009-2018



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

Figure 44: Evolution of harmonised indexes of consumer prices, 2009-2018



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

A.5 TG I: *fi-compass* survey

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

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

Overall, the survey consists of 7 659 respondents, of which 73% own the agricultural enterprise, 8% are member owners, 8% are owner's relatives, 7% administrative managers, 3% other employees and 1% human resource managers. Table 15 reports the number of respondents by Member State.

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

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

Source: fi-compass survey.

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

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

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

A.6 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 16 reports the sample size per country.

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

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

Source: Agri-food survey.

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

www.fi-compass.eu

contact@fi-compass.eu

European Commission
Directorate-General
Agriculture and Rural Development
B-1049 Brussels

European Investment Bank
Advisory Services
fi-compass
98-100, boulevard Konrad Adenauer
L-2950 Luxembourg