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

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Glossary and definitions

Expression	Explanation
AFM	Netherlands Authority for the Financial Markets
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.
ALF	Achtergestelde Leningen Fonds
AWU	Annual Working Unit
BL	*Borgstellingskrediet voor de Landbouw* – Guarantee Credit for Agriculture Fund
BMKB	*Borgstelling MKB – kredieten*
CAP	Common Agricultural Policy
CBS	*Centraal Bureau voor de Statistiek* – Dutch Statistics Bureau
CPB	Central Planning Bureau
DNB	De Nederlandsche Bank
EAA	Economic Accounts for Agriculture
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EIB	European Investment Bank
EIF	European Investment Fund
EU 24	The 24 EU Member States covered by the *fi-co*mpass '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.
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.
FNLI	Dutch Food Industry Federation

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.

GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GL	Garantstellingsfonds
GO	*Garantie Ondernemingsfinanciering*
GVA	Gross Value Added
ha	Hectare
RDP	Rural Development Programme
SAFE	Survey on the access to finance of enterprises
SBS	Structural Business Statistics
SDE	*Stimulering Duurzame Energieproductie*
SMEs	Small and medium-sized enterprises
SO	Standard Output
SSF	Subsistence Farm
UAA	Utilised Agricultural Area
VVK	Garantieregeling Vermogensversterkende Kredieten

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EXECUTIVE SUMMARY

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

The analysis draws on the results from two comprehensive and representative EU-level surveys carried out in 2018 and 2019. These are 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 The Netherlands

The Dutch agriculture sector is showing a stable investment trend since 2010. In 2017, the annual investment in capital formation amounted to EUR 4.5 billion, whereas machinery and buildings were the primary target. Four main drivers of demand for finance in the agriculture sector stand out:

(i) **Intergenerational transfer:** based on the ageing structure, up to 20 000 farms may be subject to transfer to the next generation of farmers, requiring a large amount of finance to buy out the assets of the retiring generation.

(ii) **Farm expansion:** farmers benefit by means of farm consolidation from the economies of scale. This implies significant investments in increased production capacity.

(iii) **Sub-sector specific investments:** horticulture, as an example, calls for intensive infrastructure investments, which impact the overall demand for finance.

(iv) **Regulatory and policy changes:** the national circular agricultural strategy is likely to push the demand for finance by the agriculture sector as additional investments are required to respond to the growing standards.

Results from the study indicate that 28% of the Dutch farmers applied for finance in 2017, mostly for medium and long-term loans (15.4% of the respondents, against only 3.4% for short-term financial products)**.** In fact, medium to long-term loans represent 90% of outstanding loan volume in the sector according to FADN. Most farmers applied for bank loans to finance investments in new machinery, equipment or facilities. Working capital and the purchase of land were also among the other common reasons for farmers to apply for finance. Almost all (98%) of the farmers indicated that their own personal assets were used as collateral.

There are a number of governmental initiatives aimed at providing support to farmers, including the Guarantee Credit for Agriculture Fund[2] (BL), BL Plus Scheme and Green Funds Scheme. Investments are also supported under the Common Agricultural Policy, notably though the Rural Development Programme. A capital enhancing credit fund programme (VVK) has been developed recently to facilitate lending to young farmers just starting out or taking over a business and willing to invest in innovation or substantial business development.

Nevertheless, the report indicates that there is a potential for new financial instruments, **with a financing gap estimated between EUR 73 million and EUR 303 million**. The financing gap mainly concerns small to medium-sized farms and long-term loans. **About 22.3% of the overall gap could be attributed to young farmers**. Farmers below 40 years old account for nearly 29% of the rejected and viable loan applications and 12.2% of the discouraged applications. The general drivers of the gap are linked to a number of key challenges faced by farmers that usually prevent banks to provide them with finances, including:

2 In Dutch: Borgstellingskrediet voor de Landbouw or BL.

- Stakeholders[3] interviewed for the purpose of this report highlighted the **difficulty to access bank finance for young farmers and new entrants**, due to the limited level of own capital resources available to ensure solvency, the lack of collateral, as well as the challenge to prepare a viable business plan. There is a substantial need for capital especially for young farmers who must buy out the share of their parents and/or siblings from the family farm. Furthermore, after the farm takeover, the farm's solvency level is at a minimum, which makes it difficult to obtain finances from banks for further investments[4].
- **Low profit margin in case of small-sized family farms**. To improve profit margins, farms need to invest in order to benefit from economies of scale. At the same time, low profit margins discourage banks from providing the necessary financial resources. This may create a vicious circle that does not allow structural change to occur.
- **High risk perception from banks in financing innovative farming solutions**. Farmers, who would like to invest in innovations and new ways of farming are considered by the banks as too risky due to the fact that these ideas and concepts are not tested and do not guarantee good cash flows and returns on investment. Examples include investments in health food, organic agricultural products, smart farming and biomass processing technologies.

According to interviewed stakeholders in the agriculture sector, there are no liquidity constraints on the supply side of the credit market and the financing gap is mainly driven by credit risk perceived by the banks. The significant market concentration on the supply side might also create constraints in access to finance by reducing competition, producing more selectivity in the banks' decision to finance projects, and increasing financing cost.

RECOMMENDATIONS

Existing governmental initiatives already provide financial support to farmers; these include the Guarantee Credit for Agriculture Fund, the BL Plus Scheme, and the Green Funds Scheme. Nevertheless, the analysis conducted for this study suggests that there remains constraints on access to finance might justify further policy intervention. Any new policy actions should operate in synergy with existing instruments and avoid duplication.

Areas that may warrant review or where there may be possibilities to develop new financial instruments (including under the EAFRD) are:

- Insufficient equity and collateral of young farmers and new entrants. The newly established VVK guarantee fund is expected to provide an important contribution to addressing problems for these groups. The adequacy of this fund, in terms of its approach and budget, should be monitored and properly assessed in due course, when it has been in operation for a sufficient period of time.
- Investment in innovative business ideas. There is a need to support innovative and untested business ideas that can contribute to achieving the Dutch Government's sustainable policy objectives. As there seems to have been almost no uptake of the BL plus guarantee instrument, an assessment of its functioning and conditions might be conducted to identify possible improvements.
- Lack of equity for innovative ideas. Young farmers and new entrants, as well as established farmers, with innovative ideas but lacking sufficient equity, might benefit from a pilot equity or quasi-equity instrument. Such an instrument could help in situations where current guarantee and risk-sharing solutions are not sufficient to overcome banks' reluctance to lend to these innovative segments.

3 See Annex A.2. for details on the stakeholders.
4 Information from interviews.

Financing gap for the agri-food sector in The Netherlands

Gross investment in the Dutch agri-food sector exhibited an overall positive trend between 2014 and 2017. In 2017, gross investment amounted to about EUR 4.4 billion and increased by 23% compared to 2014.

The main drivers for the demand for finance are investments in innovations and capacity expansion, as well as investments aimed at ensuring compliance with regulatory and policy changes addressing climate change.

According to the Agri-food survey, **almost half of the Dutch agri-food companies applied for finance in 2018. Medium to long-term loans were the most requested financing products.** The most common reason for agri-food companies to apply for a loan was to invest in capacity expansion. The most frequent reason for companies not to apply for credit was the availability of sufficient own resources.

The financing gap for the Dutch agri-food sector is estimated to be EUR 251 million. The financing gap mainly concerns small-sized firms. The type of loans for which the gap is the largest are long-term loans. The main reasons for this gap include:

- **The rejections faced by start-ups** (with a lack of credit history) with innovative ideas. In the Agri-food survey, the respondents indicated that the most frequent reason for banks to reject the loan applications is the fact that applicants are start-ups.
- **The rejections of long-term loans by banks**. As suggested in the analysis of the supply of finance, banks show restraint in providing long-term loans due to a preference for shorter return on investment horizons.
- **Reduced appetite from banks to invest in innovation and technology** investments needed to comply with policy and regulatory changes, including climate adaptation and mitigation measures.
- **Market concentration on the supply side** might increase selectivity in project assessment by banks and increase financing costs. This is confirmed by a higher level of interest rates in The Netherlands in comparison to the Eurozone average.
- **Some more general constraints, such as asymmetrical information and banks' preference for more profitable investment (e.g. mortgage loans),** which affect general lending to SMEs in The Netherlands and might be assumed to play a role also in the financing to agri-food enterprises.

There are many types of financial providers that supply credit to the agri-food sector. While some sub-sectors in agri-food mainly rely on banks, others could access credit from other sources, such as private equity, public capital markets and institutional investors.

A number of already available governmental initiatives that provide support for agri-food firms include Borgstelling MKB-kredieten (BMKB) or SME loan guarantee, Garantie Ondernemingsfinanciering (GO) or Corporate Finance Guarantee, Seed Capital and SDE+[5]. Regional development offices also manage provincial funds and provide financial and advisory support programmes available for agri-food entrepreneurs at every stage of their development with grants, loans, and equity participations.

Nevertheless**, based on the analysis conducted for this study, some constraints in accessing finance still exist in the agri-food sector, which might justify further policy initiatives**. Any new policy actions should in any case operate in synergy with the existing instruments, in order to avoid duplications.

RECOMMENDATIONS

Areas that may warrant review or where there may be possibilities to develop new financial instruments (including under the EAFRD) are:

- A review of currently available financial instruments to assess their suitability to support access to credit for start-ups and innovative projects, for which banks seem to adopt a conservative approach and display a reluctance to provide finance.

5 In Dutch: Stimulering Duurzame Energieproductie.

- An assessment of the availability of loans with sufficiently long maturity to support innovative projects that aim to meet new environmental and climate standards, for which banks do not currently seem willing or able to provide finance.

1. INTRODUCTION

Objective

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

Approach

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

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

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

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

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

The analysis draws on the results from two comprehensive and representative, at EU 24 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 24 agri-food processing enterprises, where the latter survey was undertaken as part of the work of this study. The analysis of supply and demand for finance is further elaborated by desk research and enriched with secondary data obtained from EU and national data sources.

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

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

Report structure

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

2. PART I: AGRICULTURE SECTOR

2.1. Market analysis

This section analyses the farm structure, including sub-sector activities, physical and economic size of agriculture holdings, age structure, and the economic aspects such as output, incomes and prices.

Key elements on the Dutch agriculture sector

- In 2018, agriculture, forestry and fishing sector contributed 1.9% of the overall Gross Value Added (GVA) in The Netherlands, with an agricultural output of EUR 27.9 billion (6.8% of the EU 28).
- Out of 55 680 farms, 48.5% are managed as medium-sized family-owned farms (from 20-100 ha)[6].
- The share of young farmers under the age of 40 was 8.7% in 2016, which is much lower than the EU average[7].
- In 2017, nearly half of the agricultural enterprises specialised in grazing livestock (cattle and dairy), followed by 19.5% growing arable crops, 10.7% managing horticulture, and 10.7% intensive livestock (pigs and poultry).
- Farms generally do not process their own products, but in many cases, farmers indirectly benefit from processing via their membership in cooperatives.

Agriculture production is vital to the Dutch economy. In 2018, agriculture, forestry and fishing sector contributed 1.9% of the overall Gross Value Added (GVA) in The Netherlands[8], with an agricultural output of EUR 27.9 billion (6.8% of the EU 28). This output is produced by 55 680 farms, which are mainly medium and large-sized holdings[9]. From the total agricultural output, 54.3% is attributable to crop production and 45.7% to animal production[10]. Although the Dutch population is predominantly urban, agricultural land represents 54% of the total land surface of the country[11]. Most of this agricultural land is used as grassland (53%), while arable land covers about 29% of the total agricultural area. The majority of the farms are livestock farms, representing 66% of the total number of agricultural enterprises in The Netherlands. In terms of both production and export value, horticulture is the most important sub-sector in Dutch agriculture. Vegetables and horticultural products generated 38.2% of total output created by the agriculture sector in 2018.

The ageing structure of the Dutch agriculture sector brings challenges. Nearly two-thirds of farms are managed by natural person aged over 51 years. Of these, around 61% of farms have no family successor. In the next fifteen years, over 20 000[12] farms face the risk of the lack of intergenerational transfer. However, evidence shows that the succession rate increases with the size of a farm; for example, large-sized farms generally have a higher chance of succession. On the downside, the share of young farmers (below 40 years old) was 8.7% in 2016,[13] indicating that young farmers are a minority.

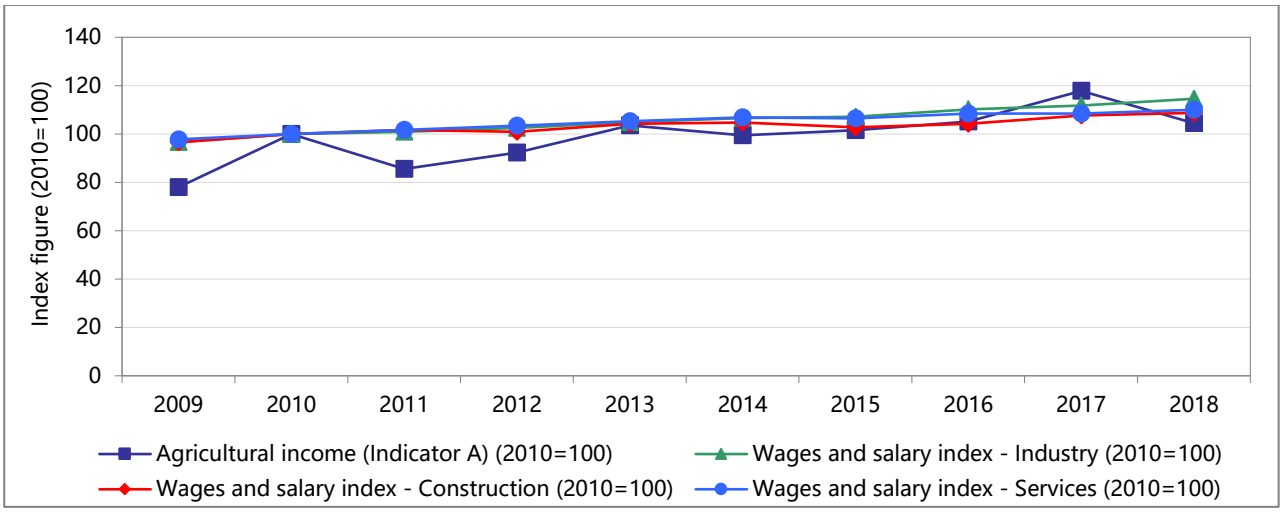
6 European Commission, DG AGRI, June 2019, EU Statistical Factsheet for The Netherlands.
7 Eurostat, 2018, Agricultural, forestry and fishery statistics.
8 EU Statistical Factsheet Netherlands, 2019, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agri-statistical-factsheet-nl_en.pdf.
9 FADN, https://ec.europa.eu/agriculture/rica/.
10 European Commission, DG AGRI, June 2019, EU Statistical Factsheet for The Netherlands.
11 Centraal Bureau voor de Statistiek (CBS). Data from 2015.
12 https://www.rijksoverheid.nl/actueel/nieuws/2019/01/09/garantieregeling-vermogensversterkende-kredieten-geeft-toekomst-aan-jonge-boeren. In 2016, 51 600 farms had the legal form of a natural person.
13 Eurostat, 2018, Agricultural, forestry and fishery statistics.

In 2016[14], 194 agri-cooperatives were active in the Netherlands[15]. Economies of scale are the main rationale for the existence of cooperatives. Furthermore, the Dutch law facilitates a reduction of taxable profits earned as a result of economic transactions between natural persons/members and the cooperative.

The agriculture sector is significantly integrated with export markets. In 2019 the value of agricultural exports amounted to EUR 94.5 billion (+4.6% increase compared to 2018)[16]. Of this amount, EUR 68.5 billion is attributable to Dutch manufactured products and EUR 26 billion to re-exports of previously imported foreign goods. Exports of domestically manufactured goods contributed more significantly to the Dutch economy (EUR 38.5 billion) than re-exports of goods that were first imported before undergoing limited processing (EUR 3.4 billion)[17]. Most Dutch exports of processed and unprocessed agricultural goods (78%) go to other EU member states[18]. The major importers of Dutch agricultural products are Germany, Belgium, the United Kingdom and France. In 2019, ornamental plants and flowers were the most profitable export sectors with EUR 5.8 billion, followed by dairy products and eggs (EUR 4.3 billion), meat (EUR 4 billion) and vegetables (EUR 3.5 billion).[19]

Agricultural incomes moving at the same pace as in other sectors of the economy. With smaller deviations, agriculture incomes evolved in comparable manner compared to wages and salaries in other sectors of the economy. 2017 marked a peak year for agricultural incomes based on revenues obtained in the animal production. However, in 2018, the incomes decreased by 11.3% based on a sharp increase in energy prices by 16.3% (Figure 1).

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

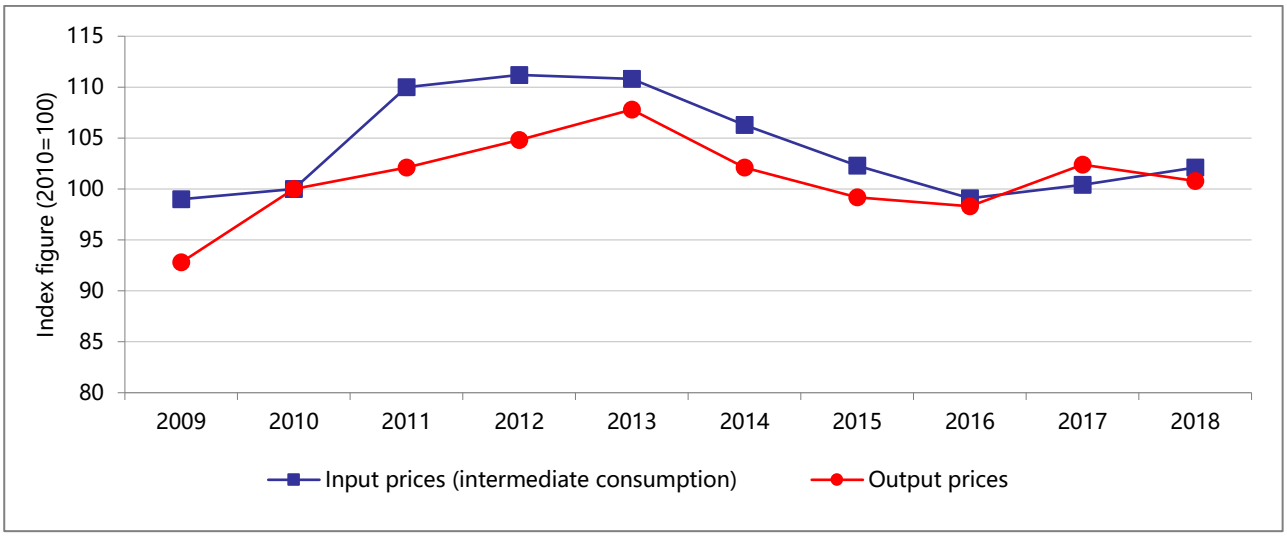


Source: European Commission, DG AGRI, Statistical Factsheet for The Netherlands, June 2019.

Profit margins in the agriculture sector show a contraction, as input prices rise faster than output prices. Input and output prices were relatively high in the years following the 2007-2008 economic crisis. Input prices increased by around 10% between 2010 and 2013, while output prices were only 5% above the 2010 levels over the same period (Figure 2). Since 2014, both prices started to decline and dropped down to the 2010 level in 2016 and 2017, before slightly increasing again in 2018. However, as shown in Figure 3, consumers' prices for food increased slightly more than the overall consumers' prices index starting from 2015.

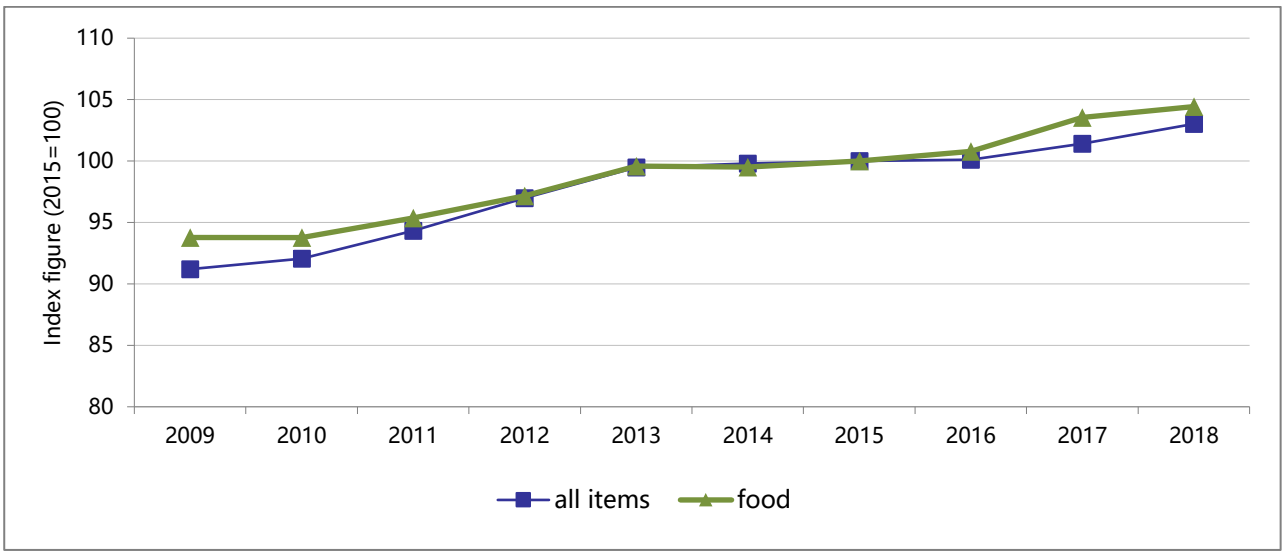
14 2016 data is the latest data available at the time of the preparation of this report.
15 NCR, House of cooperatives, https://www.cooperatie.nl/huis-van-de-cooperatie/.
16 https://www.cbs.nl/en-gb/news/2020/03/agricultural-exports-hit-record-level.
17 https://www.cbs.nl/en-gb/news/2020/03/agricultural-exports-hit-record-level.
18 European Commission, June 2019, DG AGRI, Statistical Factsheet for The Netherlands.
19 https://www.government.nl/ministries/ministry-of-agriculture-nature-and-food-quality/news/2020/01/17/dutch-agricultural-exports-worth-%E2%82%AC94.5-billion-in-2019.

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



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

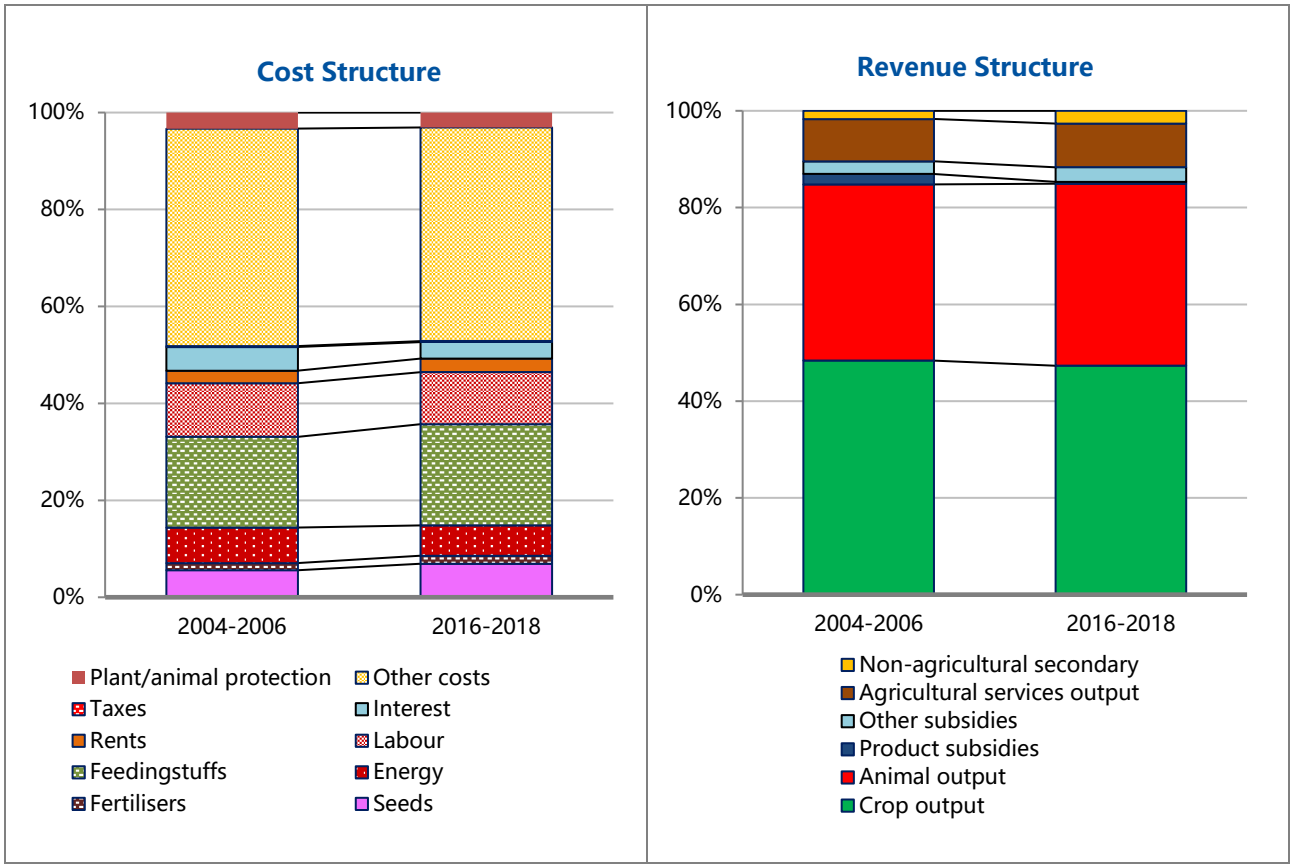
Figure 3: Evolution of harmonised index of consumer prices, 2009-2018



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

As for the cost and revenue structure for the agriculture sector (Figure 4), comparing the years 2004-2006 with 2016-2018, costs for taxes, interest and labour 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 output has increased.

Figure 4: Agricultural income – only cost and revenue structure in The Netherlands, 2004-2018



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

Statistical factsheet The Netherlands, 2019

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

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

This section describes the drivers of demand for finance in the agriculture sector and analyses the met and unmet demand. It seeks to elaborate the main reasons for farm enterprises to request financing and identify the agriculture sub-sectors displaying the largest need for finance. The section also provides an analysis of the type of producers that face the greatest constraints to accessing credit. The analysis of the demand for agriculture finance is based on the findings from the *fi-compass* survey of 301 Dutch 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 Dutch agriculture sector

- The demand for finance is driven by (i) the farm consolidation process, (ii) infrastructure investments in horticulture sub-sector, and (iii) regulatory changes pertaining to stringent standards.
- 34.1% of Dutch farmers applied for finance in 2017, which is higher than the EU 24 average of 29.1%.
- Farmers particularly rely on bank loans to meet their need for finance to support investments.
- Most farmers (47%) used bank loans to finance investments in new machinery, equipment or facilities.
- Medium to long-term loans are the most popular financing products for farmers.
- For almost one third of the respondents who applied for a loan, the banks asked for a guarantee (compared to 42.8% at EU 24 average). The median value of the collateral as a percentage of the loan amount was 51% to 75% according to survey results.
- 98%[20] of Dutch farmers are using their own personal assets as collateral.
- 15% of the loan applications were rejected by banks.
- Results from the *fi-compass* survey shows that only a small percentage (less than 3.1%) of Dutch farmers did not apply for a loan due to the fear of being rejected.
- The main constraints to access bank finance for farmers relate to: (i) lack of equity and collateral for young farmers, (ii) lack of credit history and sound business plans for farmers applying for finance, (iii) banks' risk aversion for innovative projects.
- The cost of production and access to land are the key concerns for Dutch farmers. Considering the high price of land, it is particularly difficult for new entrants to join the sector.

2.2.1. Drivers of total demand for finance

The Gross Fixed Capital Formation[21] (GFCF)[22] dynamic in the Dutch agriculture remained stable since 2010. GFCF reached a total value of EUR 4.5 billion in 2017. Investments were made mainly in machines and other technical equipment (EUR 2.1 billion in 2017), followed by buildings (EUR 1.7 billion). Comparing GFCF with the GVA of the agriculture sector, there is a downward trend since 2011[23], pointing to a decline in capital formation. However, investments as a percentage of GVA still averaged around 42% for the period between 2010 and 2017, which is higher than the 30.7% share in EU 28[24].

20 *fi-compass* survey.

21 GFCF does not include investment in land purchase.

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

23 Eurostat, 2019 - Economic Accounts for Agriculture.

24 Eurostat, 2019 - Economic Accounts for Agriculture.

Table 1: Gross Fixed Capital Formation in agriculture sector, 2010-2018, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Agricultural Products	259	200	251	316	333	356	341	89	52
Animals	168	129	179	238	221	254	220	-11	-48
Plantations	91	71	72	78	112	102	121	100	100
Non-Agricultural Products	3 911	5 190	4 736	4 238	4 537	4 102	3 746	4 144	4 690
Materials	1 660	2 225	1 913	2 005	2 087	2 153	1 950	2 370	2 683
Buildings	1 953	2 640	2 456	1 903	2 077	1 646	1 423	1 414	1 627
Other	298	324	368	330	372	303	374	360	380
Total GFCF	4 169	5 389	4 987	4 554	4 870	4 458	4 088	4 233	4 741

Source: Eurostat - Economic Accounts for Agriculture, 2019.

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

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

(ii) investing in infrastructure in the horticulture sub-sector; and

(iii) improving production standards in response to regulatory requirements.

Structural changes to achieve economies of scale is a driver for demand of finance. Due to low profit margins, farmers aim at achieving higher efficiencies. Since 2000, the number of farms in The Netherlands has fallen by some 43%, representing an annual decrease of 2-3%[25]. Whilst the area of agricultural land decreased by 9% during the same period, the decline can be attributed to the concentration of farms into bigger holdings. In 2000, only 9% of farms were larger than 50 hectares, whilst in 2016, almost 22% of farms had more than 50 hectares[26]. This growth was largely financed by credit, and the amount of outstanding debt per farm more than doubled compared to 2001[27].

However, 26% of Dutch farmers expressed in the *fi-compass* survey that access to land is a significant challenge, which is more than twice as high compared to the EU 24 average of 11% (Figure 5). It is important to note that due to this demand, land prices have been on the rise, making the purchase of new land riskier and securing finance for it more difficult. Therefore, access to land is challenging for farmers due to high land prices and limited availability of agricultural land. The average price of agricultural land in The Netherlands was EUR 60 900 per hectare in 2018[28].

Structural change in Dutch farms aimed to achieve higher efficiency is also a strategy to face increasing production costs. Stakeholder interviews have pointed out that, due to diminishing profit margins, many farmers are forced to invest in order to achieve cost savings or to focus on alternative ways of farming, i.e. targeting a niche market or focusing on alternative income streams. However, relevant stakeholders in the agriculture sector agreed with the results from the *fi-compass* survey that the production cost is less of a concern for the Dutch farmers if compared to the EU 24 (Figure 5) because Dutch farmers are generally efficient in their production processes. Cost price is less often perceived as an issue by farmers in The Netherlands than by EU 24 farmers because they are producing mainly for export[29]. In particular, according to the *fi-compass* survey, 10% of Dutch farmers compared to 38% of farmers in the EU 24 average noted purchase prices to be a difficulty they faced in 2017. Similarly, costs of production are considered a constraint for 35% of Dutch farmers compared to 47% for farmers in the EU 24 average.

25 Wageningen Economic Research 2018, Agrimatie. https://www.agrimatie.nl/PublicatiePage.aspx?subpubID=2525&sectorID=3534&themaID=2265&indicatorID%20=%203517.

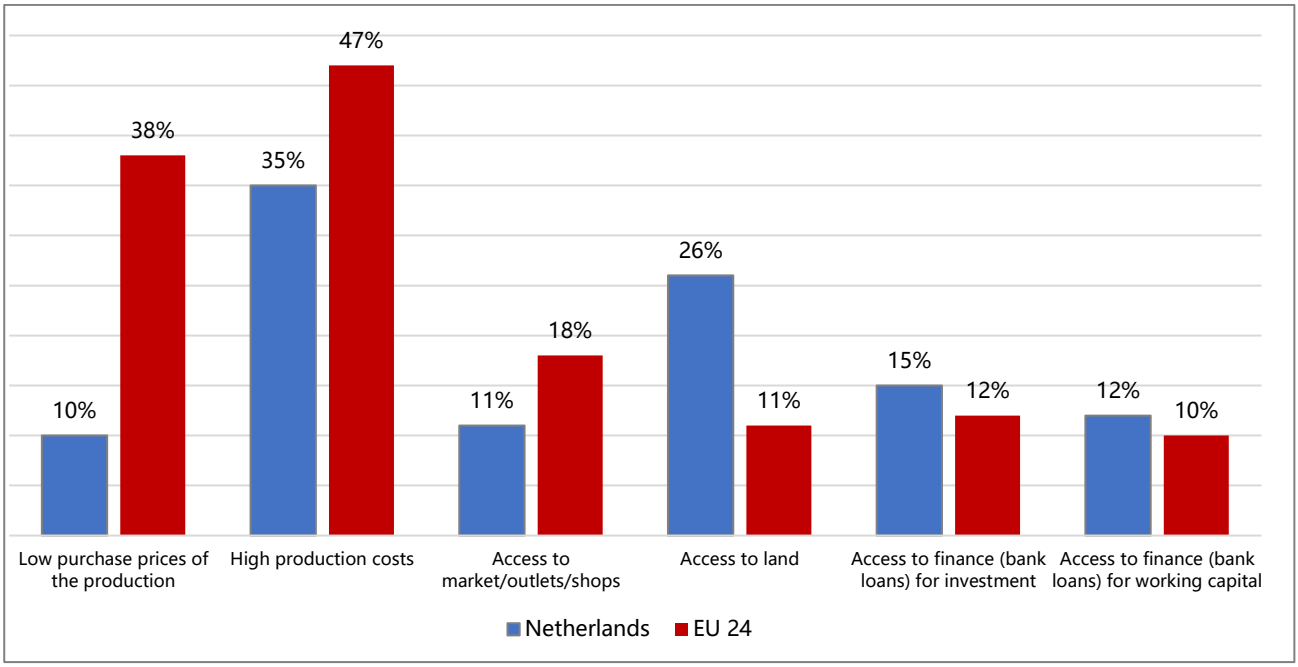
26 FADN data.

27 Data from Planbureau voor de Leefomgeving (2000-2016).

28 Wageningen Economic Research 2018, Agrimatie. https://www.agrimatie.nl/PublicatiePage.aspx?subpubID=2525&sectorID=3534&themaID=2265&indicatorID%20=%203517.

29 Information from interviews.

Figure 5: Difficulties experienced by farmers in 2017



Source: fi-compass survey.

Intensive infrastructure requirements in the horticultural sub-sector also drive demand for finance. Demand for finance and average liability levels are highest in the horticultural sub-sector where intensive infrastructure investments are frequently undertaken to increase scales[30]. The increase in scale is being driven by various market developments such as market growth, year-round supply, the shortening of the supply chain and access to retail markets as well as investments in Research and Development. In recent years, investment companies have also shown an increased interest for horticultural enterprises. The average loan size in the horticulture sector is around EUR 5 million, which is much higher than that in other sub-sectors where average loan sizes are between EUR 600 000 and EUR 700 000[31].

Regulatory and policy changes are another driver for the demand of finance. For example, an increase in financing demand for the laying hens' sub-sector can be linked to the EU ban on the use of traditional cage systems that entered into force as of January 2012. Recent policy changes that are likely to have an additional impact was the circular agricultural strategy launched in 2018 by the Dutch Ministry of Agriculture, Nature and Food Quality. This national strategy is likely to push the demand for finance in the agriculture sector as additional investments are needed, with new ways of farming, increased standards or promoting sustainable agriculture practices (i.e. to reduce greenhouse gas emissions) will be required to comply with the policy. Another example is the regulations on the nitrogen cap applied to pig farmers concentrated in the South and the East of The Netherlands. To comply with the standards, pig farmers need to invest in measures that contribute to the reduction of nitrogen emissions[32].

Farm succession will be an important driver of demand for finance in the next fifteen years. As previously mentioned, in the next fifteen years, over 20 000 farms may be subject to intergenerational transfer. To enable a smooth transition, a large amount of finance will be needed to buy out the assets of the retiring generation. Larger holdings might also need financing to achieve greater efficiency and higher profit margins and for reorienting the farm business in more prosperous market opportunities.

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

30 Data from Planbureau voor de Leefomgeving (2000-2016).
31 Information from interviews.
32 Information from interviews.

finance. Besides contributing to the beneficiaries' income, they also help in guaranteeing the repayment capacity of farmers. The 2014-2020 RDP received EUR 1.7 billion of public funding available for a seven-year period (EUR 825 million from the European Agriculture Fund for Rural Development (EAFRD), EUR 446 million of national co-funding, and EUR 413 million of additional national funding top-ups).

The RDP focuses on two major agricultural issues: stimulating innovative investments and cooperation and improving environmental sustainability. The Netherlands has opted for efficiency and simplicity by programming a relatively small number of measures, including direct payments, market measures and rural development[33]. Financial instruments supported by the EAFRD could not be established despite the country being one of the firsts to programme it and to complete its ex-ante assessment. Later on, it was re-programmed. The distribution of expenditure among these three measures are presented in (Figure 6). Direct payments constituted the highest share of CAP expenditure in 2017 (81%), followed by rural development measures at 13%. The share of direct payments in The Netherlands is higher than that in the EU 28 (70.9%)[34]. The RDP budget allocated to sub-measure 4.1 Investments in farm modernisation accounts to EUR 361 million. By end April 2020, 19.1% of that budget was executed.

In the Dutch program for rural development there are two types of investment under sub-measure 4.1:

1) The first type is M4.1.1 focusing in particular on strengthening economically viable business operations and strengthening sustainability. Some project calls under this sub-measure are specifically aimed at improving the water quality and water management system. The sub-measure is successful as with the many applicants the total amount applied for often exceeds the available subsidy ceiling. Provinces take measures to find solutions within budgetary options. However, the number of applications that cannot be satisfied financially due to exceeding of the available budget remains high.
2) The second type is M4.1.2, also called the Young Farmers scheme under the Investment measure, focusing on (innovative) investments that contribute to themes within the program and that have a beyond-legal provisions character (including climate, sustainability and animal welfare). The subsidy scheme is based on previously described investment categories from which young farmers can choose. At the first call for projects, there were 14 investment categories, which doubled to 28 by the end of 2018, as demand was high. Based on annual implementation data, the top three categories of investments are solar panels, precision farming techniques and low-emission floors. The latest call for projects has been very successful, which resulted in an exceeding of the budget-ceiling in most provinces. As in previous years, most provinces will decide to make additional resources available in near future. The sub-measure replaces to great extent the support under sub-measure 6.1, which is not programmed in the Dutch RDP.

The expectations of the Dutch EAFRD managing authority is to support 3 500 companies with the implementation of the above two sub-measures by 2023. At the end of 2018, 1 639 companies received a subsidy grant, of which 469 companies made an investment and also received a subsidy. With the pace and demand for financing registered in 2018 and 2019, the target is achievable. Moreover, it is clear that the available financing is about twice lower than the real demand as about 3 113 applications amounting to EUR 133.2 million have not been supported by the RDP through the first 124 calls by the end of 2019.

33 https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/key_policies/documents/rdp-factsheet-netherlands_en.pdf.

34 European Commission, June 2019, DG AGRI, EU Statistical Factsheet for The Netherlands.

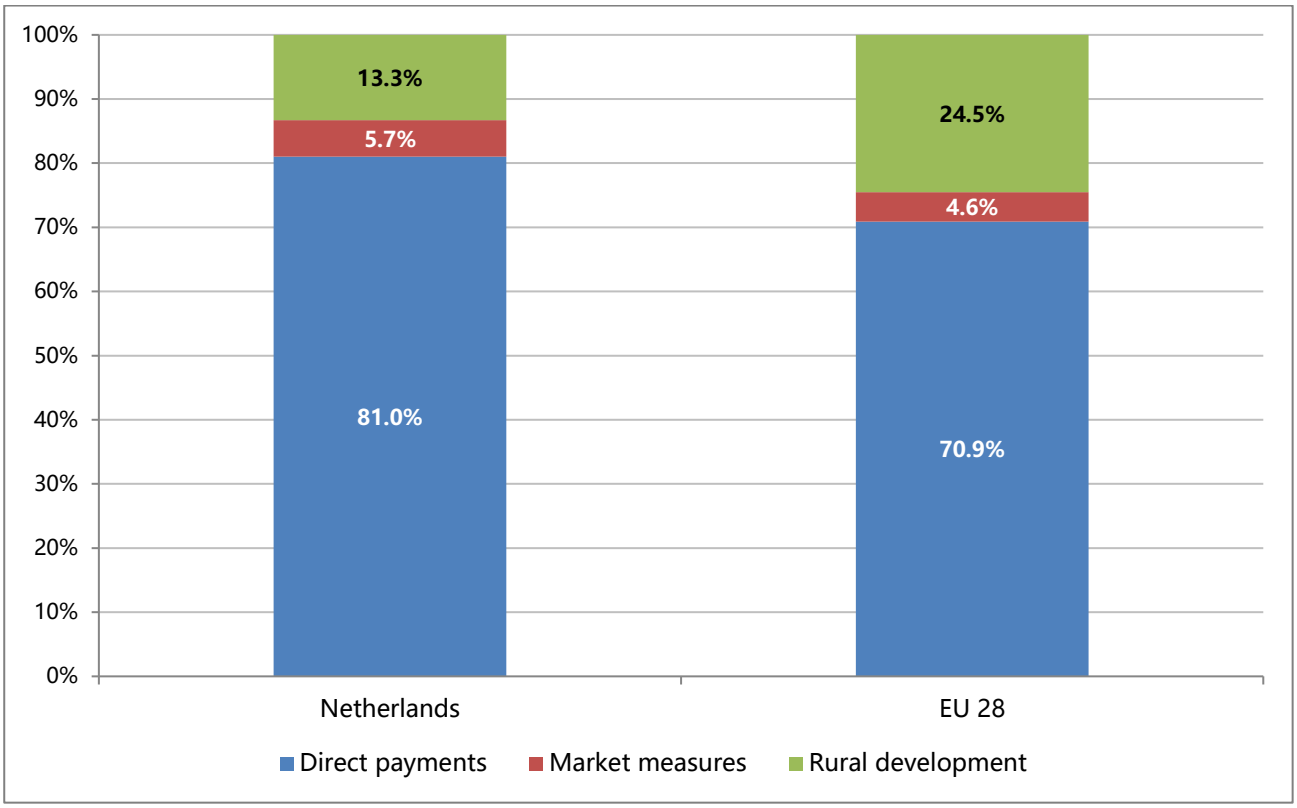
Table 2: Implementation of the Dutch RDP sub-measure 4.1, total public financing, 2014-2020

Sub-measures	Amount under the RDP calls (EUR million)	Amount requested by all submitted applications (EUR million)	Amount that could not be supported (EUR million)	Number of Applications received	Number of applications approved for support	Number of applications not approved for support
4.1 Support for investments in agricultural holdings	152.5	285.3	133.2	6 043	2 930	3 113

Source: Ministry of Agriculture, 2020. Preliminary data.

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

Figure 6: The Netherlands: Distribution of CAP expenditure in 2017

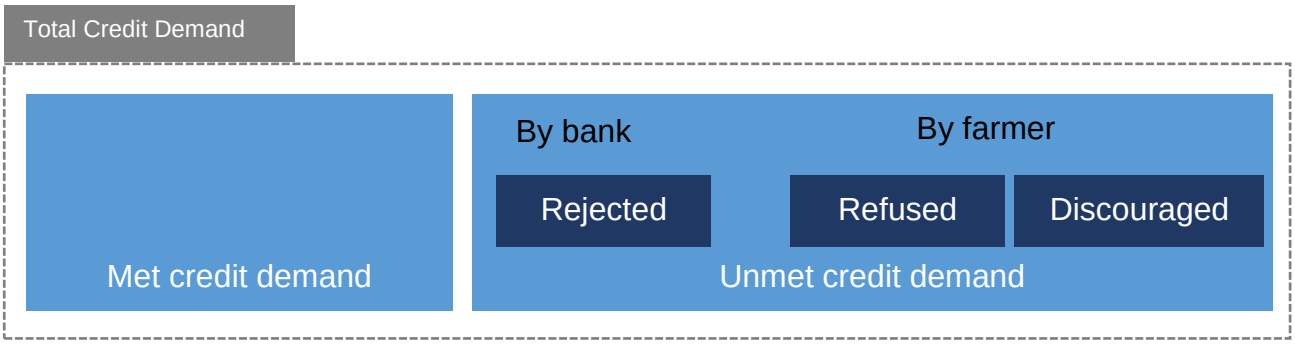


Source: European Commission, DG AGRI, EU Statistical Factsheet for The Netherlands, June 2019.

2.2.2. Analysis of the demand for finance

The potential total demand for finance combines both met and unmet demand. The met demand consists of the value of all applications for finance which were accepted by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial institution, offers of credit refused by farmers, alongside cases where farmers are discouraged from applying for credit due to an expectation of rejection or refusal (Figure 7).

Figure 7: 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 The Netherlands is estimated at EUR 573 million.

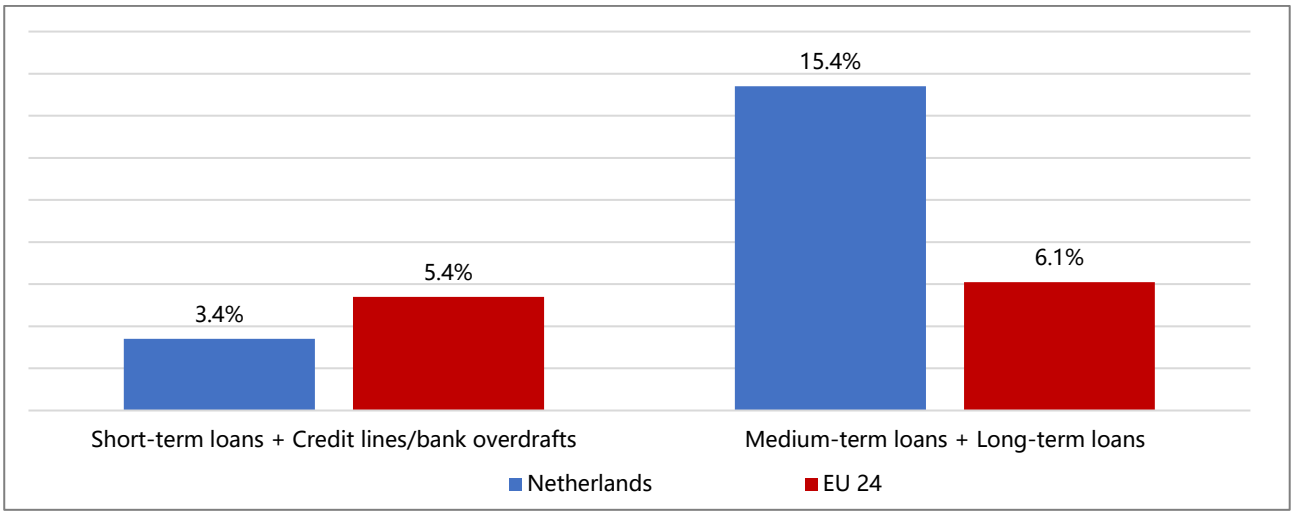
Although the total outstanding loan volume has slowly contracted since 2011[35]**, the agricultural financing market is expected to grow.** Considering the various drivers for the demand for finance, the majority of the stakeholders interviewed for this report believe that the demand for credit in the agriculture sector in The Netherlands will increase in the coming three years. In particular, drivers such as structural change towards economies of scale and policy interventions, such as those encouraging a more circular and sustainable agriculture, are likely to push for more investments. 37% of the Dutch respondents to the *fi-compass* survey confirmed that they expect the demand for finance to rise in the near future (compared to 27% at EU 24 level), and another 45% of the respondents to the *fi-compass* survey expect the demand for finance to remain unchanged.

In 2017, 28% of the Dutch farmers applied for bank finance[36]. Dutch farmers seek finance almost exclusively from banks. According to data from the *fi-compass* survey, this figure is higher than the EU 24 average of 13.2%. Dutch farmers are not relying on resources from private individuals (family and friends) (0.7%) compared to EU 24 average (11.4%).

Medium to long-term loans represent 90% of the outstanding loan volume in the sector[37]. Short-term loans account for 10% of the total outstanding loan volume by the agriculture sector. These shares have been rather stable over the past ten years. These statistics are also confirmed by the results from the *fi-compass* survey. In 2017, the most attractive maturities to Dutch farmers were those of medium to long-term loans**.** The results of the survey indicated that 15.4% of Dutch farmers applied for loans with a minimum duration of 18 months (compared to an average of 6.1% for the same duration at the EU 24 level); whereas 3.4% of respondents applied for short-term loans (up to 18 months) and credit lines, bank overdraft, which is slightly lower than the EU 24 average (Figure 8). Furthermore, Dutch farmers indicated that the main reason for not applying for a loan in 2017 was the sufficient level of internal and own funds (54.6%) or an earlier loan that already covered their needs (48.8%) (Figure 12).

35 See Section 2.3.2.
36 *fi-compass* survey.
37 FADN.

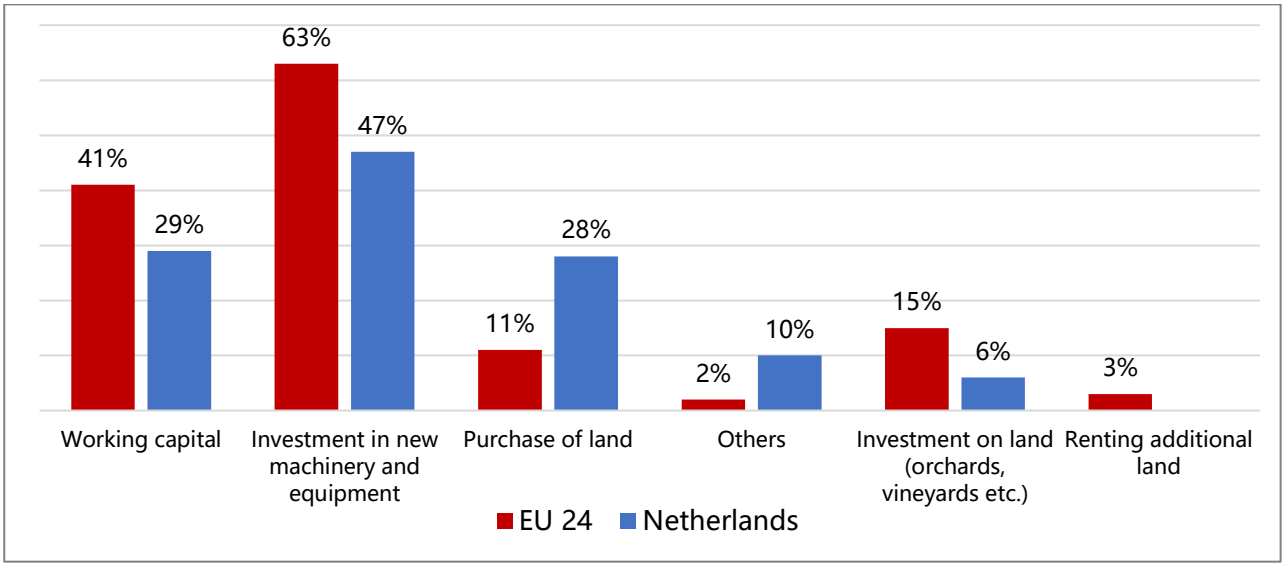
Figure 8: Farmers applying for finance in 2017, by financing product



Source: fi-compass survey.

Most farmers (47%) use bank loans to finance investments in new machinery, equipment or facilities (Figure 9). These investments are important to enable the expansion of production to achieve economies of scale. As discussed previously concerning the drivers of demand for finance, this is one of the ways farmers improve their profit margins as well as their negotiating power in the value chain.

Figure 9: Purpose of bank loans in the agriculture sector in 2017



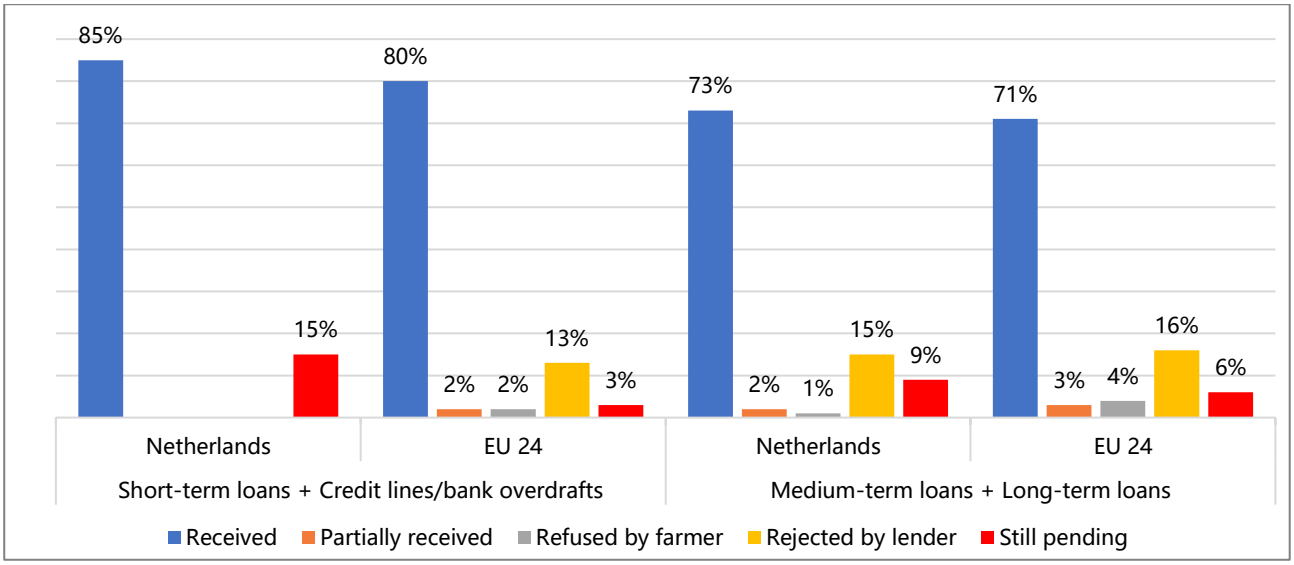
Source: fi-compass survey.

Working capital and the purchase of land were among the other common reasons for farmers to apply for finance (Figure 9). According to the *fi-compass* survey, 29% of respondents in the Dutch agriculture sector indicated that obtaining finance for working capital is one of the reasons for them to apply for a bank loan. This is confirmed during the stakeholders' interviews. For example, for crop based sub-sectors, short-term loans are usually needed to cover input costs such as seeds, fertilizers and other materials prior to sowing. Similarly, farmers might need to obtain seasonal working capital loans to cover a higher demand for labour to help with harvesting.

The *fi-compass* survey also indicated that the purchase of land is much more often a reason for farmers in The Netherlands to apply for a loan compared to farmers in the EU 24 (28% compared to 11% at EU 24 level). It may be that the high price of the agricultural land (see section 2.2.1) is driving this portion of the demand as own resources are simply not enough and therefore financing is needed. During interviews with stakeholders in the agriculture sectors, high land prices are often mentioned as one of the constraints for Dutch farmers and that the purchase of land can be seen as one of the drivers of the demand for finance. None of the Dutch farmers expressed a need for finance to cover rent for additional land as this demand is usually covered by working capital.

High rejection rate applied by banks for medium and long-term loans. In The Netherlands, while no short-term loan applications were rejected at the time of the survey, 15% of medium and long-term loan applications were rejected by the lender (Figure 10). However, banks mentioned that their rejection rates of loan applications for farmers are low and in the range of 1-2%[38]. While this is not an officially derived figure and could be also underestimated, it is also true that banks do not keep a database of all pre-submission application dialogues where farmers could also be discouraged by the bank's officer. In The Netherlands, most farmers would seek advice from an accountant, a financial or trusted advisor before making a loan application. Usually, if an application is not viable, the farmer would be advised not to submit an application to the bank. To the farmer, this could be considered as a rejection. However, this is not officially recorded as a rejection by the bank. This assumption seems also to be supported by the low rate of discouraged enterprises (see below), since discouraged applicants might be included in the rejection rate.

Figure 10: Results from applications for finance in the agriculture sector in 2017



Source: fi-compass survey.

High risk perception for innovative projects might be a significant driver for rejected applications. According to results from the *fi-compass* survey (Figure 11), 51% of the respondents with rejected applications indicated that to the reason was the fact that the investment risk was too high. This reason was also identified by stakeholders in the agriculture sector particularly when discussing investments needed for innovations in agriculture. Faced with regulatory and policy changes, farmers are searching for new and more sustainable ways of farming. These include ways to produce organic agricultural products, healthier food or innovation in technologies to reduce nitrogen emission in livestock production or greenhouse gas emissions in glasshouse horticultural production. Additional investments are, therefore, needed. However, it is uncertain whether the cash flows and returns from investment in these untested ideas are sufficient to make these investments commercially viable as consumers might not be willing to pay the price premiums required to cover the

38 Interviews with the banks.

investment costs. As a result, banks are more hesitant to provide loans for innovative projects. Constraints to access finance for innovative projects, have also been highlighted by the ex-ante assessment for an EAFRD-financed financial instrument (see the box at the end of the section).

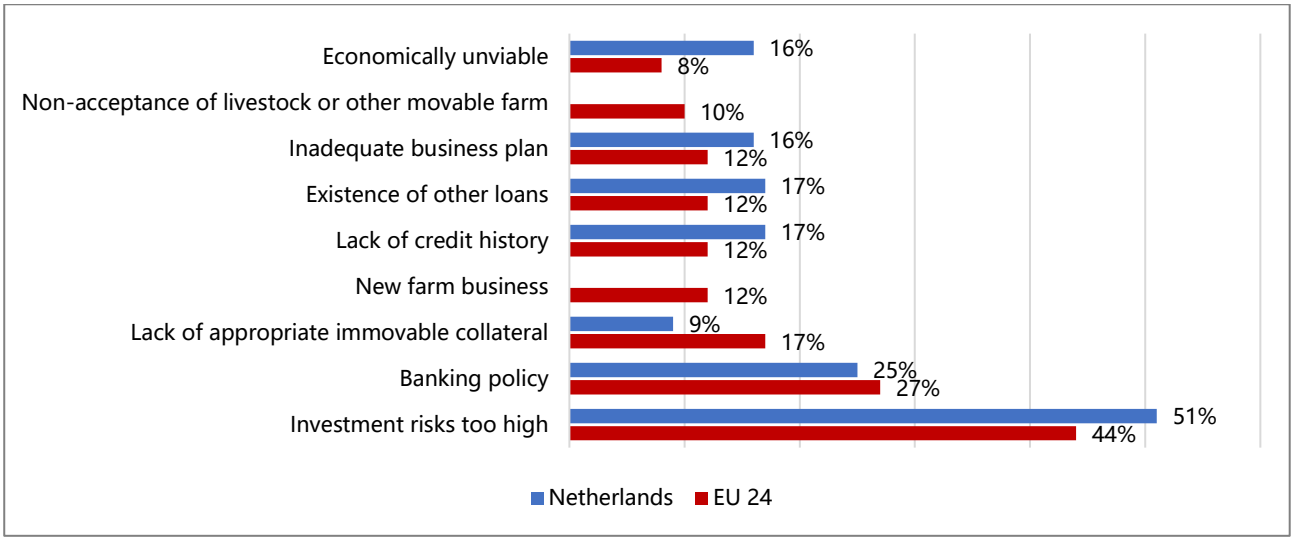
Young farmers and new entrants face difficulties in accessing finance due to insufficient own resources and collateral. Almost all Dutch farmers (98%) indicated that their own personal assets were used as collateral, while the remaining 2% used exclusively private guarantee providers. This is a strong difference to the rest of the EU, where on average 11% of the farmers used private guarantee providers and 4% a European/International guarantee association. Although the role of guarantee providers in The Netherlands is limited, stakeholders expressed that entering the farming business as a new producer is nearly impossible due to the large initial investments required to acquire high priced land, costly machinery and also due to the volatile seasonal nature of the farming business model. The stakeholders mentioned that efforts to acquire such loans by new entrants have largely been unsuccessful due to the need for significant personal collateral. To address this particular challenge, the Ministry of Agriculture, Nature and Fisheries announced in January 2019 a guarantee scheme, Garantieregeling Vermogensversterkende Kredieten (VVK), specifically targeting young farmers. From 1 January 2020, the scheme entered into force (more details are provided in section 2.3.1.2).

Stakeholders also suggested that banks would be hesitant to provide finances for further investments in farms that have recently gone through a succession process due to low solvency rate. In particular, following the farm takeover, young farmers tend to have high debts and low equity, hence low solvency. If these farmers need additional finances to invest in innovative business ideas, it is difficult for them to prove solvency to get their loan applications approved.

Lack of credit history and sound business planning represents also a constraint, particularly for new entrants. In addition, according to the *fi-compass* survey results, around the same percentage of respondents (16-17%) indicated that the lack of credit history, the existence of other loans, inadequate business plan and economically unviable businesses were among the main reasons for the banks to refuse applications from Dutch farmers. Stakeholders during interviews confirmed these results and emphasised that the lack of a sound business plan and credit history are the most common reasons for banks to reject loan applications from new entrepreneurs who would like to start a farming business.

Another common reason for banks to reject a loan application is linked to their internal credit policy (e.g. limits on lending to farmers). According to the *fi-compass* survey, 25% of farmers indicated that this is one of the reasons why banks have rejected their loan applications.

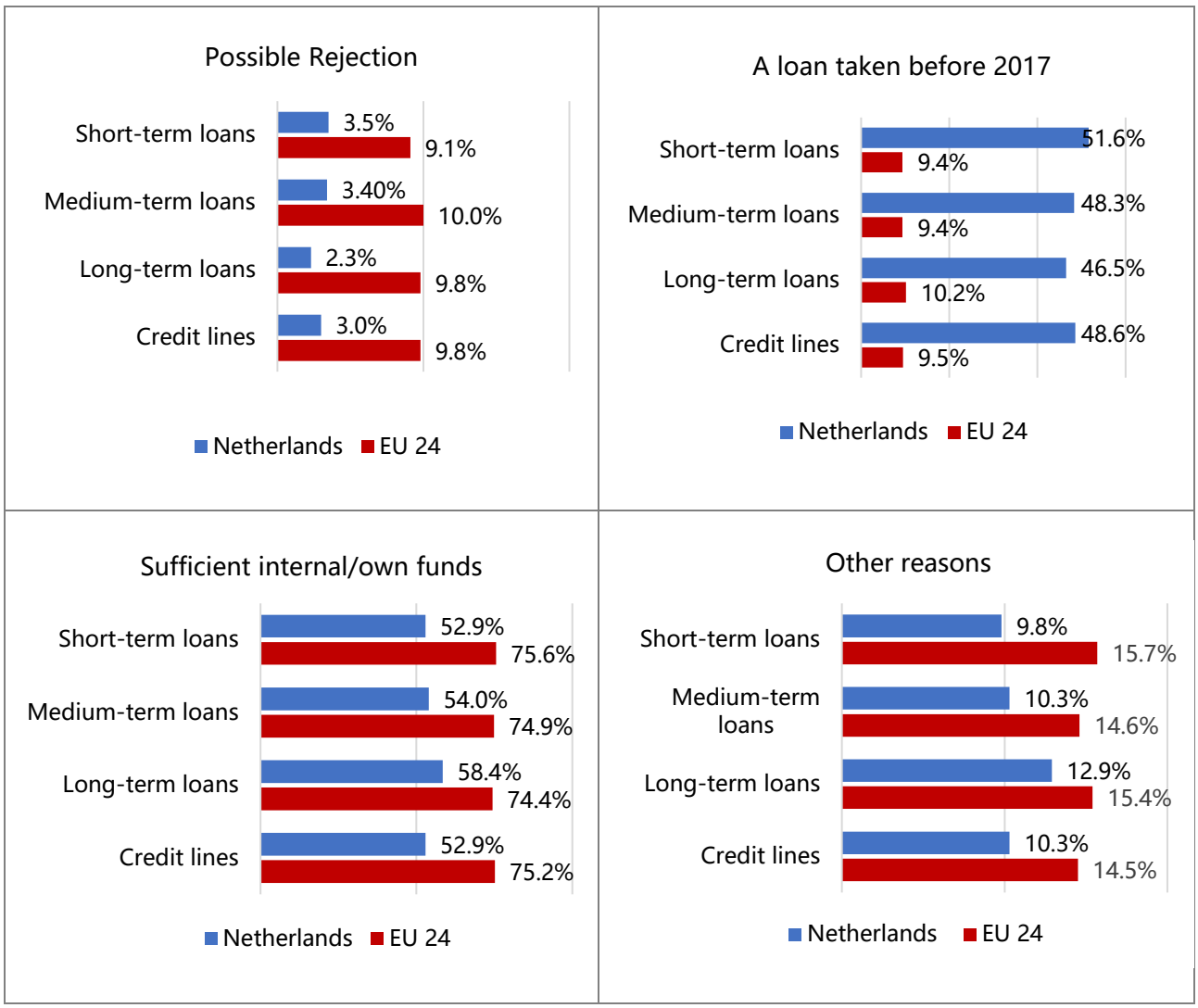
Figure 11: Reasons for applications' rejection in the agriculture sector in 2017



Source: fi-compass survey.

On average, only 3.1% of Dutch farmers did not apply for finance due to fear of being rejected, while responses vary slightly depending on the maturity of the financial products (Figure 12). According the results from the *fi-compass* survey, the main reasons why farmers did not apply for a loan in The Netherlands in 2017 were because of the existence of a loan taken before 2017, which was regarded as sufficient and the relatively sufficient level of internal/own funds. However, through interviews, it turned out that the conditions and tradition with regards to collateral discourage young farmers and new entrants in particular from applying for loans[39]. In general, Dutch banks require a solvency ratio of 30%, debt service coverage ratio of 1.3, and good quality collateral. In land-based industries, the land owned by farmers is considered as a good collateral for loans. However, in industries that do not operate on a large area of land, it is more difficult to find a good collateral. Overall, it is difficult to obtain the estimate of the share of discouraged applicants, which might be higher than recorded by the *fi-compass* survey. Stakeholders stated that many of the pre-application discussions have already helped farmers to decide whether they would submit an official loan application.

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



Source: fi-compass survey.

39 Information from interviews.

Main findings of the ex-ante assessment[40] for use of financial instruments in the Dutch agriculture sector

- The ex-ante assessment was conducted to evaluate the potential of a guarantee instrument dedicated to innovative investments in the agriculture sector.
- The Dutch agriculture sector has a strong innovative potential, especially in terms of sustainability, animal welfare, energy reduction, social perception.
- Despite the high potential, only 2% of farms were characterised as innovative in 2012.
- In the agriculture sector, the number of innovative credit applications is consistently lower than regular credit applications. This is mainly due to the difficulties faced by companies, especially start-ups and micro and small-sized companies, in accessing credit.
- Main difficulties identified by the ex-ante are:
  - Despite banks have sufficient liquidity, they are reluctant to provide credits to innovative farms.
  - Innovative projects are in general considered highly risky by banks and this is even worse for the agriculture sector as it is a cost and demand driven sector with low margins.
  - Banks apply stricter requirements to innovative farms: the solvency requirements are set at 30% of credit volume (25% for standard credits) and additional special requirements are set for credit history.
  - Start-ups, micro and small-sized farm businesses are the most damaged as often they do not have meet solvency and credit history requirements.
  - Because of unattractive credit conditions farmers prefer to rely on their own resources.
- Recommendation: The proposed financial instrument is a guarantee scheme targeting farmers that are seeking credit for innovative projects. The implementing body suggested is The Netherlands Enterprise Agency (RVO) which has extensive experience in implementing similar instruments. The suggested guarantee amount per project is up to EUR 2 million or 80% of the loan.

40 LEI Wageningen UR (University & Research centre), 2014, Ex-ante assessment Garantstelling Marktintroductie Innovaties (GMI) land-en tuinbouw.

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

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

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

- There are three main bank suppliers of agricultural finance in The Netherlands: Rabobank, ING and ABN AMRO.
- Credit unions and private equity are not common financing mechanisms in Dutch agriculture.
- The type of loans most commonly used by the Dutch agriculture sector are long-term loans, ranging between ten and 20 years and in limited cases up to 30 years. Short-term loans are used at a much lower rate and are more frequently deployed during crisis situations.
- A number of governmental initiatives that provide support for farmers include the Guarantee Credit for Agriculture Fund (BL), the BL Plus Scheme and the Green Funds Scheme. These three credit guarantee schemes have been established outside of RDP.
- Under the Green Funds Scheme, farmers with green status projects[41] can borrow at a lower interest rate than the market lending rate while investors pay a lower income tax on their green capital.
- The total outstanding loan volume in agriculture in 2017 is estimated to be EUR 38.5 billion.
- The main constraints identified in the supply of finance relate to: (i) market concentration, (ii) banks' lack of appetite to finance innovative projects in the sector.

2.3.1. Description of finance environment and funding availability

2.3.1.1. Finance Providers

The agricultural credit market is almost entirely served by three banks, including Rabobank, ING and ABN AMRO. Among these three banks, Rabobank has the largest market share (83%) in food processing and agricultural credits while ABN AMRO accounts for around 12% and ING is with a 3% of the market share. Specifically, in the agriculture sector, the market share for Rabobank is 78%[42]. A fourth Dutch bank, Triodos bank targets mainly a niche market, serving organic farmers, for instance [43].

In The Netherlands, credit unions provide relatively small loans up to EUR 250 000. Credit unions are cooperatives whose members are entrepreneurs in a specific sector or region. For the agriculture sector, credit unions could focus on specific agricultural sub-sectors while agricultural entrepreneurs focus on investment opportunities in their region. Experienced and solvent entrepreneurs make funds as well as knowledge available to entrepreneurs with investment plans. A coach is assigned to entrepreneurs for whom loans are

41 The main condition for being eligible for financing under the scheme, among other technical and financial conditions, is that these are new projects providing a significant and immediate environmental benefit. The government sets the criteria applying to green projects and issues green certificates for projects that meet these criteria, thus ensuring that they qualify for green funding.
42 Information provided from interviews.
43 Information provided from interviews.

approved (preferably from the credit applicant's sector). Although credit unions have a long tradition in many countries (e.g. USA and the UK), in The Netherlands this is a fairly new concept[44].

Private equity is not often a financial provider of agricultural finance in The Netherlands. With private equity, financing investors become joint owners of the enterprise and share profits and losses. These types of investments are done in mature companies, often with high annual returns on equity of around 10% and an investment horizon shorter than for regular bank loans, ranging from three to five years. Due to these features, this form of financing is not common in Dutch agriculture as agricultural enterprises generate low returns on equity and usually have a much longer investment cycle than five years, which is usually not compatible with the private equity investment funds' exit strategy (within five years)[45].

However, the subordinated loan fund[46] (ALF), managed by Aegon asset management[47], investing in small and medium-sized enterprises across various sectors can provide a potential for private equity investment in agriculture. ALF was the result of a collaboration between the Dutch Investment Institution (NLII)[48], ABN AMRO, ING and Rabobank and Aegon Asset Management with the support of the then Ministry of Economic Affairs and Finance. The Ministry of Economic Affairs and Finance supports ALF under the Growth Facility Scheme and guarantees 50% of any losses on the principal sum of the subordinated loans. For every euro of subordinated loan from ALF, the bank provides at least an equal amount in bank credit (non-subordinated)[49]. According to stakeholders, at the moment, ALF does not have a particular interest in or expertise in understanding the agriculture sector. Stakeholders, however, see a potential for the agriculture sector to apply for these types of loans.

There are three governmental initiatives that provide support for farmers in the form of guarantee credit. The Ministry of Agriculture, Nature and Food Quality has an agreement with a number of affiliated banks for two main guarantee schemes, including the Guarantee Credit for Agriculture Fund (BL)[50] and BL Plus Scheme[51]. The Green Funds Scheme, which also includes agriculture projects as one of the project categories, is another example of a public support for farmers. Further information on these schemes is provided in the next section.

2.3.1.2. Financial Products

In The Netherlands bank loans to the agriculture sector fall under the product category of business loans. **Table 3**Table 3 provides an overview of the main types of financing solutions offered by banks to businesses.

44 Braaksma and Smit, 2013.
45 Ibid.
46 In Dutch: Achtergestelde Leningen Fonds.
47 See link: https://www.aegonassetmanagement.com/globalassets/asset- management/netherlands/strategies/documents/informatie-memorandum-nlii-alf-dutch.pdf.
48 NLII was a private institution, established in 2014 by institutional investors, making it easier for parties such as insurers and pension funds to invest in the Dutch economy. NLII has ceased its activities in 2018 as there were no additional financing issues in which it could play a significant role.
49 https://www.mkb.nl/nieuws/achtergestelde-leningen-fonds-van-start.
50 See link: https://www.rvo.nl/subsidies-regelingen/borgstellingskrediet-voor-de-landbouw-bl.
51 See link: https://www.rvo.nl/subsidies-regelingen/borgstellingskrediet-voor-de-landbouw-bl/extra-mogelijkheden-bl-plus.

Table 3: Main financing solutions offered by banks in The Netherlands

Main features	Business loans	The EURIBOR Optimal Loan	Credit lines/overdrafts	Green loans	Lease	Loans with state guarantee
Objective	Large investments, e.g. purchase of land, construction/ renovation of farm buildings, sheds and warehouses	Small investments, e.g. purchase of livestock, agricultural machinery & equipment, irrigation plants, etc.	Short-term cash flow needs to cover temporary imbalances between revenues & costs of the farmer / company	Investments with a positive impact on nature and the environment	Machine, equipment and vehicle	A loan with up to 90% guarantee from the government, financing possible with insufficient collateral
Duration	12 months – economic life of assets (up to 30 years)	Max 5-7 years	• Closed-ended • Open-ended	Max 10 years	2-8 years	Up to 6 years
Interest rate	1-14% fixed 2-13.5% variable	1-12.5%	1-12.5% based on EURIBOR rate 5-12.5% based on bank rate	Fixed interest rate lower than market rate	1-14% Fixed interest	Fixed interest rate

Source: Banks' websites, 2019.

The Dutch financial institutions offer loans to farmers for both investment and working capital financing. Several stakeholders state that loans offered to farmers are not very different from loans offered to other non-agricultural enterprises while some suggest that there might be some special bank policies applied to farmers in The Netherlands. For example, some banks require a solvency rate of a minimum of 30% and a debt service to capital ratio of 1.2 to 1.3[52].

Loan products for farmers are distinguished in terms of purpose and maturity:

- The type of loans most commonly used by the Dutch agriculture sector are long-term loans, ranging between ten and 20 years and in limited cases up to 30 years. Short-term loans are used less and are more frequently deployed during crisis situations.
- Leasing arrangements are also commonly used, in particular, for investments in agricultural machinery[53]. In the case of financial lease for farm resources, the farmer pays a fixed amount every month (repayment and interest) with a duration shorter than the economic life of the business assets.
- 51% of farmers in The Netherlands also lease the land of the farms on which they are operating.

In land based sectors such as arable crops and dairy farming, long-term loans of 20 years or more are provided for investments in expansion of the farm, loans of up to 25 years can be provided for the construction of a new barn, five to seven year loans can be provided for an investment in new machinery[54].

52 Interviews with banks.
53 Interviews with banks.
54 Interviews with banks.

Farmers are also offered short-term loans for working capital, sometimes with maturity of three months (seasonal working capital loans) to 18 months.

As mentioned in the section 2.3.1.1, the Dutch government does not provide subsidised loans to farmers but has in place several guarantee schemes, including:

Borgstellingsfonds voor de Landbouw (BL)

The Borgstellingsfonds voor de Landbouw (BL) [55], which was established in January 2017, replaces the previous Garantstellingsfonds (GL). BL is intended for farmers or a starting agricultural entrepreneur. BL could provide individual loans of up to EUR 1.2 million where the Ministry of Agriculture, Nature and Food Quality guarantees 70% of the loan through national funding. Farmers can request the bank to use this guarantee scheme if there is not enough collateral for their loan application.

The government guarantees the repayment of the BL loan that the bank provides to the agricultural entrepreneur. The bank pays a commission for this to The Netherlands Enterprise Agency (RVO.nl) and charges this amount to the farmer. Currently, the commission is 3% of the loan with BL. For a starting agricultural entrepreneur, the rate is 1%. This commission is lower than the market rate, which provides agricultural entrepreneurs with a benefit. This benefit is called the gross grant equivalent. The percentage is not fixed, and it mainly depends on the estimated risk of the loan. The amount of subsidy is stated in the loan agreement with the bank that the farmer deals with.

The guarantee covers up to six years from the date of the first repayment. For investments in real estate, such as land or buildings, the maturity of a loan could be up to 12 years. Farmers have a grace period of six months after the loan contract signature. The repayment scheme is linear. The rules for a guarantee credit (such as the size, duration, repayment and suspension) depend on the type of investment (working capital or real estate). If necessary, the bank can temporarily suspend the repayment of the loan.

According to stakeholders, BL conditions has improved compared to its predecessor (the GL) allowing the participating banks to easily incorporate the scheme into their offerings due to lower administrative burden and time requirement. More details on the number of guarantees provided and the associated amounts are described in section 2.3.2.

BL Plus Scheme

Alongside the BL scheme exists the BL Plus Scheme which targets greenhouse growers and farmers who want to invest in a sustainable and environmentally friendly farm practices way as well as agricultural entrepreneurs who want to invest in innovations within their family farms (a new concept, product or production process). Extra favourable conditions apply, such as a higher BL loan, at a maximum amount of EUR 2.5 million. A lower commission (1%) applies to start-ups and young farmers willing to take over a farm business.

More details on the number of guarantees provided and the associated amounts are described in section 2.3.2.

Green Funds Scheme

Green Funds Scheme is a tax incentive scheme for investors launched in 1995. Under this scheme, projects that are divided into categories covering a broad range of activities, from high-tech environmental innovation, agriculture to low-tech improvements in the area of nature and the landscape can be given a green project status. Dutch banks have a ‘green fund’ or a ‘green bank’ which meets the strict requirements imposed by the Green Institutions Scheme. The banks issue bonds with a fixed value, term and interest rate, or shares in a green investment fund. Usually the interest rate or dividend paid out by the bank is lower than the market rate, which means that the bank can in turn invest the funds in green projects for a lower interest rate. Individual investors benefit by paying a lower income tax on their green capital.

There are also a number of newly developed or planned financing solutions:

55 See link: https://www.rvo.nl/subsidies-regelingen/borgstellingskrediet-voor-de-landbouw-bl.

- The government has made available a budget of EUR 75 million through its capital enhancing credit fund programme (Garantieregeling Vermogensversterkende Kredieten VVK)[56] to facilitate access to loans for young farmers who start or take over a business and want to invest in innovation or sustainable business development. This is a national funding program that is established outside of the EAFRD funding and is operational since 1 January 2020. EUR 64 million of the fund is available to offer financial support in the form of guarantees and EUR 11 million will be dedicated to training and coaching purposes during the acquisition phase for young farmers. The training programme will be developed by the Ministry in cooperation with Wageningen University and will include courses and coaching.
- Invest-NL[57] (Netherlands Investment Agency or RVO), a Dutch promotional bank was officially launched in January 2020 by the Ministry of Economic Affairs and Climate. The government's aim is that the fund will stimulate a transition towards a more sustainable agriculture sector. Invest-NL is established with EUR 2.5 billion of investment capital. Entrepreneurs can go to Invest-NL as a one stop shop for risk capital, guarantees, export credit insurance and international financing programs. Invest-NL will contribute to the financing of social transition challenges through investments in areas such as energy, sustainability, mobility and food and social areas such as care, safety and education. Invest-NL also makes it possible to improve access to European funds. Previously, The Netherlands was not able to use European funding, because The Netherlands did not have a national financing institution that could assess projects submitted to them by farmers and help finance them under European funding. All its neighbouring countries have a National Promotional Bank for this. Invest-NL will play this role in The Netherlands.

2014-2020 EAFRD Financial Instrument

The Netherlands was the first country to programme under its RDP a financial instrument in the period 2014-2020. The Dutch government which was ready with its ex-ante assessment already at the end of 2014, introduced the financial instrument from the beginning.[58] The instrument was a Guarantee Fund for Risky Innovations (GMI) and had a budget of EUR 5 million. It targeted the market introduction of innovations and its development was based on the experienced the government had in dealing with a number of financial instruments, which start dates back from the Marshall plan, and the three specific financial products (loans to guarantees), which were operating on the market.

The ex-ante assessment has concluded that the applicable system in The Netherlands at the time of programming the financial instrument in the RDP was not fit to support innovations, especially in the start-up period where the innovation is not fully marketed and returns are not secure, i.e. the risk with the business is the highest. The proposed instrument targeted not only system-innovations, but also market-innovations, i.e. the branding of the already created product, which is a critical stage for the survival and future development of the innovative business. The guarantee could have backed up a loan of a maximum EUR 2.5 million and maximum five guarantees would have been given per innovation.

Despite the rather good idea complementing the products offered on the Dutch market, the EAFRD financial instrument was taken out from the RDP in October 2016. A number of reasons stood behind that decision:

- The banks had the product ultimately rejected from cost-benefit considerations. GMI was a small portfolio of loans. And a separate product implies for banks a separate internal procedure and adjustments in the ICT systems. Local banks considered these adjustments too expensive in relation to the small scale-use / budget foreseen.

56 See link: https://www.rijksoverheid.nl/actueel/nieuws/2019/01/09/garantieregeling-vermogensversterkende-kredieten-geeft-toekomst-aan-jonge-boeren.

57 See link: https://www.nederlandsinvesteringsagentschap.nl/binaries/nederlands- investerings- agentschap/documenten/brochures/2017/september/22/factsheet-nia/Factsheet+NIA+Invest-NL+NL.pdf.

58 Van Drunen, Kees, Video presentation of the EAFRD financial instrument is available here: https://www.fi-compass.eu/video/guarantee-market-introduction-innovations.

- It was also agreed that the GMI as established under the EAFRD rules applicable at the time, would mean more work for the banks than a loan guarantee under the BL-procedure, particularly given that as of 1-1-2017, this latter procedure has been simplified. In the meantime, and after the instrument was de-programmed, the eligibility rules for financial instruments under the EAFRD were considerably simplified.

It was therefore concluded - because of necessity - not to implement this GMI EAFRD funded financial instrument as a separate scheme under the RDP, but to support it through the national scheme already existing in the market namely the 'Borgstelling MKB-landbouwkredieten' plus-module.

The limited number of banks operating in the Dutch agricultural finance market also proved to be an obstacle in the setting-up of this financial instruments as the choice of implementation body and the possibilities for negotiations on the side of the government have been very limited.

2.3.2. Analysis of the supply of finance

The total outstanding loan volume to the agriculture sector in The Netherlands is estimated to be EUR 38.5 billion in 2017. According to the data in Rabobank's annual reports, in 2017, the volume of loans to food and agriculture provided by Rabobank was EUR 36.9 billion. Of this amount, in the same year the total volume of loans to primary agricultural production was around EUR 30 billion. As Rabobank's market share in agricultural lending is around 78%[59], the total outstanding loan volume from banks to the Dutch agriculture sector is also estimated to be EUR 38.5 billion (Table 4).

Table 4: Outstanding loans to the agriculture sector, based on Rabobank annual reports, EUR billion

	2015	2016	2017
Rabobank loan portfolio to F&A (Annual Reports)	97.8	102	97.8
of which in The Netherlands	35.0	37.5	36.9
of which to agriculture	28.5	30.5	30.0
Total outstanding loan volume to agriculture[60]	**36.5**	**39.1**	**38.5**

Source: own elaboration, Rabobank annual reports, and interviews.

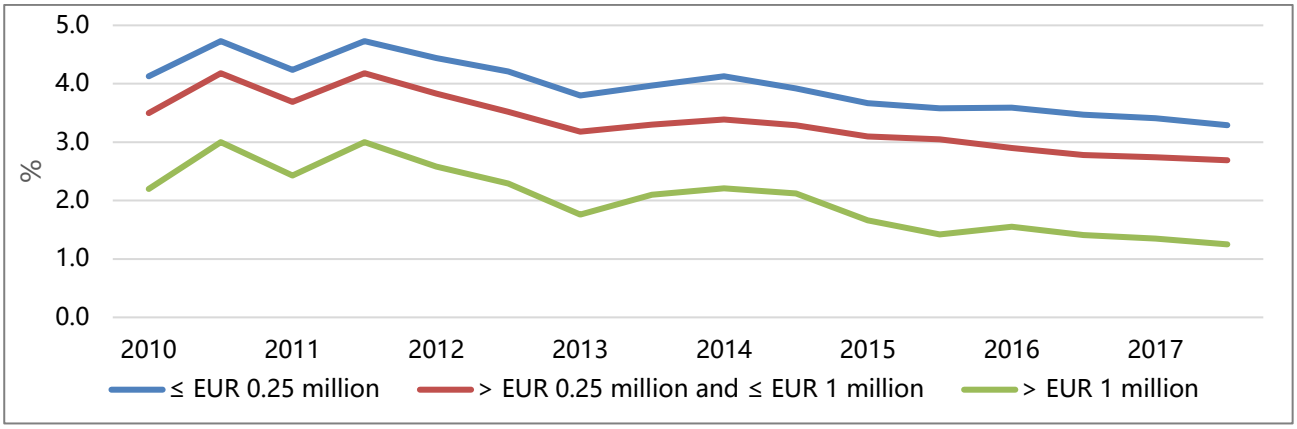
The Dutch agriculture credit market is highly concentrated as there are only three main banks operating in it, namely Rabobank, ABN AMRO and ING. As already mentioned, Triodos is a small bank that targets mainly a niche market, serving organic farmers, for instance, which does not impact on the shares of the leading banks.

In general, there seems to be no liquidity constraint on the supply side of the Dutch agriculture credit market although there seems to be also a lack of appetite from banks to finance untested and innovative agricultural business ideas. According to interviews of stakeholders in the Dutch agriculture sector, banks are risk averse when it comes to untested innovative ways of farming. Banks are more inclined to reject loan applications based on these innovations. For example, in case of business ideas targeted at more sustainable ways of farming (see also section 2.2.2).

59 Interview with Rabobank.

60 Based on a 78% Rabobank market share.

Figure 13: Interest rate development for new loans in the Netherlands by loan size, 2010-2017

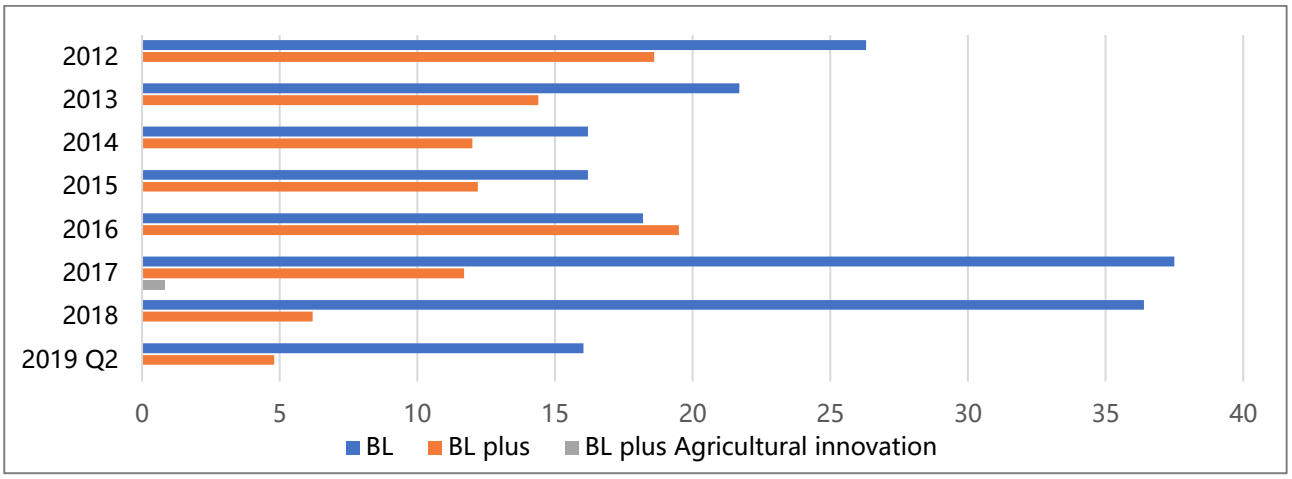


Source: Data from DNB for 2010-2017.[61]

The interest rates applied to loans to Dutch farms are similar to other businesses in the economy. While interest rates faced by businesses in The Netherlands might be higher than those in other EU country, **overall there has been a declining trend in interest rate applied to new loans of all volumes** (Figure 13). According to the De Nederlandsche Bank (DNB)[62], the larger the loan volume is, the lower the interest rate faced by the borrowers. In particular, loans of EUR 1 million or higher face the lowest interest rates, followed by medium-sized loans of between EUR 250 000 and EUR 1 million. Small-sized loans of less than EUR 250 000 face the highest interest rates, close to 3.5% in 2017. The trend is observed throughout the global credit market following the financial crisis. This suggests that there is not a liquidity constraint on the supply side and that the debt servicing charges are declining.

Furthermore, the supply of finance has somewhat eased throughout 2017, for all size of enterprises[63]. Credit easing mainly came from an easing of terms and conditions, in particular through a reduction of the margins. In the first quarter of 2017 the easing was also driven by changing size, maturity and collateral requirements on new loans.

Figure 14: Amount of guarantee provided by BL, 2012-2019, EUR million



Source: Ministry of Economic Affairs and Climate, 2019.[64]

61 https://dashboards.cbs.nl/v1/financieringsmonitor2018_180023/.

62 De Nederlandsche Bank (DNB) is responsible for overseeing financial stability in The Netherlands, a task embedded in the Bank Act and every six months publishes its Financial Stability Report.

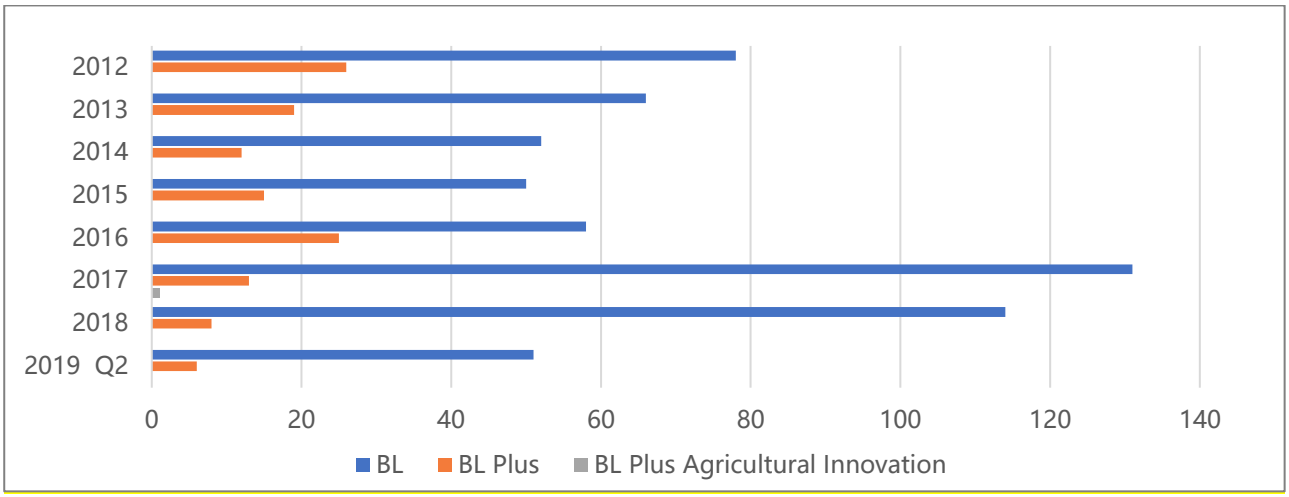
63 ECB, 2017, Bank Lending Survey.

64 https://www.bedrijvenbeleidinbeeld.nl/beleidsinstrumenten/b/borgstellingskrediet-voor-de-landbouw.

In 2017, a cap of EUR 80 million was available under BL scheme, but this cap was not reached. Each year, about EUR 45 million is being used from the fund (Figure 14).

Within the cap of EUR 80 million, EUR 20 million is intended to be used for agricultural innovations under the BL Plus scheme. To date, however, there has been a negligible uptake of the BL Plus scheme as only one farmer so far made use of it (Figure 15). Stakeholders indicate that the fund is not fully exploited because the guarantee scheme only addresses the collateral issue while according to stakeholders, the real issue here is the fact that banks are hesitant to finance risky, untested agricultural innovative ideas[65]. This suggests that other types of financial solutions, such us equity instruments, might be explored to finance specifically this type of projects in agriculture.

Figure 15: Number of guarantees issued by BL, 2012-2019, EUR million



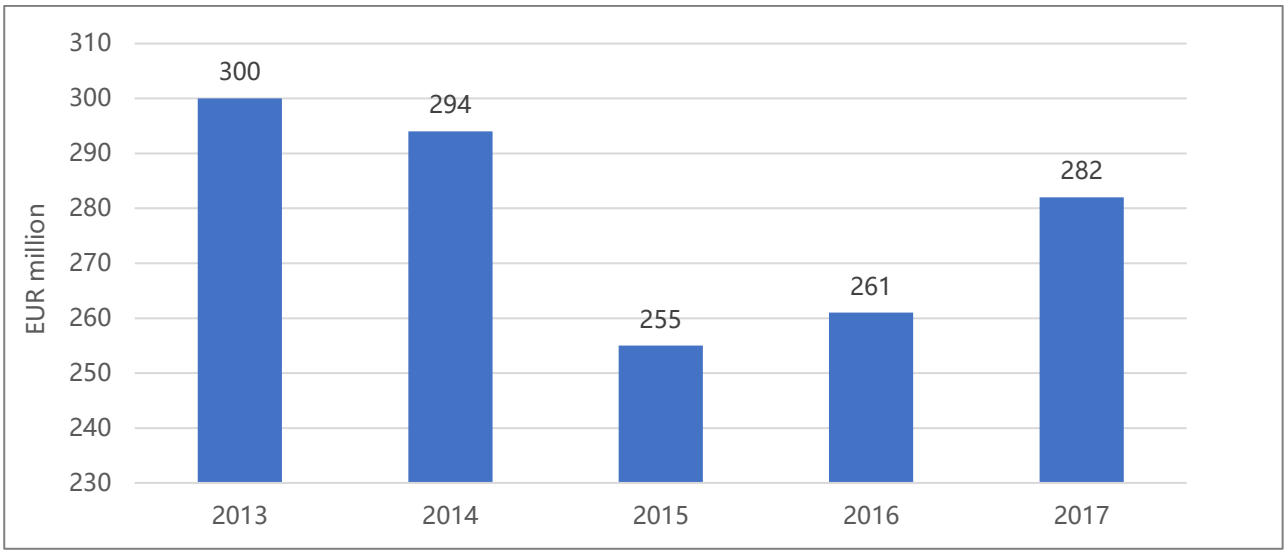
Source: Ministry of Economic Affairs and Climate, 2019.[66]

National financial instruments provided an average amount of guarantee of EUR 38 million per year (between 2012-2018)[67]. As reported in Rabobank's 2017 annual report, the loan volume with agricultural guarantee funds in 2017 was EUR 282 million, which is higher than the amount in the previous two years but is still less than the relative peak level of EUR 300 million in 2013 (Figure 16). However, it is worth noting that these instruments only address the collateral issue, which as suggested by stakeholders is only one of the factors in the loan's (approval) process.

At the same time, the fact that there is almost no uptake in some of the guarantee instruments and the existence of the financing gap suggest there is room for improvement. According to stakeholder interviews, uptake will increase if procedures to access, manage and use financial instruments are streamlined and simplified, reducing the administrative burden and allowing to speed up their implementation. Banks will be more willing to request these financial instruments products on behalf of their customers if the government set up a dedicated body to work directly with farmers[68]. To facilitate the uptake of the financial instrument, under the current capital enhancing credit fund programme (Garantieregeling Vermogensversterkende Kredieten VVK)[69] that facilitates access to loans for young farmers, EUR 11 million of the total EUR 75 million will be dedicated to training and coaching purposes during the acquisition phase for young farmers (see section 2.3.1.2)

65 Interviews with banks.
66 Ibid.
67 Estimated using data from https://www.bedrijvenbeleidinbeeld.nl/beleidsinstrumenten/b/borgstellingskrediet-voor-de-landbouw.
68 Suggestions from stakeholders.
69 See link: https://www.rijksoverheid.nl/actueel/nieuws/2019/01/09/garantieregeling-vermogensversterkende-kredieten-geeft-toekomst-aan-jonge-boeren.

Figure 16: Loan applications supported by the agricultural guarantee fund at Rabobank, 2013-2017



Source: Rabobank annual report, 2017.

2.4. Financing gap in the agriculture sector

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

Key elements of the financing gap in the Dutch agriculture sector

- The financing gap is estimated between EUR 73 million and EUR 303 million.
- The most constrained segment is long-term financing of small and medium-sized farms.
- Banks are hesitant to finance untested and/or innovative projects for which they find it difficult to estimate the economic return.
- The key constraint is the insufficient own capital to prove solvency and the weak repayment capacity deriving from low economic returns on farming activities across almost all agriculture sub-sectors.
- New entrants and farmers who did not inherit the farm from their families face serious difficulties in obtaining financing from banks, mainly because they do not benefit from family farm collateral.
- The market is also dominated by only three banks, which concentration has an impact on the possibility for financing projects.

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 farms that are both financially viable and have unmet demand X average loan volume

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

The financing gap arises from unmet financing demand from economically viable farms[70]. The unmet demand for finance includes:

I. lending applied for but not obtained, or
II. a lending offer refused by the potential borrower, as well as
III. lending not applied for due to expected rejection.

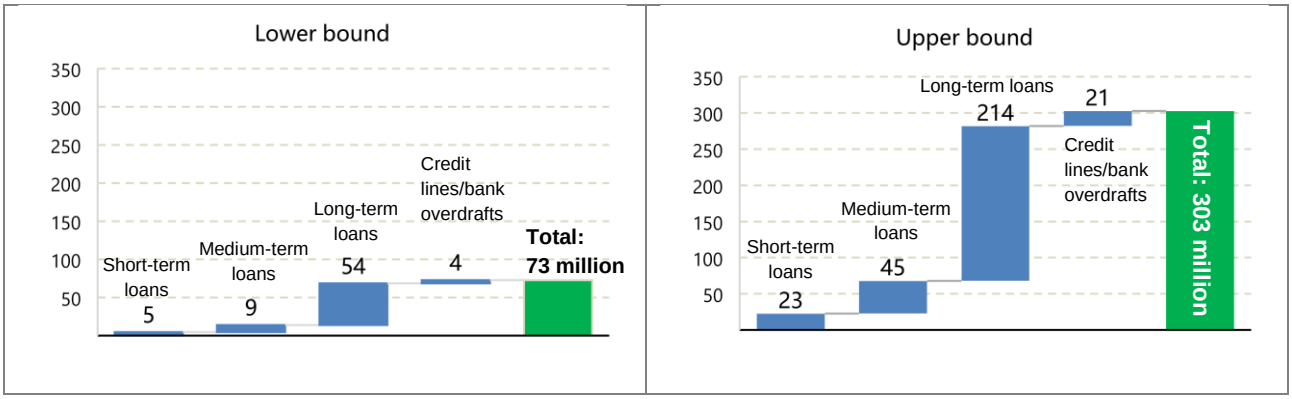
For the purpose of this study, 'turnover growth' is used as a proxy of farm viability. In particular, two different criteria for viability are used, which lead to the calculation of a range for the financing gap between an upper and a lower bound:

- 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.

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

The financing gap for The Netherlands primary agriculture sector is estimated between EUR 73 million and EUR 303 million (Table 5). However, unmet financing needs are concentrated in specific segments of the sector. The financing gap mainly concerns small to medium-sized farms. The type of loans for which the gap is the largest are long-term loans (Figure 17).

Figure 17: Financing gap by product in the agriculture sector in 2017, EUR million



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

Table 5: Financing gap by farm size and product in the agriculture sector in 2017, EUR million

		Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Upper bound	Small-sized farms	**127.6**	8.3	20.2	91.5	7.5
	Medium-sized farms	**143.1**	11.0	20.0	103.4	8.7
	Large-sized farms	**32.1**	3.3	5.2	18.9	4.7
	Total	**302.7**	**22.6**	**45.4**	**213.8**	**20.9**
Lower bound	Small-sized farms	**30.8**	1.7	4.2	23.3	1.6
	Medium-sized farms	**34.6**	2.3	4.2	26.3	1.8
	Large-sized farms	**7.5**	0.7	1.1	4.8	1.0
	Total	**72.9**	**4.7**	**9.5**	**54.4**	**4.4**

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

About 22.3% of the overall gap might be attributed to young farmers. According to the *fi-compass* survey, in the upper boundary estimate, up to 28.85% of rejected and viable loan applications came from applicants below 40 years old. Similarly, up to 12.17% of the discouraged applications came from young farmers. Using this information to provide a different break down of farms with constrained access to finance, we obtain a financing gap for young farmers up to be EUR 67.7 million.

General drivers of the gap are linked to a number of key challenges faced by farmers that prevent banks to provide them with finances, including:

- **Their insufficient own capital to prove solvency and lack of collateral for new entrants**. New entrants and young farmers without family in the sector to support them have difficulties in obtaining finances from banks. Due to limited own resources to prove solvency, lack of collateral, as well as in combination with the challenge to design a viable business plan, stakeholders expressed that entering farming business as a new entrant is nearly impossible[71]. There is a substantial need for capital for young farmers who need to buy out the parents and their siblings from the family farm. Following the

71 Information from interviews.

farm takeover, the farm's solvency level is at a minimum, which makes it difficult to obtain finances from banks to make any further investments in the farm business.[72]

- **Low profit margin observed in the case of small-sized family farms**. To improve profit margins, farms need to expand in order to benefit from economies of scale. Scaling up requires substantial investments which banks are hesitant to finance due to the low margins and increasing costs of production. The low profit margins create a vicious circle that does not allow structural change to occur.
- **High risk perception for banks to finance innovative farming solutions**. Farmers who would like to invest in innovations and new ways of farming appear to be considered too risky by the banks as these ideas and concepts are not tested and do not guarantee good cash flows and returns on investment. Examples include investments in healthy food, organic agricultural products, smart farming and biomass process technologies.

There seems to be no liquidity constraint on the supply side of the credit market[73]. However, the significant market concentration on the supply side might create constraints in access to finance, reducing competition, producing more selectivity in the banks' decision to finance projects and increasing financing cost.

Feedback from stakeholders interviewed suggest that the share of young farmers with unmet demand might be underestimated and that the actual financing gap might be higher, although no evidence for this was given.

72 Information from interviews.
73 Interview with banks.

2.5. Conclusions

The demand for agricultural finance in The Netherlands is driven by capacity expansion in an already intensive sector, characterised by farms succession and regulatory and policy changes. The demand for finance is foreseen to increase in the next three years[74]. In particular, due to policy interventions aimed at encouraging a more circular and sustainable agriculture which are likely to push for more investments.

While there seems to be no liquidity constraint on the supply, the agriculture finance market is affected by the risk aversion of banks and the dynamics of the demand. Farmers are facing a number of key challenges that prevent banks to provide them with finance including low profits across almost all agriculture sub-sectors (for small-sized farms in particular), low solvency, lack of collateral and own capital (in particular for new entrants), lack of banks appetite to finance innovations and new ways of farming. Market concentration on the supply side may also play a role in the limitations for financing. Especially pronounced are these for start-ups without inheritance of farm assets and land, including young farmers.

The financing gap in the sector is estimated between EUR 73 million and EUR 303 million. The financing gap mainly concerns small to medium-sized farms. The type of loans for which the gap is the largest are long-term loans. About 22.3% of the overall gap might be attributed to young farmers.

Several options exist to strengthen and address the financing gap. A number of existing governmental initiatives provide support for farmers, including the Guarantee Credit for Agriculture Fund, the BL Plus Scheme, and the Green Funds Scheme, although the uptake of some is low. Nevertheless, based on the analysis conducted for this study, some constraints in accessing finance still exist in the sector, which might justify further policy initiatives. Any new policy actions should in any case operate in synergy with the existing instruments, in order to avoid duplications.

Areas that may warrant review or where there may be possibilities to develop new financial instruments (including under the EAFRD) are:

- Young farmers and new entrants which lack sufficient equity and collateral. In this case, the newly established VVK guarantee fund is expected to provide an important contribution. The adequacy of the strategy and budget of the instrument should be assessed after some years of operation.
- Investment in innovative, untested business ideas that can help achieve the sustainable policy objectives introduced by the Dutch government. As BL plus guarantee instrument currently available seems to have almost no uptake, its functioning and conditions might be re-assessed to verify possible improvements.
- Young farmers and new entrants, as well as established farmers, with innovative ideas but lack of sufficient equity, might also benefit from a pilot equity or quasi-equity instrument, considering that guarantee and risk-sharing solutions might not be sufficient to overcome banks' reluctance towards these innovative segments.

74 Based on survey data findings and opinions from major stakeholders before the COVID-19 crisis.

3. PART II: AGRI-FOOD SECTOR

3.1. Market analysis

This section analyses the structure of the agri-food sector, including sub-sector activities, the number of agri-food enterprises, and the economic aspects such as production, value added and exports.

Key elements on the Dutch agri-food sector

- The Dutch agri-food sector employed 140 000 persons in 2017, representing 1.52% of the overall labour force in The Netherlands.
- In 2017, 6 611 enterprises were operating in it, which was an increase of 46% compared to 2010 and can be mainly attributed to a large growth in small-sized enterprises.
- The Dutch agri-food sector experienced a positive performance over the period 2009-2017. In this period, the production value of the Dutch agri-food sector grew steadily, increasing by almost 53% and reaching EUR 76.3 billion in 2017.
- The value added at factor costs reached EUR 14 billion in 2017, an increase of 22% from the 2010 level.
- A defining feature in The Netherlands is that it is a country with large cooperatives, their market share covers about 70% of total value added in the agri-food sector.
- The sector is highly export oriented and has been identified as a so-called "top sector[75]" by the Dutch government. In 2018 the sector exported about EUR 37 billion of products and this value has grown 3% annually on average since 2013.

The Dutch agri-food sector employed 140 000 persons in total in 2017[76]. This represents 1.52% of the overall labour force in The Netherlands[77]. In 2017, 6 611 enterprises were operating in the Dutch agri-food sector, which represented an increase of 46% compared to the number of firms in 2010[78]. This represents an average annual growth of 4% since 2011. Small-sized firms with less than 50 employees or micro-sized enterprises with less than ten employees represent the largest share of agri-food enterprises (80%), whereas large-sized firms with over 250 employees accounted for only 1% of the total number of enterprises operating in the sector. 65% of the increase in agri-food enterprises between the years 2010 and 2017 can be attributed to the increase of small-sized enterprises with less than 50 employees (an average growth of 5.7% a year). This implies an absolute growth of over 1 300 micro-enterprises (less than ten full time employees (FTEs))[79].

The Dutch agri-food sector experienced a positive performance over the period 2009-2017. In this period, the production value of the Dutch agri-food sector grew steadily, increasing by almost 53% and reaching EUR 76.3 billion in 2017. A positive trend was also observed for the sector's value added. The Dutch agri-food sector's value added at factor cost[80] increased by 22% between 2010 and 2017, reaching EUR 14 billion in 2017[81]. In 2015, cooperatives accounted a major share of the sector's value added with a

75 This terminology is used by the government. It refers to strategic sectors. https://www.government.nl/topics/enterprise-and-innovation/encouraging-innovation.
76 2018 data were not available in Eurostat.
77 FNLI, 2017, https://agrifoodtechplatform.nl/wp-content/uploads/2018/09/AgriFoodTech-Snapshot-2018.pdf.
78 Eurostat 2019, Eurostat Business Statistics, NACE2_R2 (2010-2017).
79 Eurostat 2019, Eurostat Business Statistics, Eurostat NACE2_R2 (2010-2017).
80 The value added at factor cost is the gross income from operating activities after adjusting for operating subsidies and indirect taxes.
81 Eurostat 2019, Eurostat Business Statistics.

market share of 70%[82]. Furthermore, the gross operating surplus[83] (or operating turnover) generated by the Dutch agri-food sector positively performed over the last decade, having increased by approximately 38% between 2009 and 2017, reaching about EUR 7 billion in 2017.

Production of manufactured food products accounted for about 87% (EUR 66.4 billion) of the total production value in the sector[84] in 2017, and for 73% of the total operating turnover[85]. In 2017, the sub-sectors performed as follows:

- Manufacture of other food products[86] was the sub-sector contributing the most to the overall production value of the manufacture of food products (23%);
- Manufacture of dairy products ranked second, contributing 21% to the overall production value of the manufactured food products; and
- Processing and preserving of meat and production of meat products ranked third, contributing 16% to the overall production value of manufactured food products[87].

The Netherlands ranks second in the world in terms of agricultural exports, with key trading partners such as Germany, Belgium, France, the UK and Russia. Agri-food sector has been identified as a "top sector" by the Dutch government. It exported agri-food products in value of about EUR 37 billion in 2018 and this value has grown 3% annually on average since 2013[88], driven by a sustained demand from both EU and non-EU markets. About a quarter of Dutch agri-food production is exported outside the EU and these exports have grown annually by half a percent on average since 2013. In 2018, 65% (EUR 8.5 billion) of dairy products produced in The Netherlands were exported, with 45% within the EU and 20% outside the EU[89].

82 Bijman, 2016, Agricultural Cooperatives in The Netherlands: key success factors. Available via: https://edepot.wur.nl/401888.

83 Gross operating surplus is defined as value added minus personnel costs. It represents the surplus generated by operating activities after the labour factor input has been recompensed.

84 Eurostat 2019 - Eurostat Business Statistics.

85 Eurostat 2019 - Eurostat Business Statistics.

86 This category includes manufacture of sugar, manufacture of cocoa, chocolate and sugar confectionery, processing of tea and coffee, manufacture of condiments and seasonings, manufacture of prepared meals and dishes, and manufacture of homogenised food preparations and dietetic food.

87 Eurostat 2019 - Eurostat Business Statistics.

88 Based on COMEXT data for sections 16 to 23 of the CN classification.

89 Dutch Dairy Association (NZO). Zuivel in cijfers. Available via: https://www.nzo.nl/wp-content/uploads/2019/01/zuivel-in-cijfers-Jan2019-NL.pdf.

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

This section describes the drivers of demand for finance in the agri-food sector and analyses the met and unmet demand. It seeks to identify the main reasons for agri-food enterprises to request financing and the agri-food sub-sectors showing the largest need for finance. The section also provides an analysis of the type of enterprises which face more constraints in accessing credit. The examination of the demand for agri-food finance is based on the findings from Agri-food survey results of 80 Dutch enterprises, as well as interviews with key stakeholders in the agri-food sector combined with national statistics.

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

- Gross investment in the Dutch agri-food sector exhibited an overall positive trend between 2014 and 2017. In 2017, it amounted to about EUR 4.4 billion; an increase by 23% compared to 2014.
- The main drivers for the demand for finance by the Dutch agri-food sector are investments in innovations and capacity expansion, as well as investments aimed at ensuring compliance with regulatory and policy changes addressing climate change.
- Most agri-food enterprises in The Netherlands (81%) use bank finance for capacity expansion (e.g. processing equipment, buildings and infrastructure), followed by inventory and working capital (48%).
- According to results from the Agri-food survey, 46% of agri-food enterprises applied for finance in the last year. The majority of survey respondents applied for medium to long-term loans (respectively 19% and 16%). Short-term loans and credit lines combined were responsible for 26% of credit applications.
- On average, 86.5% of the loan applications by the Dutch agri-food companies were successful. A similar figure was found by the Dutch Finance monitor[90], which found that 84% of finance applications by SMEs in general were successful in 2018.
- The share of loan rejections was higher for loan products than for credit lines/bank overdrafts. Among the most common reasons for banks to reject a loan were lack of credit history and/or because the applicant was considered too risky being a start-up company.
- The Agri-food survey found that 3% of agri-food enterprises did not apply for finance due to fear of potential rejection. The most frequent reason for companies to not apply for credit was the unfavourable terms and conditions offered by banks.
- A recent study by the Dutch Central Planning Bureau[91] found that in comparison with other EU countries, Dutch SMEs are applying for relatively fewer bank loans and applications submitted are relatively frequently rejected by banks.
- Survey respondents identified affordable loans/credit lines (with lower interest rates) and loan/credit schemes with flexible repayment conditions as possible ways to enhance access to finance for agribusinesses in The Netherlands.

90 https://dashboards.cbs.nl/v1/financieringsmonitor2018_180023/.

91 Central Planning Bureau (CPB), 2019, Dutch SME bank financing, from a European perspective. Available at https://www.cpb.nl/sites/default/files/omnidownload/Policy%20Brief%20SME%2009072019_0.pdf.

3.2.1. Drivers of total demand for finance

Gross Fixed Capital Formation (GFCF) exhibits a positive attitude towards investments in the agri-food sector since 2011[92]**.** GFCF reached an overall investment of EUR 2 billion in 2018[93]. Furthermore, investments by the Dutch agri-food sector have grown the most rapidly of all EU countries over the past years according to a report by the Dutch Federation of the Food and Drinks manufacturing industry (FNLI)[94]. Within the agri-food sector, 81% of gross investments were carried out in food production, whilst 19% for manufacturing of beverages[95].

Although investments in the agri-food sector have been increasing over the period 2014 and 2017, a more heterogeneous pattern is observed at sub-sector level. Between 2014 and 2017, gross investment in the Dutch agri-food sector showed a positive trend, reaching EUR 4.4 billion in 2017 (+23% compared to 2014). Gross investment in manufacture of food products drove the overall positive trend, increasing by 28% between 2016 and 2017. On the contrary, the level of investment in the manufacture of beverages sub-sector only modestly increased (+5%) during the period under consideration[96].

Of particular interest are some trends in some segments of the manufacture of food products industry:

- Gross investment in the manufacture of dairy products showed an abrupt decrease in 2014, after a six-year period (2009-2014) of steady positive increase. Between 2014 and 2017, the investment in the sub-sector decreased by 47%, falling from EUR 1.2 billion to about EUR 673 million in 2017.
- For the other food products[97] segment, after a small decrease between 2015 and 2016, investment levels increased by 59% over the period 2016-2017[98], reaching EUR 935 million.
- The remaining sub-sectors benefited from an average investment level of EUR 798 million in 2017, with an average change of 23% since 2014.

Investments as a share of total turnover have been rather stable. The investment rate of the Dutch agri-food sector ranged between 9.2% and 16.5% between 2010 and 2017. However, in the last three years, the investment rate of the sector was stable at a level of 15%[99].

Faced by strong international competition, **there is a continuous need for Dutch companies to invest in innovations and capacity expansion to remain competitive on the world markets**. This is due to the fact that the majority of Dutch agri-food companies rely heavily on exports in their business models. Furthermore, because of the switch from competing on cost to *Customer Intimacy*[100] or *Product Leadership*[101], enterprises in the Dutch agri-food sector need to invest in innovation, collaboration, positioning and new business models[102] to meet the new market demand. Stakeholders from the agri-food sector also indicated during the interviews that there is an increase in consumer demand on international level for Dutch agri-food products. These stakeholders also highlighted that the rapid growth of the middle-class in many Asian and Middle Eastern countries that has led many companies to invest in capacity expansion to be able to serve these

92 Eurostat, 2019.
93 Dutch Federation for the Food and Drinks Manufacturing Industry (FNLI). Monitor Levensmiddelenindustrie 2018, p.3. Available via: https://www.fnli.nl/wp-content/uploads/2015/01/Monitor-2018.pdf.
94 Ibid
95 Eurostat, 2019 – Eurostat Business Statistics.
96 Ibid.
97 Manufacturing of sugar, tea or coffee, chocolate and confectionery, condiments, and prepared dishes.
98 Eurostat, 2019 – Eurostat Business Statistics.
99 Eurostat 2019.
100 A strategy that delivers customized products and focuses on attention to individual customers and customer loyalty https://www.strategischmarketingplan.com/marketingstrategieen/customer-intimacy/.
101 Product leadership is a value strategy of Treacy and Wiersema where excellence in product leadership and innovation is the most important for the company. There is a lot of attention for research and development. https://www.strategischmarketingplan.com/marketingstrategieen/customer-intimacy/.
102 https://www.growcampus.nl/agrifood-scale-up-programma-weer-van-start/.

markets[103]. Data from the Agri-food survey confirms that investments in capacity expansion are one of the main reasons for companies to look for bank finance (see section 3.2.2).

The agri-food sector includes a rich and growing ecosystem of start-ups and small businesses. These small-sized companies focus their investments on innovations in the field of plant-based proteins, circular agriculture, food and health, and smart and digital technology[104]. Overall, the birth rate of companies is the highest within the micro (less than ten employees) and the small (less than 50 employees) enterprises while the number of medium (less than 250 employees) and large-sized companies is decreasing. Among small-sized companies, the higher growth rates are found within the 'Manufacture of beverages', the 'Manufacture of vegetable and animal oils and fats', and the 'Manufacture of other food products' sub-sectors (Table 6).

Table 6: Change in the number of firms between 2014 and 2017 in agri-food sector, by size class

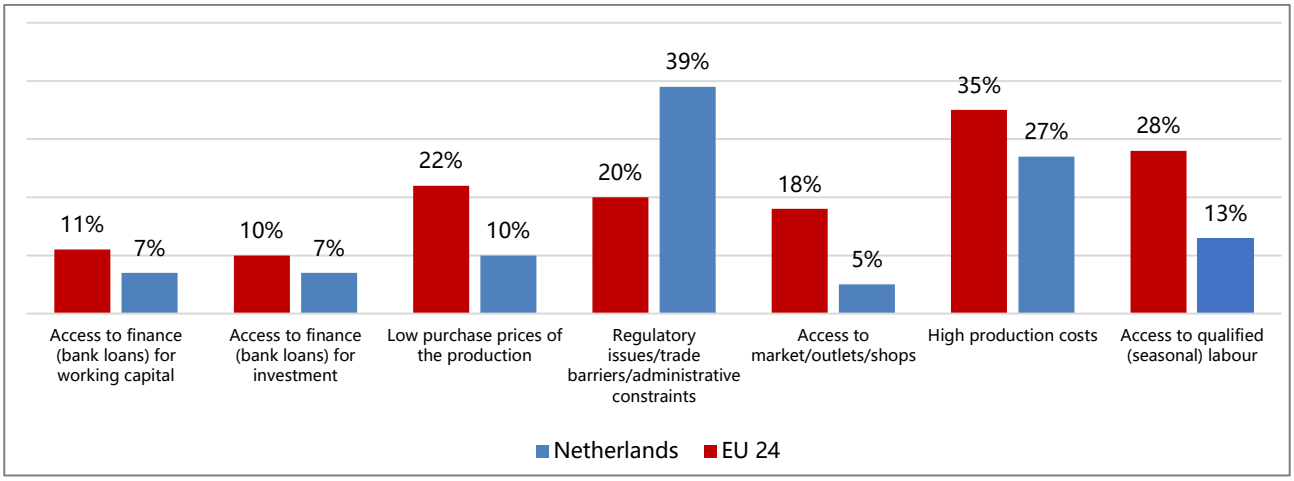
	All	Number of employees				
		0 to 9	10 to 19	20 to 49	50 to 249	250 or more
Manufacture of food products	12%	16%	-5%	-5%	7%	-7%
Processing and preserving of meat and production of meat products	8%	13%	-12%	-7%	-6%	0%
Processing and preserving of fish, crustaceans and molluscs	9%	12%	8%	-20%	13%	NA
Processing and preserving of fruit and vegetables	7%	23%	-54%	-24%	9%	-9%
Manufacture of vegetable and animal oils and fats	20%	45%	-40%	75%	-29%	0%
Manufacture of dairy products	-12%	-17%	133%	-14%	4%	-25%
Manufacture of grain mill products, starches and starch products	2%	5%	-57%	60%	-9%	0%
Manufacture of bakery and farinaceous products	12%	17%	-4%	-7%	5%	-10%
Manufacture of other food products	25%	31%	2%	0%	26%	-5%
Manufacture of prepared animal feeds	12%	22%	-15%	4%	8%	0%
Manufacture of beverages	103%	114%	36%	25%	-20%	0%

Source: Calculations based on Eurostat, Structural business statistics (SBS), 2019.

Further investments to comply with regulatory and policy changes that have been introduced by the Dutch government to mitigate the effects of climate change will subsequently drive the demand for finances. According to the Agri-food survey, agri-food enterprises in The Netherlands indicated that regulatory issues, trade barriers and administrative constraints are the biggest difficulties they faced in 2018 (Figure 18). In particular, 39% of the respondents in the agri-food sector in The Netherlands experienced these difficulties, compared to only 20% in the EU average. As already discussed in Part I of this report on the agriculture sector, the Dutch government adopted its policy for a circular agriculture. Recently, the Climate Act was introduced into law. The Climate Act sets targets by which The Netherlands must reduce CO_2 emissions by 49% in 2030 compared to the level in 1990. To achieve this goal, the government, companies and civil society organisations have committed to a Climate Agreement. It also contains agreements that these organisations have made among themselves, including achieving 95% less CO_2 emissions in 2050 compared to the CO_2 emissions level in1990. In addition, by the end of 2020, The Netherlands must emit at least 25% fewer greenhouse gases than in 1990[105]. It is to be seen what the impact of this Climate Agreement will be for firms' ways of doing business and their bottom lines and the demand for finance by the agri-food sector in particular. However, it is likely that additional investments will be required from industry to invest in innovative ways to reduce various sources of emissions from agricultural businesses, such as through using more sustainable inputs (e.g. renewable energy sources).

103 Information from interviews.
104 https://www.foodvalley.nl/.
105 https://www.rijksoverheid.nl/onderwerpen/klimaatverandering/klimaatbeleid.

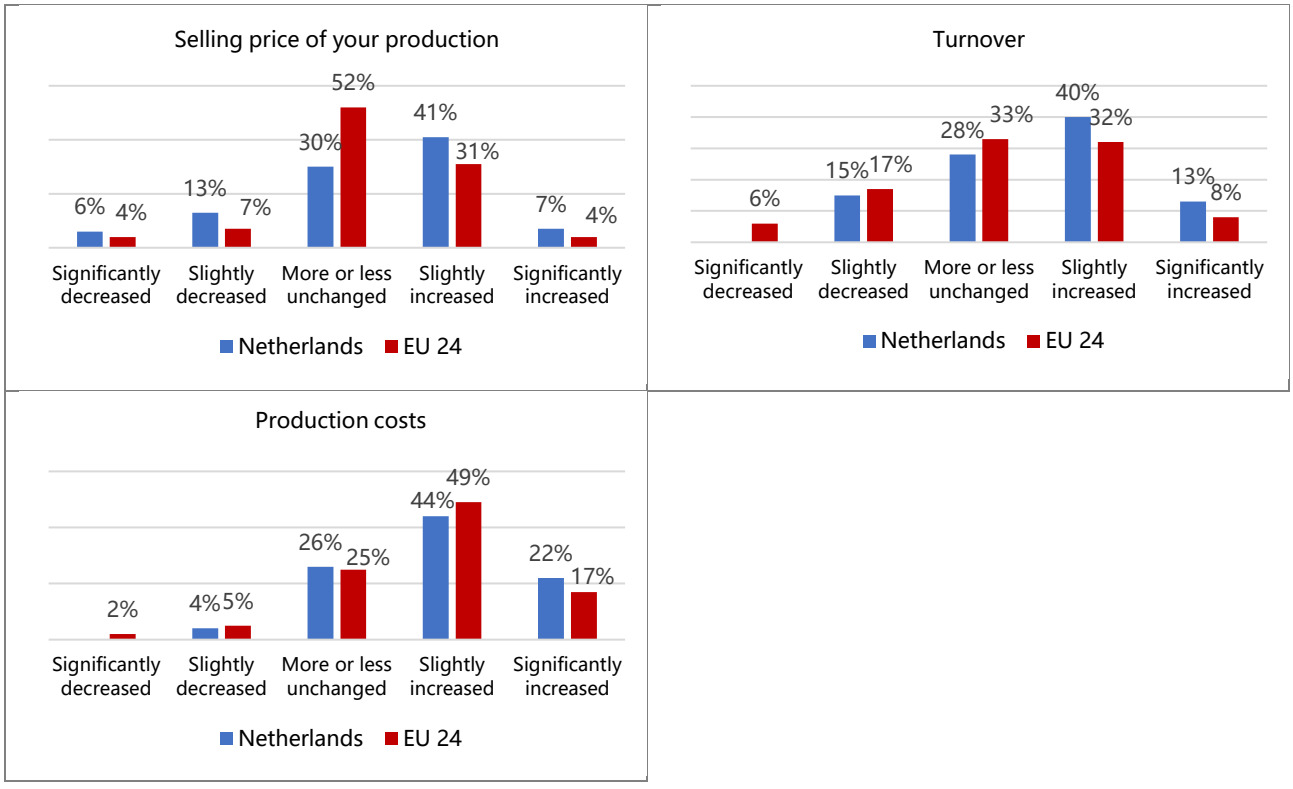
Figure 18: Difficulties experienced by agri-food enterprises in 2018



Source: Agri-food survey.

High production costs are also identified as one of the main difficulties faced by Dutch agri-food enterprises, with 27% of the respondents indicating that high product costs are a main problem for them. At the same time, access to market and selling prices are much less of a concern for enterprises in The Netherlands when compared to the EU 24 average (Figure 18). This indicates that the cost increase might be compensated by increasing prices for the output and good export performance. This finding is confirmed by Figure 19 suggesting that the share of Dutch agri-food enterprises indicating a cost increase in 2018 is overall in line with the EU 24 average, while a higher share of enterprises than in the EU 24 declares an increase in selling prices and in turnover.

Figure 19: Changes in key economic indicators of agri-food enterprises in 2018



Source: Agri-food survey.

3.2.2. Analysis of the demand for finance

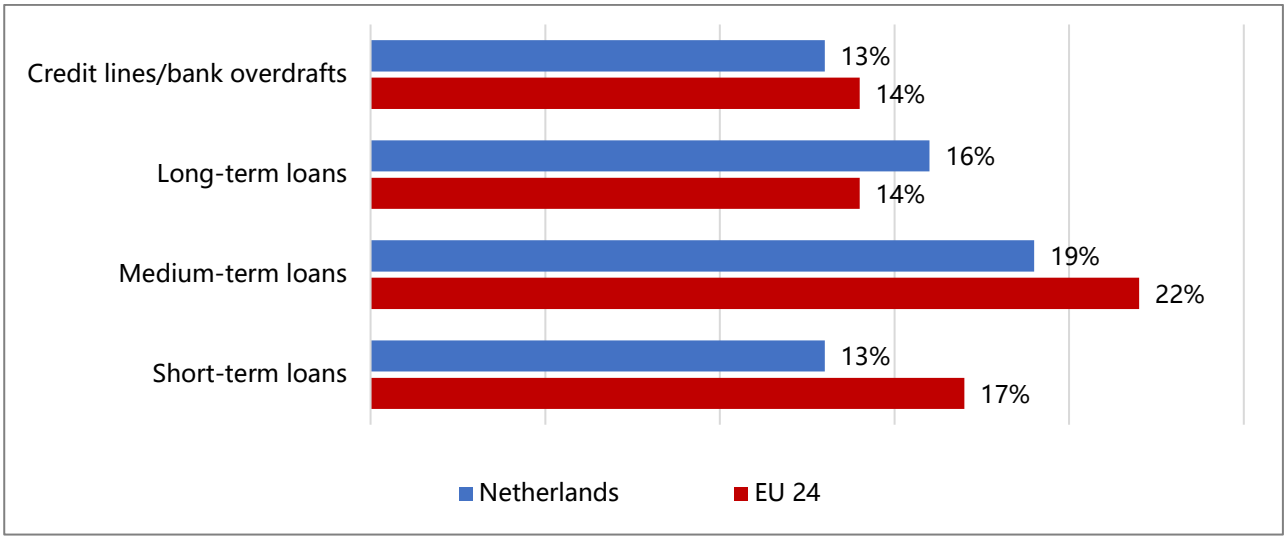
The potential total demand for finance combines both met and unmet demand. The met demand consists of the value of all applications for finance which were accepted by the financial institutions in the relevant year. The unmet demand consists of the assumed value of applications rejected by a financial 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 The Netherlands is estimated at EUR 251 million.

In 2018, 46% of Dutch agri-food companies applied for finance, the same to the average EU 24 level. Bank loans are the main source of financing for Dutch agri-food businesses and in 2016, for example, about 63% of the total financing to the businesses was through bank loans[106].

According to results from the Agri-food survey (Figure 20), the highest share of the respondents to the survey applied for medium to long-term loans, 19% and 16%, respectively. Short-term loans and credit lines were together responsible for 26% of credit applications in 2018.

Figure 20: Agri-food enterprises applying for finance, by financing product in 2018



Source: Agri-food survey.

The most common reason for agri-food companies to apply for a loan is to invest in capacity expansion (Figure 21). According to the Agri-food survey, 81% of respondents indicated that they have applied for a loan to expand their production capacity (the EU 24 average was 71%). Interviews of stakeholders in the agri-food sector confirmed this. In particular, due to the growing demand for Dutch agri-food from export markets, these investments are often seen in the dairy sub-sector, vegetable processing and potato processing sub-sectors[107].

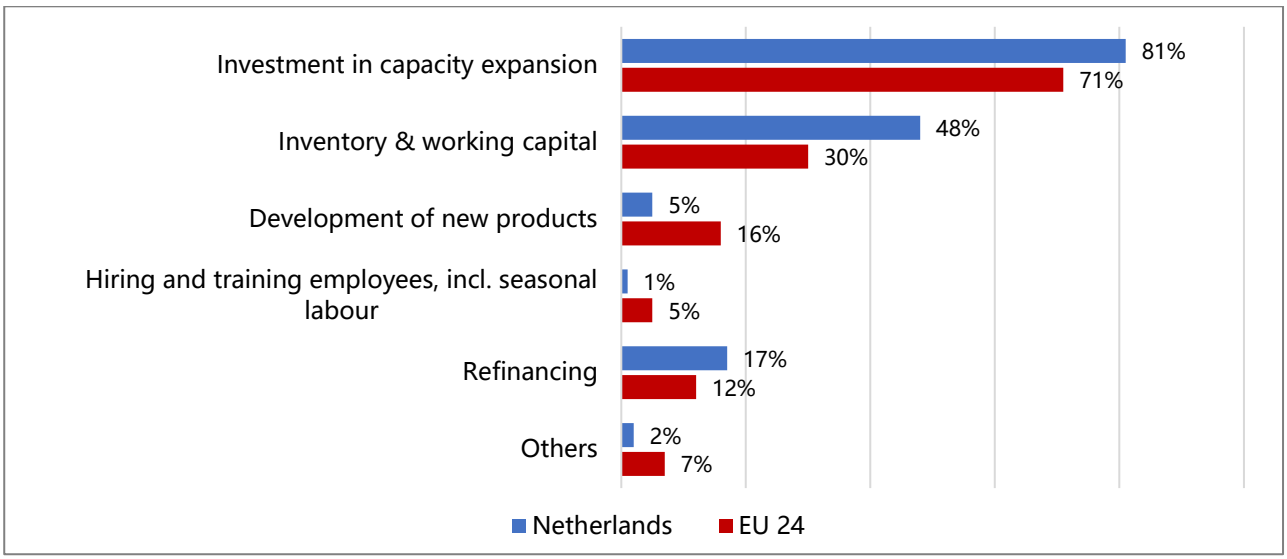
The second most common reason that Dutch agri-food firms apply for a loan is for inventory and working capital. Nearly Half (48%) of the Dutch agri-food firms compared to the average of 30% agri-food firms in the EU 24 indicated this is the reason they applied for a loan. Stakeholders confirmed that enterprises in the Dutch agri-food sector frequently sought finances to cover their working capital needs. However, they did not specify which category of working capital (i.e. inventory, account receivables, cash or current liabilities, and staff remuneration) is the most common reason for loans.

106 Centraal Bureau voor de Statistiek, 2018, Financieringsmonitor 2018. p. 13, https://www.cbs.nl/nl-nl/maatwerk/2019/05/financieringsmonitor-2018.

107 Information from interviews.

Re-financing is the third most common purpose for Dutch agri-food firms to apply for a loan (17% of the respondents in the Agri-food survey). Developing new products is relatively less often a reason to apply for finance (5% compared to 16% for the EU 24), although the actual share of enterprises investing in new products might be higher based on the considerations in the previous section about the main investment drivers for the sector.

Figure 21: Purpose of bank loans in the agri-food sector in 2018



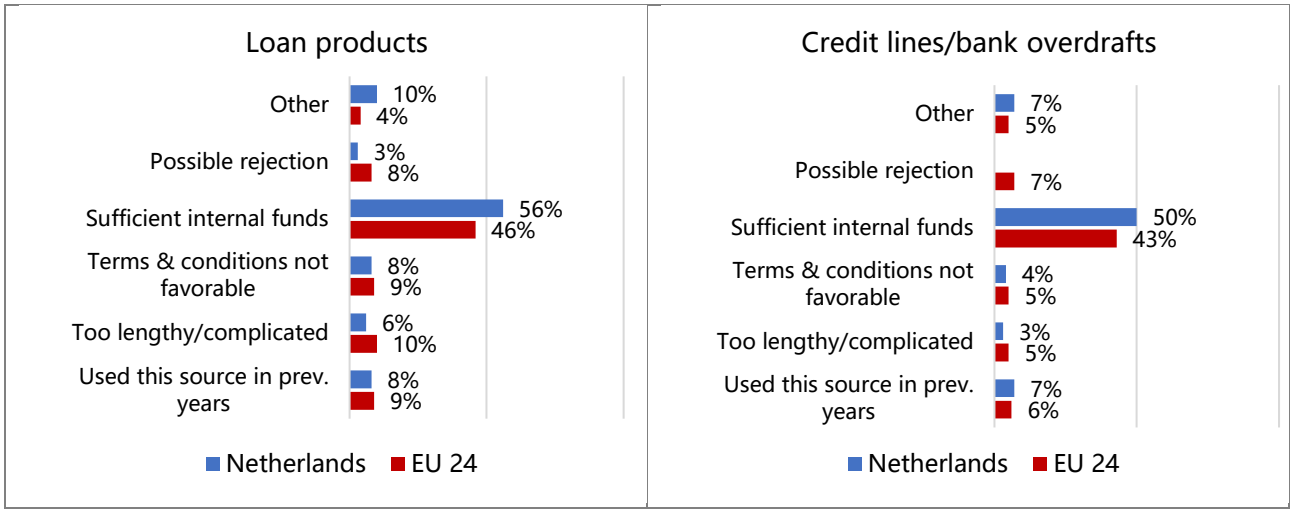
Source: Agri-food survey.

The most frequent reason for companies to not apply for credit was the sufficient internal funds, especially for loan products (56% of respondents indicated this reason in Figure 22). At the same time, 15% of enterprises were discouraged from applying for loans due to the unfavourable terms and conditions. Stakeholders interviewed confirmed the main reason companies do not apply for credit was the sufficient internal funds because many of these companies are multinational with healthy financial positions. This is also true for Small and Medium-sized Enterprises (SMEs) operational in the other sectors of the economy. In fact, three-quarters of Dutch SMEs do not have a need for external financing because some (i) have sufficient internal resources or (ii) simply do not have growth to finance or (iii) do not want to rely on external lending[108]. SMEs that are self-sufficient can finance from corporate profits or private assets of the entrepreneur and also with cash flows from the parent company.

While Dutch agri-food firms can rely on their own financing resources, bank loans play an important role in the sectorial financing, more than for the EU 24 average. According to the Agri-food survey, 60% of agri-food enterprises in The Netherlands (76% in the EU average) consider own financial resources as the most important source for finance. Besides own financial resources, long-term loans (41%) and credit lines are the most important (31%) financing sources for Dutch agri-food firms, closely followed by the other types of financing products. However, the importance of bank loans turns out to be higher in The Netherlands, especially for medium and long-term loans than at EU 24 level.

108 Central Planning Bureau (CPB) (2019). Dutch SME bank financing, from a European perspective. Available at https://www.cpb.nl/sites/default/files/omnidownload/Policy%20Brief%20SME%2009072019_0.pdf.

Figure 22: Reasons for not applying for loans in the agri-food sector in 2018

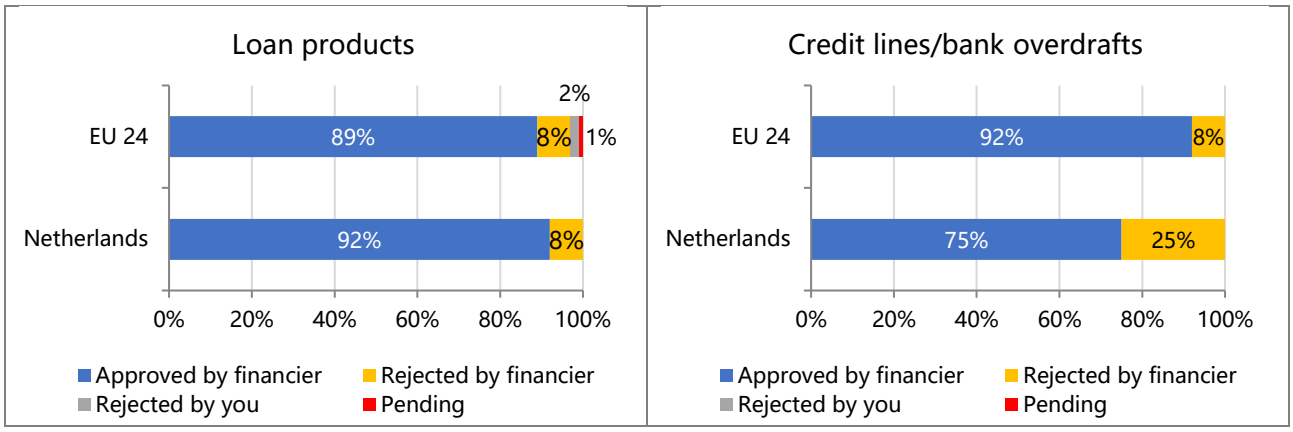


Source: Agri-food, survey.

A 3% share of the agri-food enterprises are discouraged to apply for loan products due to fear of possible rejection (Figure 22). The interviews found that the number of firms that did not apply for loans due to fear of possible rejection is not easy to estimate. This is because companies often receive financial advice during the pre-application process, a decision to not apply for a loan is not recorded in the bank database[109]. According to stakeholders in the agri-food sector in The Netherlands, applicants are particularly discouraged from applying for long-term loans. Indeed, banks tend to prefer investments with a shorter time horizon providing faster returns on investment. Agri-food firms, on the other hand, need loans to support long-term investments that take time to payback (e.g. investments in technologies or R&D). As a result, there is a mismatch between the objectives of banks and borrowers[110] (for further analysis see section 3.3.2).

Credit lines are more often rejected than loans. 8% of banks loans (aggregating all loan categories) have been rejected in 2018 according the Agri-food survey, which is the same as the EU 24 average (Figure 23). Rejections have been reported to be much higher for credit lines (25% against 8% EU 24 average).

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



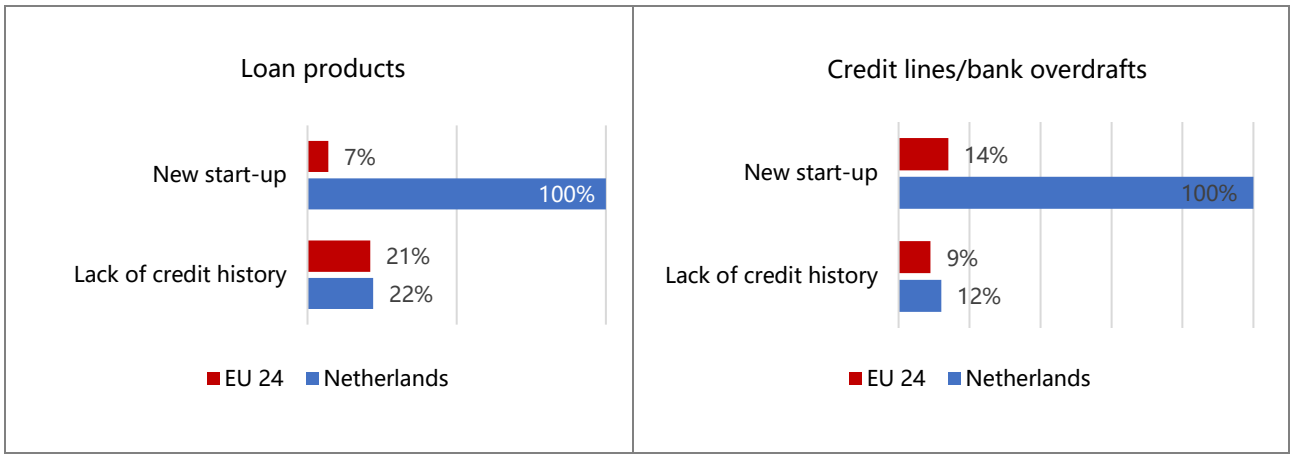
Source: Agri-food survey.

109 Information from interviews.
110 Information from interviews.

The SAFE survey results indicate a 3% rejection rate for loans and 16% for credit lines/bank overdrafts for SMEs[111] in 2018. Based on these results, rejections seem to be more frequent for agri-food enterprises compared to SMEs operating in other sectors of the economy. At the same time, it seems to be confirmed that for all sectors, applications for credit lines are more likely to be rejected when compared to bank loans for all maturities. According to the annual finance monitor by the Dutch Statistics Bureau (CBS)[112], 84% of credit applications by SMEs in The Netherlands were at least partially successful (obtained less than 100% of the requested amount) in 2018.

The main reasons provided by banks to reject loan applications were the fact that the applicant was a start-up company and/or a lack of credit history (Figure 24). According to the Agri-food survey, all of the respondents with a rejected loan application indicated that the main reasons for banks to reject loan applications are the fact that the applicants are start-ups. Interviews with stakeholders confirmed these findings[113]. With business risk perceived by banks as being too high, insufficient collateral/guarantee and the existence of previous yet to be paid back loans, seemed to be the main reasons of rejection for agri-food enterprises in the EU 24, they do not seem to be a problem in The Netherlands.

Figure 24: Reasons loans' rejection in the agri-food sector in 2018



Source: Agri-food survey.

There is a constrained access to finance for innovation and technology to comply with policy and regulatory changes in order to **provide climate adaptation measures**. Considering the new policy changes introduced in The Netherlands, there are increasing needs for investments in innovative ideas to reduce various types of emissions from the production process and develop sustainable agricultural supply chains, innovations in agri-food technologies or disruptive business models. However, due to the risk aversion of banks, these untested ideas are perceived to be risky, affecting negatively the availability of risk capital[114].

A recent publication (see box below) **by the Dutch Central Planning Bureau confirms that the rate of access to finance for SMEs, in general and for all economic sectors, in The Netherlands is substantially lower compared to the EU 28 average and to similar countries.** The report highlights that no clear constraints emerge on the demand side of the market, since overall economic and financial performance of Dutch enterprises is in line with the top performer countries in the EU 28. Constraints in access to finance are mostly attributed to:

111 ECB, 2018, Survey on Access to Finance of Enterprises (SAFE): https://ec.europa.eu/growth/access-to-finance/data-surveys_en.

112 Centraal Bureau voor de Statistiek, 2018, Financieringsmonitor 2018: https://www.cbs.nl/nl- nl/maatwerk/2019/05/financieringsmonitor-2018.

113 Information from interviews.

114 Information from interviews.

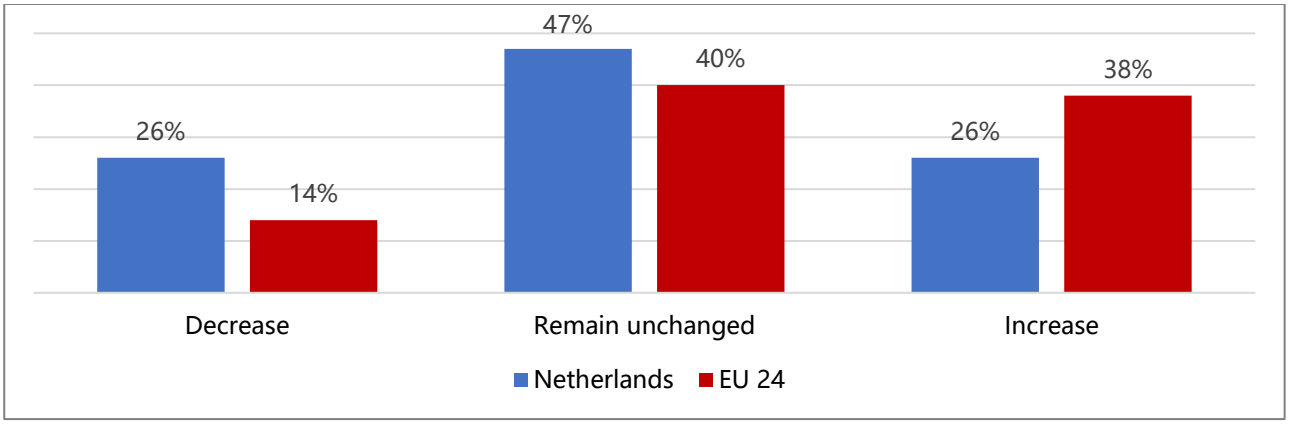
- Asymmetrical information, particularly related to the fact that in The Netherlands there is no credit registry accessible to banks in order to assess credit rating of individual businesses, which is available in other countries (e.g. Belgium, France, Italy).
- Preference in banks' policy for mortgage loans over business loans, also related to a favourable regulatory environment for real estate investment guaranteed by a mortgage.
- Market concentration level, as indicated also by the relatively high interest rates in The Netherlands.

SMEs access to finance in The Netherlands

A recent publication[115] by the Dutch Central Planning Bureau found that in 2017-18, based on the SAFE statistics, shows that Dutch SMEs less often received a bank loan (by 16%) than comparable enterprises in the Eurozone. In 2018, an average of 25% of all SMEs in the Eurozone obtained a bank loan. According to the same study, in 2017–2018**,** 14% fewer loan applications were fully approved in The Netherlands compared to other countries in the EU. Banks in the Eurozone approved on average 74% of all SME loan applications. The low success rate in obtaining bank financing applies to all Dutch companies, but more so to SMEs. The 2009-2018 period shows a steady trend, although in recent years the difference between The Netherlands and the Eurozone regarding the average number of applications has grown, while for the number of rejections the difference has decreased. Most businesses that do not apply for a loan have sufficient financial means at their disposal. In addition, in The Netherlands as opposed to elsewhere in Europe, the expectation of a loan application being rejected appears to be more frequently a reason that SMEs to not apply for a loan.[116]

The demand for finance in the agri-food sector is expected to increase in the next few years. The majority of stakeholders interviewed believe that as long as economic conditions remain strong, investments are not expected to decrease. In particular, policy interventions such as those encouraging a more circular and sustainable agriculture are likely to push for more investments. On the contrary, 47% of Dutch respondents to the Agri-food survey expect that the demand for finance by their enterprise to remain unchanged for the next two to three years (compared to 40% at EU 24 level); whereas 26% of the respondents indicated they expected their demand for finance either to decrease or increase in the near future (Figure 25). Results for the EU 24 show that 38% of agri-food enterprises expect their demand for finance to rise in the next couple of years.

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



Source: Agri-food survey.

115 Central Planning Bureau (CPB), 2019. Dutch SME bank financing, from a European perspective: https://www.cpb.nl/sites/default/files/omnidownload/Policy%20Brief%20SME%2009072019_0.pdf.

116 Idem.

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 The Netherlands 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 Dutch agri-food sector

- There are many types of financial providers that supply credit to the agri-food sector. While some sub-sectors in agri-food mainly rely on banks, others could access credit from other sources such as private equity, public capital markets and institutional investors.
- There are a number of national and regional governmental initiatives in The Netherlands such as the SME loan guarantee scheme for SMEs and Corporate Finance Guarantee for medium and large-sized enterprises which are applicable for agri-food firms. The Seed Capital fund is specifically established for agriculture, horticulture and food sector. SDE+ is an input subsidy that encourages companies, institutions and non-profit organisations to generate renewable energy to be used in their operation.
- The total outstanding loan volume to the Dutch agri-food sector is estimated at EUR 14.6 billion in 2018.
- Long-term loans are the most common loan type for all firm-size categories.

3.3.1. Description of finance environment and funding availability

3.3.1.1. Finance Providers

There are a large number of financial sources for the Dutch agri-food sector[117], including the traditional channel through the three main banks (Rabobank, ABN AMRO and ING), private equity, public capital markets and institutional investors. The market shares of banks presented in the report of the agriculture sector apply here as well as those shares for both agriculture and food. Bank loans and leases are still the most common form of financing, especially for SMEs[118].

The Dutch government also provides support to SMEs in the agri-food sector in the form of guarantee and equity schemes. A brief overview of the Dutch government support is provided below and more details on the guarantee and equity schemes are outlined in the next section:

- The Ministry of Economic Affairs and Climate has an agreement with a number of banks and non-bank financiers for two main guarantee schemes, including the Borgstelling MKB-kredieten (BMKB) or SME loan guarantee[119] and Garantie Ondernemingsfinanciering (GO) or Corporate Finance Guarantee[120].
- In the Seed Capital scheme for agri-horti-food sector[121], the Dutch government (Ministry of Economic Affairs and Climate) and private investors jointly finance a fund that invests in promising techno-starters and innovative start-ups in agri-food and horticultural sector. This is an equity scheme.

105 Information from stakeholder interviews.
106 https://dashboards.cbs.nl/v1/financieringsmonitor2018_180023/.
107 https://www.rvo.nl/subsidies-regelingen/borgstelling-mkb-kredieten-bmkb.
120 https://www.rvo.nl/subsidies-regelingen/garantie-ondernemingsfinanciering-go.
121 Terminology used by RVO. https://www.rvo.nl/subsidies-regelingen/seed-capital/overzicht-seedfondsen-sector/seed-fondsen-agri-horti-food-sector.

The Ministry of Economic Affairs is also providing an operating grant, called SDE+[122] to encourage the production of renewable energy by companies in The Netherlands. For the agri-food sector, this can be seen as input subsidy for enterprises that also produce part of their energy from renewable sources such as biomass, or photovoltaic.

In The Netherlands, provincial funds to foster regional economic development are managed by regional development agencies. Most of them have financial and advisory support programmes available for agri-food entrepreneurs at every stage of their development with grants, loans, and equity participations. Examples of regional funds are BOM, LIOF, NOM, Oost NL, Zeeuws Participatiefonds, Innovation Quarter, Horizon Flevoland, Wadinko and Startgreen Capital.

Alternative investment providers (including crowdfunding and impact investment funds) are open to meet financial needs of "sustainable/green" agri-food entrepreneurs. MVO Nederland, the largest network of partners who innovate and implement innovations to reach the goals in the new economy in The Netherlands organised a match making event between innovative and sustainable agri-food entrepreneurs and alternative finance providers in September 2019. The following alternative finance providers to this niche market were invited:

- Dutch Good Growth Fund (RVO);
- PYMWYMIC;
- Stichting DOEN;
- a.s.r. grondfonds;
- Oneplanetcrowd;
- Nationaal Groenfonds;
- ForrestEffect Fund.

Their products are listed in the section 3.3.2.

To further encourage innovations and investments in start-ups and SMEs, there are several regional scale-up programmes. Typically, programmes like Foodvalley Agri-food 2030, Agri-food Scale-Up, PIM Noord Holland and AgriFoodCapital are organised and funded by multiple stakeholders in the region. For example, Foodvalley combines science, business and research institutes with a focus on food in Gelderland[123]. Their Agri-food 2030 programme is proposing an integrated co-investment agenda driven the Province of Gelderland, Topsector Agri-food, local municipalities, multinationals and the local scientific community. Adding up to EUR 42 million in total of required investments 2020-2030[124]

Specific financing for the agri-food sector is now also available under the EAFRD through the national rural development programme. The financial instrument for supporting market innovations, which was introduced in the RDP from the off-set, was taken out from the programme in October 2016.

3.3.1.2. Financial Products

Similar to the agriculture sector, banks provide loans to the agri-food sector under the product category of business loans in The Netherlands. Table 7 provides an overview of the main types of financing solutions offered by banks to businesses and to agri-businesses.

122 In Dutch: Stimulering Duurzame Energieproductie. Information can be found: https://english.rvo.nl/subsidies-programmes/sde and https://www.rvo.nl/subsidie-en-financieringswijzer/stimulering-duurzame-energieproductie-sde.

123 https://www.regiofoodvalley.nl/en/.

124 https://gelderland.stateninformatie.nl/document/7806782/1/PD__Bijlage_AgriFood_2030_tweede_tussenrapportage_%28PS2019-566%29.

Table 7: Main financial solutions offered by banks to agri-businesses

Main features	Business loans	The Euribor Optimal Loan	Credit line/overdrafts	Green loans	Lease	Loans with state guarantee
Objective	Large investments, e.g. purchase of land, construction/ renovation of farm buildings, sheds and warehouses	Small investments, e.g. purchase of livestock, agricultural machinery & equipment, irrigation plants, etc.	Short-term cash flow needs to cover temporary imbalances between revenues & costs of the farmer / company	Investments with a positive impact on nature and the environment	Machine, equipment and vehicle	A loan with up to 90% guarantee from the government, financing possible with insufficient collateral
Duration	12 months – economic life of assets (up to 30 years)	Max 5-7 years	• Closed-ended • Open-ended	Max 10 years	2-8 years	Up to 6 years
Interest rate	1-14% fixed 2-13.5% variable	1-12.5%	1-12.5% based on EURIBOR rate 5-12.5% based on bank rate	Fixed interest rate lower than market rate	1-14% Fixed interest	Fixed interest rate

Source: Banks' websites, 2019.

The Dutch financial institutions offer loans to agri-food firms for both capital investment and working capital financing. The most common loan type is long-term loan for all firm-size categories.

The Dutch national government does not provide state funded loans to agri-food firms but has in place several guarantee schemes to address the issue of the lack of collateral faced by start-ups and SMEs, including:

SME loan guarantee (BMKB)

The scheme has been in place in The Netherlands since 1915. With BMKB, the Ministry of Economic Affairs and Climate partially guarantees companies that would like to take out a loan but cannot provide the finance providers with enough security (such as 'collateral' in the form of buildings or machines).

The budget for BMKB in 2019 is EUR 640 million for banks and EUR 25 million for non-bank financiers[125]. The BMKB has been extended up to and including 30 June 2022. Companies with a credit need of up to EUR 266 667 can finance three-quarters of this amount with BMKB credit, otherwise the limit will be no more than half of the credit. A government guarantee of 90%, funded through national budget, applies to the BMKB credit.

The companies that are eligible for this type of guarantee scheme are companies with a maximum of 250 employees (FTEs) with an annual turnover of up to EUR 50 million or a balance sheet total of EUR 43 million. These companies can be regular, start-up or small-sized credit enterprises. SMEs can ask their affiliated financiers to make use of the BMKB if necessary. SMEs do not apply directly for BMKB loans but do so through the accredited financial intermediaries. The process of BKMB proceeds as follows[126]:

- The SME application for a guarantee credit coincides with the credit application with the financier.

125 https://www.rvo.nl/subsidies-regelingen/borgstelling-mkb-kredieten-bmkb.

126 https://www.rvo.nl/subsidie- en- financieringswijzer/borgstelling- mkb- kredieten- bmkb/aanvraaginformatie- borgstelling-mkb-kredieten.

- The financier decides whether to grant the SME a guarantee credit and under which conditions.
- If the financier wants to provide the SME with a loan, the SME must negotiate the credit terms with the financier. The financier must comply with the BMKB conditions.
- After the offer has been signed, the financier registers the provided guarantee credit with The Netherlands Enterprise Agency (RVO).

When the guarantee credit is taken out, the financier pays a one-off guarantee commission to RVO. This commission is based on the guarantee credit and the rate depends on the term. The financier charges the applicant this commission. Table 8 presents the commission rates applied to loans with different terms.

Table 8: Guarantee commission

Number of quarters	Regular, starters and small-sized credit enterprises	Innovative enterprises
up to 8	3.90%	5.55%
9 to 24	4.25%	6.10%
25 to 48	5.85%	8.35%

Source: RVO, 2019.[127]

The term of the guarantee is a maximum of six years from the date of the first repayment. If the loan is intended to be invested in a building, a maximum period of 12 years applies. The rules that apply to a guarantee credit, such as the size, duration, repayment and suspension, depend on the type of business (starter or established entrepreneur) and the purpose of the loan. The applicant starts to repay the loan no later than six months after credit signing. Depending on the type of guarantee and company, it is possible to suspend the loan for a specific duration[128].

There is not specific information on the sub-sector breakdown of the scheme so the share of usage by agri-food sector cannot be obtained[129].

Corporate Finance Guarantee (GO)

The GO scheme offers companies who need credit the opportunity to arrange financing that would otherwise not have been possible. The scheme is for medium and large-sized companies with substantial activities in The Netherlands and for entrepreneurs in Bonaire, Sint Eustatius or Saba[130].

The GO allows banks to get a 50% state guarantee on medium and large loans. Loans of up to EUR 50 million and up to EUR 25 million are guaranteed.

This state guarantee, funded through the national budget, reduces the risk for banks to receive corporate financing and increases their ability to lend money. Since 2009, participating banks have provided GO loans for a total of more than EUR 3.5 billion. The government has, therefore, issued a total of more than EUR 1.75 billion in guarantees.

The budget for GO is EUR 200 million in 2019. Of this, agri-food sector has been using between 5-10% of guarantee funds, which means about EUR 10 million-EUR 20 million yearly.

127 Ibid.
128 Ibid.
129 Information from stakeholder interviews.
130 https://www.rvo.nl/subsidies-regelingen/garantie-ondernemingsfinanciering-go.

Seed Capital for agri-horti-food sector

The Ministry of Economic Affairs and Climate Policy aims to support technical and innovative start-ups. The Ministry grants capital to investment funds that invest risk capital in innovative entrepreneurs in the technological and creative sector through this scheme. The RVO is responsible for its implementation[131].

Both Dutch and foreign investors can make use of Seed Capital Scheme. The 2020 tender for investors in all eligible sectors[132] was open from 1 January 2020 to 31 March 2020 and has a budget of EUR 22 million. This budget is available for investors who want to set up an investment fund[133].

The scheme provides a loan whose amount cannot be higher than the private investment amount of the fund, up to a maximum of EUR 10 million. This used to be EUR 6 million. The maximum average investment per company, measured at the end of the investment period is EUR 2 million, an increase from the previous amount of EUR 1.2 million. [134]

Under SEED Capital for agri-horti-food sector, there are currently four investment funds:

- **Brightland Agrifood Funds**[135] is an independent entity funded by private and public investors. It focuses on the agriculture and agri-food sectors (healthy food, smart farming and biomass process technologies) with added value for and by the regional Brightlands ecosystem. The fund has a budget of EUR 12 million and expects to make eight to ten participations in the coming six years.
- **EVCF II Growth Capital**[136] focuses on innovative business-to-business companies with a proven technology and revenue model, with the potential for accelerated scaling up. EVCF II Growth Capital has a budget of EUR 11.4 million with the objective to build up a portfolio of approximately ten participations in the coming five years. Typically, this fund takes a minority interest (possibly in combination with loans).
- **Future Food Fund**[137] focuses on Dutch companies that want to have an impact on the agri-horti-food sector with innovative technology and/or disruptive business models. The fund budget is EUR 12 million and they aim for capital injections of EUR 0.5 million– EUR 3.5 million.
- **SHIFT Seed Fund**[138] is public-private fund that focuses on innovations in the agri-food and agriculture sectors with a clear impact on sustainability or health in general. More specifically, the fund's investment themes are 'Agriculture & Nutrients', 'Food & Health', 'Bio-Based Technologies', and 'Water & Clean Technologies'. The fund dares to step in early and takes on the role of 'lead investor'. The average investment size per investment is EUR 1.2 million. Typically, they invest in several rounds based on previously agreed milestones. The minimum investment amount is EUR 100 000 per investment and can invest up to EUR 2.4 million per investment. A follow-up on investment can be made from the parent fund SHIFT Invest in a number of participating interests.

There are a number of conditions applied to investment funds to be eligible for the Seed Capital Scheme[139]:

- An investment fund needs to set up a fund with at least three shareholders or three partners.

131 https://english.rvo.nl/subsidies-programmes/seed-capital.
132 These sectors include agri-horti-food, energy, high tech, IT, life science and health and logistics.
133 https://www.rvo.nl/subsidies-regelingen/seed-capital.
134 Ibid.
135 https://www.rvo.nl/subsidies-regelingen/seed-capital/totaaloverzicht-seedfondsen/brightlands-agrifood-fund.
136 https://www.rvo.nl/subsidies-regelingen/seed-capital/totaaloverzicht-seedfondsen/evcf-ii-growth-capital.
137 https://www.rvo.nl/subsidies-regelingen/seed-capital/totaaloverzicht-seedfondsen/future-food-fund.
138 https://www.rvo.nl/subsidies-regelingen/seed-capital/totaaloverzicht-seedfondsen/shift-seed-fund.
139 https://www.rvo.nl/subsidie-en-financieringswijzer/seed-capital/voorwaarden.

- The fund takes the form of an NV[140] (a publicly listed company), BV[141] (private company with limited liabilities), CV[142] (a limited partnership) or a VOF[143] (Dutch general partnership).
- The fund focuses exclusively on removing the equity gap at the techno starter and / or creative starter. That means a shortage of equity or problems with raising it.
- Investments must be made in the first six years of the fund.
- The fund must be liquidated no later than 12 years after the start.
- In the fund plan, the fund needs to describe how it will supervise the techno starter and creative starter.

SDE+

Under this scheme, producers who generate renewable energy receive finance. Production of renewable energy is not always profitable because the cost price of renewable energy is higher than the market price. SDE+ compensates producers for the unprofitable component[144] for a fixed number of years, depending on the technology used.

The technologies that are eligible for this subsidy scheme include:

- renewable electricity;
- renewable gas; and
- renewable heat or a combination of renewable heat and electricity (CHP).

For energy produced with biomass, there is a system of controls in place to ensure that it meets criteria for sustainability. The scheme is only applicable for companies, institutions and non-profit organisations. The project must be realised in The Netherlands.

The scheme issued two rounds of subsidy applications in 2019, one in the spring and one in autumn. The budget for the autumn round was EUR 5 billion.

Alternatively, SMEs in the sustainable agri-food sector can seek funding from regional development agencies and the Dutch impact investment community. To boost innovation and growth in the regions, the Dutch regional development agencies provide risk capital in the form of grants, loans, and equity investments to agri-food SMEs. Dutch Impact investors that have sustainable agri-food in their investment policy are mentioned below:

- **PYMWYMIC**: A Dutch impact investor with themed sub-funds in sustainable agriculture. They aim for strong financial return potential, seeking from EUR 250 000 to EUR 4 million in funding and providing active participation. Their investment time frame is five to eight years from start partnership with the company they agree to fund[145].
- **ForestEffect Fund**: The Fund provides equity and other forms of finance to SMEs in the full value chain of agricultural commodities. ForestEffect Fund aims to become the leading investment fund for sustainable agricultural supply chains. The Netherlands Authority for the Financial Markets (AFM) registered ForestEffect Fund is a public private partnership between three private investors and the Dutch government[146].
- **National Green Fund**: The Dutch National Fund for Green Investments develops financial instruments and bridges public and private means by breaking down (financial) barriers. National Green Fund provides loans, possibly subordinated and in some cases equity. Mortgage security, pledges,

140 In Dutch, naamloze venootschap.
141 In Dutch, besloten vennootschap.
142 In Dutch, this is called a commanditaire vennootschap.
143 In Dutch, this is called a vennootschap onder firma.
144 The difference in prices is called the unprofitable component.
145 https://pymwymic.com/.
146 https://www.foresteffectfund.com/foresteffect-fund.

guarantees and contracts can be considered as collateral for loans to companies with a minimum size of EUR 100 000[147].

- **DOEN Foundation**: With the contribution of the Dutch Charity Lotteries, DOEN supports sustainable food initiatives annually through grants, equity investments and loans. Both large and small initiatives and work from the philosophy, subsidise where necessary, invest equity, provide loans and guarantees where possible. DOEN is looking for innovative front runners who work on fair and sustainable food initiatives. DOEN focuses on sustainable entrepreneurs themselves or on parties that facilitate them. When applying for funding, DOEN looks at (i) closing local cycles and new models that optimally use raw materials; and (ii) whether the chain is transparent and balanced. Players work more closely together, and every link receives a fair share of the revenue. DOEN offers the financial products presented in the table below.

Table 9: Financial products offered by DOEN

Financial products	Characteristics
Subsidies	• a project grant – an amount of money provided for implementing a specific project from or within an organisation; • a programme grant – an amount of money to support the introduction of a certain programme in an organisation; • an institutional grant – an amount of money to support an organisation as a whole; • a subsidy with conditions – an amount of money, which is refunded in the event that an organisation succeeds in generating sufficient income itself after the start-up period.
Loans	• How the loan is structured, and which agreements are made depends on the initiative and the expected repayment capacity. Repayment and interest received are used by DOEN for green, social or creative initiatives that help achieve the goals of DOEN.
Participations	• Over the past 25 years, DOEN Participaties has become the largest impact investor for sustainable and social start-ups in The Netherlands. At the moment DOEN's portfolio consists of 65 investments and convertible loans and 12 fund investments. DOEN Participaties invests directly in sustainable or social start-ups with convertible loans or equity. Initial investments are between EUR 50 000 and EUR 500 000. In addition, they offer the option to continue investing[148].

Source: DOEN, 2019.

EAFRD support for agri-food sector

In the 3th modification of the RDP, on 20/12/2017, a new sub-measure 4.2 physical investments for the processing and marketing of agricultural and horticultural products, in **particular for the potato starch industry** was introduced into the PDR.

With the introduction of this sub-measure 4.2, the Netherlands wants to target additional support for investments in the region of 'Veenkolonien' that consist of peat areas; an area that is economically behind what concerns its agriculture sector because of structural disadvantageous local circumstances, and in

147 https://www.nationaalgroenfonds.nl/.
148 https://www.doen.nl/.

particular **for support in the processing and marketing of starch potatoes**, for which investments are an added value both for the processors as well as their members, namely the farmers, and would contribute to an improved quality and higher added value of the starch potatoes supplied. This will also strengthen the relationship and synergy between agriculture sector and the processing/marketing sector of the starch potatoes. Investments support can either be for modernisation of farms, or support for innovative technics, products or processes that are needed for the innovations, and will be run together with measures 1 (Training and Advice) and/or 16 (Co-operation).

The EAFRD Guarantee Fund instrument for Risky Innovations (GMI), unfortunately, did not materialise due to the high concentration of bank financing in just few players who did not accept to adapt their systems and procedures to what was required under the EAFRD as eligibility check. As an outcome, the GMI was continued through national schemes.

3.3.2. Analysis of the supply of finance

Bank products for the agri-food sector are classified into the four categories, similar to that for the agriculture sector: long-term investment loans, long-term working capital, credit lines and overdrafts (short-term) and other loans (short and medium-term). According to stakeholder interviewed, long-term investment loans are the most common type of finances that agri-food firms apply for.

The total outstanding volume of loans to agri-food provided by banks in The Netherlands in 2018, based on Rabobank's data is estimated to be EUR 14.6 billion in 2018.

Table 10: Outstanding loans to the agri-food sector, EUR billion

	2015	2016	2017	2018
Rabobank loan portfolio to F&A (Annual Reports)	97.8	102	97.8	103.1
of which in The Netherlands	35.0	37.5	36.9	38.1
of which to the agri-food sector	6.5	7.0	6.9	12.1
Total outstanding loan volume to agri-food sector[149]	7.9	8.4	8.3	14.6

Source: own elaboration, Rabobank annual reports, and interviews.

Although there are a large number of financial sources for Dutch agri-food firms, when it comes to bank financing, **the Dutch credit market is highly concentrated as there are only three main banks**, including Rabobank, ABN AMRO and ING. As such, the competition in the Dutch credit market is not particularly high. This can be seen in the higher interest rates paid by Dutch businesses than those by other countries in the EU 28[150] (see also further down in this section).

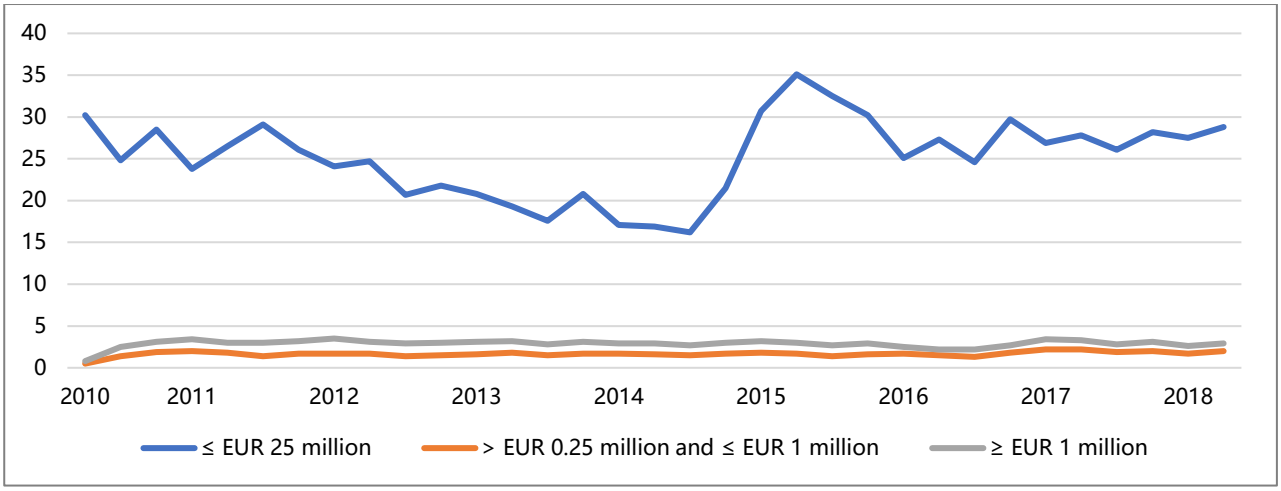
The main constraint on the supply side of the credit market for agri-food sector in The Netherlands as identified by stakeholders is the mismatch between the investment horizons of loan applicants and financing providers. In the agri-food sector, there is a longer view with regard to financing, especially at the early stages as so many of the needed investments would have a longer payback period (for example, investment in agricultural research and development). This suggests that agri-food firms would look to obtain more long-term loans. For financiers such as banks or institutional investors, faster returns on investment are preferable. As such, financial providers prefer to offer short and medium-term loans.

Low appetite from banks to finance innovative investment. Feedback from interviews indicates that it is challenging for agri-food start-ups and SMEs to attract capital from commercial parties to start and grow market innovations. Due to the high financial risk of market innovations, these loans are not or hardly provided. This while innovative entrepreneurs in most cases can meet the solvency and track record requirements.

149 Based on 83% Rabobank market share.
150 Information from interviews.

The trend for new loans of less than EUR 0.25 million and those between EUR 0.25 million and EUR 1 million are relatively stable while that for loans over EUR 1 million has been declining since the financial crisis up to 2015 when it started to increase again[151]. It is important to note that this is the trend that apply to businesses in The Netherlands in general and agri-food sector is not an exception (Figure 26).

Figure 26: New loans to the Dutch agri-food enterprises by amount, 2010-2018, EUR million



Source: DNB[152].

Supply growth might not be sufficient to meet a growing demand. In 2018, credit supply continued to ease for all size of enterprise. The ease came from changes in credit standards that were lowered for the first time since 2015 in the country. Credit standards are banks' internal guidelines on loan approval criteria. Financial institutions however reported rejecting a higher share of loan applications, throughout the fourth quarters of the year. This suggests a loan demand growing faster than the supply[153].

As already discussed in section 3.2.2, **some general elements related to SMEs financing in The Netherlands might also affect the supply of finance to the agri-food sector**:

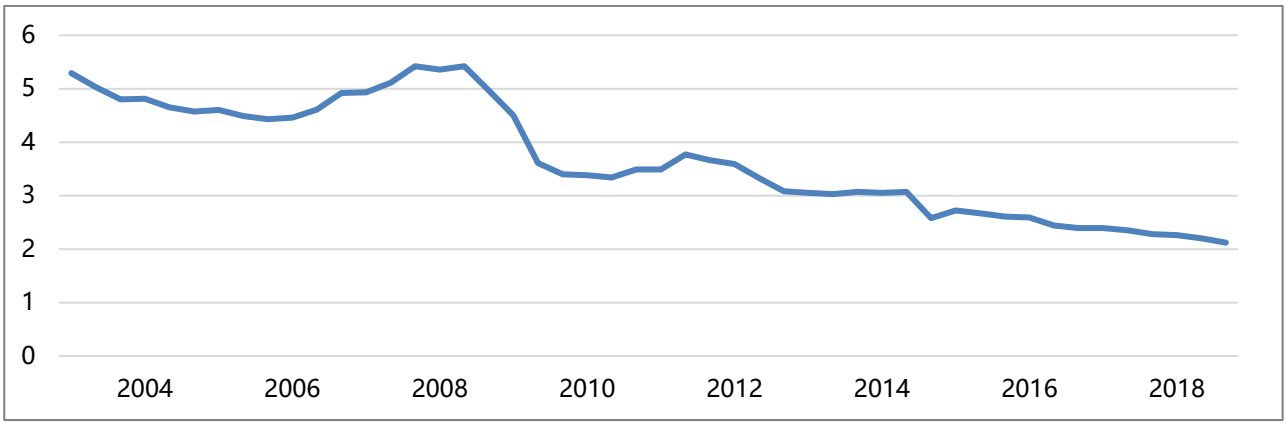
- Asymmetrical information, particularly related to the fact that in The Netherlands there is no credit registry accessible to banks.
- Preference in banks' policy for mortgage loans over business loans.

The overall banking sector does not face particular constraints. **The capital position of the Dutch banking sector has improved considerably over the past years.** The risk-weighted capital ratio (core equity capital against its total risk-weighted assets) in the second quarter of 2018 came to 16.7%, compared with 13.6% in 2014[154].

While interest rates faced by businesses in The Netherlands might be higher than those in other EU country, **overall there has been a declining trend in interest rate applied to outstanding loans** (Figure 27). From the height of over 5.5% post the financial crisis, the interest rates on outstanding loan are averaging just above 2% in 2018. The trend is observed throughout the global credit market following the financial crisis. This suggests that there is not a liquidity constraint on the supply side and that the debt servicing charges are declining.

151 DNB, https://dashboards.cbs.nl/v1/financieringsmonitor2018_180023/.
152 Ibid.
153 Bank Lending Survey, 2019, https://statistiek.dnb.nl.
154 https://www.dnb.nl/en/binaries/OFS_Najaar_2018_ENG_tcm47-379387.PDF.

Figure 27: Interest rates on outstanding loans in The Netherlands, 2004–2018, %



Source: DNB,[155] Average interest rate on outstanding loan to non-financial corporations, 2019.

EAFRD support for agri-food sector

For the new sub-measure 4.2 in the Dutch RDP, the support covers the physical investments at the level of the processor of the starch potatoes, such as, for example, improved control of inflow at the processor as well as new techniques to measure amino acid and protein content of the starch potatoes. Until the end of 2018, there is no expenditure under it, with two projects of a combined EUR 0.9 million total public financing started in 2019. As it is a new form of support and is combined with the implementation of two other measures from the RDP, its implementation will develop in 2020-2023.

155 https://dashboards.cbs.nl/v1/financieringsmonitor2018_180023/.

3.4. Financing gap in the agri-food sector

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

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

- The financing gap for the Dutch agri-food sector is estimated to be EUR 251 million.
- The gap is the largest for small-sized enterprises.
- Long-term loans hold the share of largest gap.
- The financing gap is driven by the rejections of loans by start-ups and small-sized enterprises due to the lack of track records and the risk aversion by banks, in particular when it comes to financing innovations.
- The financing gap is also driven by the preference of banks to not lend long-term loans to agri-food enterprises. Concentration in the banking market also plays a role as few players dictate its development.
- There is currently no liquidity constraint on the supply side. The financing gap might widen in the near future due to the increases in demand for finance.

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 Dutch firms (see A.5 TG II: Agri-food survey for more information). The methodology used for calculating the gap is the same as the methodology used for the agriculture sector (see Annex A.3 Methodology for financial gap calculation).

The financing gap arises from unmet financing demand from economically viable firms[156]. As explained in section 3.2.2, the unmet demand for finance includes:

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

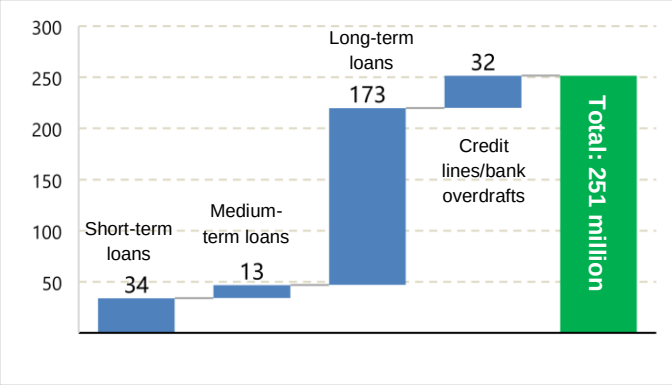
For the purpose of this study, 'turnover growth' is used as a proxy of firm viability. In particular, we make the hypothesis that all enterprises which reported a stable (non-negative) turnover growth can be considered as viable.

The financing gap for the Dutch agri-food sector is estimated to be EUR 251 million (Figure 28). However, unmet financing needs are concentrated in specific segments of the sector. The financing gap mainly concerns small-sized firms. This is consistent with the finding of the study on Dutch SME bank financing[157]. The type of loans for which the gap is the largest are long-term loans (Figure 28).

156 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.

157 Central Planning Bureau (CPB), 2019, Dutch SME bank financing, from a European perspective. Available at https://www.cpb.nl/sites/default/files/omnidownload/Policy%20Brief%20SME%2009072019_0.pdf.

Figure 28: Financing gap by product in the agri-food sector in 2018, EUR million



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

Small and medium-sized enterprises account for respectively 69.9% and 22.1% of the financing gap. As such, these two groups of enterprises account for a total of over 90% of the financing gap. Broken down by maturity, the financing gap is EUR 172.9 million for long-term loans, EUR 34 million for short-term loans, EUR 31.5 million for credit lines, and EUR 13 million for medium-term loans (Table 11).

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

	Total	Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Small-sized firms	**175.9**	22.1	9.1	122.6	22.0
Medium-sized firms	**55.7**	9.8	2.8	36.5	6.6
Large-sized firms	**19.9**	2.1	1.0	13.9	2.9
Total	**251.4**	**34.0**	**13.0**	**172.9**	**31.5**

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

General drivers of the financing gap include:

- **The rejections faced by start-ups** (with a lack of credit history) with innovative ideas. In the Agri-food survey the respondents indicated that the most frequent reasons for banks to reject loan applications is the fact that applicants are start-ups. It is often the case that start-ups are young entrepreneurs who do not have track record or a good credit history. Increased access to guarantees was flagged as a solution by 45% of the survey respondents (Figure 29).
- **The rejections of long-term loans by banks**. As suggested in the analysis of supply, banks have a preference for not providing long-term loans due to the fact that their focus is to obtain returns on investment in a shorter time period. As such, they prefer to provide short and medium-term loans (requiring shorter payback periods). On the other hand, agri-food firms have financing needs to support longer term investments (requiring longer payback periods). For example, some of the loans applied by agri-food companies are more for R&D investment which will require a longer time horizon to provide return on investment[158].
- **Reduced appetite from banks to finance innovations and technologies to comply with policy and regulatory changes** related to climate adaptation measures. With the new policy changes introduced in The Netherlands, there is an increasing need for investments in innovative ideas to reduce various type of emissions coming out of the production process and develop sustainable

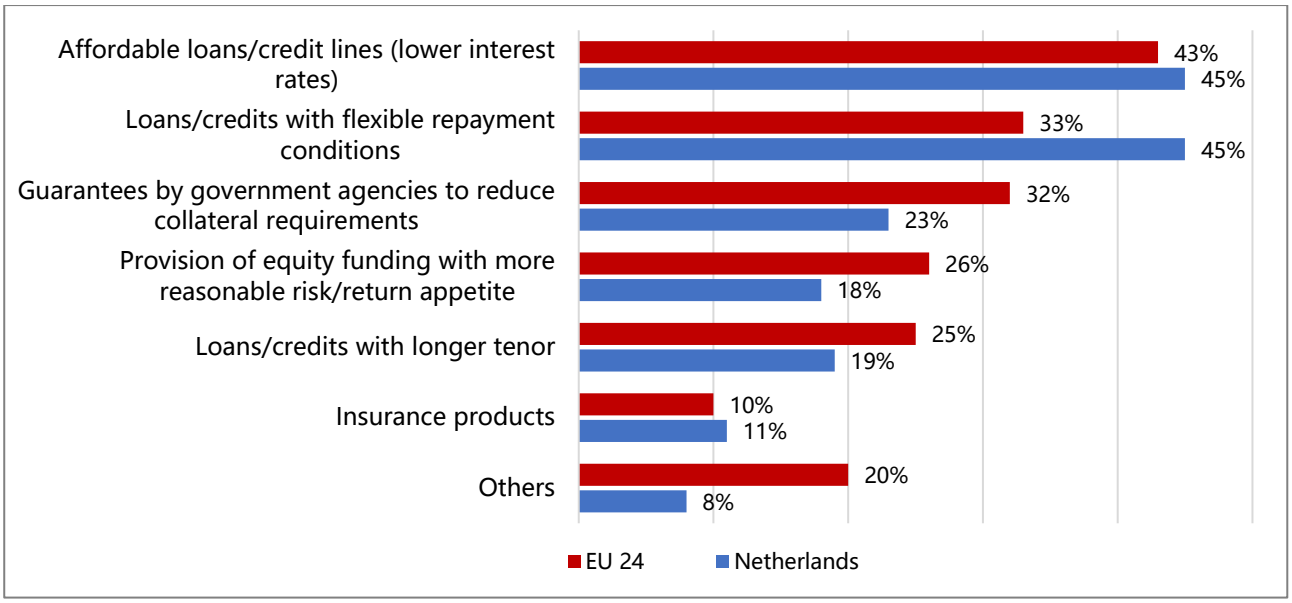
158 Information from interviews.

agricultural supply chains, innovations in agri-food technologies or disruptive business models. However, due to the risk aversion by banks, these untested ideas are perceived to be risky by them[159].

- **Market concentration on the supply side** might increase selectivity in project assessment by banks and increase financing cost. This is confirmed by a higher level of interest rates in The Netherlands in comparison to Eurozone average.
- **Some more general constraints, such as asymmetrical information and banks' preference for more profitable investment (i.e. mortgage loans),** which affect general lending to SMEs in The Netherlands might be assumed to play a role also in agri-food enterprises financing.

Over the coming years, the evolution of the financing gap in the agri-food sector will be driven by the demand for finance. Most stakeholders consulted suggest that there is currently not a liquidity constraint on the supply side. The financing gap might widen due to the increases in demand for finance. It is worth noting that in certain sub-sectors such as vegetable processing, the demand for finance to invest in business expansion might not be as high as what it has been the last five to ten years as the limit to land-based production has been reached. For dairy processing, however, the growth in demand for finance will be coming from further capital investment to fulfil increases in demand for Dutch exports of dairy products. Furthermore, the push for more sustainable businesses to comply with policy and regulatory changes that aim to achieve climate targets would require new and innovative business solutions. However, as these solutions might be untested and involve higher risks than what banks are willing to bear, firms might not be able to obtain the finances needed to invest. Rejections faced by start-up agri-food firms will continue to drive the financing gap if the risk appetite of banks for innovative untested business ideas does not change.

Figure 29: Solutions to reduce difficulties in accessing finance, 2018



Source: Agri-food survey.

159 Information from interviews.

3.5. Conclusions

The overall size of the Dutch agri-food sector is growing, as well as the amount of related investments. The sector is also well integrated within the international market and able to finance itself from various sources. The demand for finance is driven by an increase in investment in innovation and capacity expansion as well as investment to comply with regulatory and policy changes. The demand for finance in the Dutch agri-food sector is expected to increase in the coming years.[160] In particular, policy interventions, such as encouraging more circular and sustainable businesses, are likely to drive the need for further investments.

However, a financing gap in the sector has been identified and it is estimated to be EUR 251.4 million. It concerns mostly SMEs and their need for long-term loans, although access to short-term finance in the form of credit lines may also be needed. This gap stems from: (i) the rejections faced by enterprises lacking credit history and start-ups in particular; (ii) limited appetite by banks in providing long-term loans; (iii) banks' high risk perception for innovative investment to comply with policy and regulatory changes (e.g. new environmental and climate standards); (iv) market concentration on the supply side; (vi) other general constraints, such as asymmetrical information and banks' preference for more profitable investment (e.g. mortgage loans).

Agri-food financing needs are generally provided by multiple financial providers in the Dutch credit market, despite the fact that the banking sector is very concentrated. A number of governmental initiatives exist that provide support for SMEs as well large-sized enterprises, providing different types of financial products, from credit guarantee to equity.

However, based on the analysis conducted for this study, and the market constraints identified, further policy initiatives might be considered. Any new policy actions should in any case operate in synergy with the existing instruments, in order to avoid duplications.

Areas that may warrant review or where there may be possibilities to develop new financial instruments (including under the EAFRD) are:

- A review of currently available financial instruments to assess their suitability to support access to credit for start-ups and innovative projects, for which banks seem to adopt a conservative approach and display a reluctance to provide finance.
- An assessment of the availability of loans with sufficiently long maturity to support innovative projects that aim to meet new environmental and climate standards, for which banks do not currently seem willing or able to provide finance.

160 Based on survey data and stakeholders' opinions before the COVID-19 crisis.

4. ANNEX

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A.2 Stakeholders interviewed

Type of stakeholder	Name of institution
Government	Ministry of Agriculture, Nature and Food Quality
Government	Ministry of Economic Affairs and Climate
Government	Topsector Agri & Food
Government	InvestNL
Government	Netherlands Enterprise Agency (RVO)
Financing institution	Rabobank
Financing institution	ING Bank NV
Financing institution	Triodos Bank
Investment fund	Groenfonds
Farmers organisation	Land- en Tuinbouworganisatie (LTO)
Farmers organisation	Nederlands Agrarisch Jongeren Kontakt (NAJK)
Professional organisation	Agrifirm
Professional organisation	FrieslandCampina
Professional organisation	Dutch Dairy Association (NZO)
Professional organisation	Association for the potato processing industry (VAVI)
Professional organisation	Association of the Dutch Fruit and Vegetable Processing Industry (VIGEF)

A.3 Methodology for financial 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[161] or a non-negative turnover and that are not in a situation of cost increase (these two criteria might be used to obtain an upper and lower boundary for the calculations).
3. **Discouraged application is proxied by the average size** (financial value) of loan applications made by firms that applied for a similar type of financial product. This allows for grouping firms which did not apply for fear of rejection with rejected firms (see step 2 and 4 below).
4. To calculate the financial gap, we define the following four steps. Each step refers to the latest surveyed year for both the surveys.

Step1: Ratio of viable farms with unmet demand for finance

$\boldsymbol{Rejection\ Rate^{Viable}}$ **:** 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

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

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

For TG I, this total population is adjusted by removing farms having a Standard Output[162] (SO) below EUR 8 000, EUR 4 000 or EUR 2 000, depending on the Purchasing Power Parity Index (PPI) of the country. The EUR 8 000, EUR 4 000 or EUR 2 000 so thresholds are used for countries with their 2017 PPI respectively above the 66th percentile, between the 33rd and 66th percentile, or below the 33rd percentile of the PPI index in the EU. We assume equal rates of rejections among small, medium and large-sized farms, and disentangle the share of farms with constrained in obtaining credit by financing product.

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

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

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

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

Step 3: Standard Loan Application Size

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

Step 4: Financial gap across farm size and product type

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

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

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

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

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

6. 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:

162 The standard output (SO) of an agricultural product (crop or livestock) is the average monetary value of the agriculture output at farm-gate price in Euro.

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

Table 12: Elements for the calculation of the financing gap in the sector, 2017

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
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%	0.71%	0.00%
	Share of respondents that have not applied because of possible rejection	0.36%	0.36%	0.00%	0.36%
	Total (sum of rejected and discouraged)	***0.36%***	***0.36%***	***0.71%***	***0.36%***
Upper bound: farms with a non-negative turnover growth	Share of respondents rejected by creditor or farmer	0.00%	0.00%	2.47%	0.00%
	Share of respondents that have not applied because of possible rejection	1.71%	1.71%	0.33%	1.71%
	Total (sum of rejected and discouraged)	***1.71%***	***1.71%***	***2.80%***	***1.71%***
Total unmet demand: all farms	Share of respondents rejected by creditor or farmer	0.00%	1.02%	3.82%	0.00%
	Share of respondents that have not applied because of possible rejection	2.75%	2.75%	1.40%	3.11%
	Total (sum of rejected and discouraged)	***2.75%***	***3.77%***	***5.22%***	***3.11%***
Farms with constrained access to finance, **lower bound**	Small-sized farms	89	89	177	89
	Medium-sized farms	92	92	184	92
	Large-sized farms	9	9	19	9
Farms with constrained access to finance, **upper bound**	Small-sized farms	425	425	697	425
	Medium-sized farms	442	442	725	442
	Large-sized farms	45	45	74	45
Standard loan application size	Small-sized farms	EUR 19 463	EUR 47 213	EUR 130 208	EUR 17 571
	Medium-sized farms	EUR 24 660	EUR 44 874	EUR 141 384	EUR 19 491
	Large-sized farms	EUR 72 731	EUR 114 196	EUR 254 577	EUR 103 806

Source: fi-compass survey.

Table 13: Elements used for the calculation of the financing gap in the agri-food sector, 2018

		Short-term Loans	Medium-term Loans	Long-term Loans	Credit lines/bank overdrafts
Firms with a non-negative turnover growth	Share of respondents rejected by creditor or firm	2.86%	0.38%	0.38%	3.23%
	Share of respondents that have not applied because of possible rejection	1.23%	0.85%	5.44%	0.38%
	Total (sum of rejected and discouraged)	***4.09%***	***1.23%***	***5.82%***	***3.61%***
Total unmet demand: all firms	Share of respondents rejected by creditor or firm	2.86%	0.38%	0.38%	3.23%
	Share of respondents that have not applied because of possible rejection	1.23%	0.85%	5.44%	0.38%
	Total (sum of rejected and discouraged)	***4.09%***	***1.23%***	***5.82%***	***3.61%***
Firms with constrained access to finance, **upper bound**	Small-sized firms	243	73	346	214
	Medium-sized firms	14	4	19	12
	Large-sized firms	3	1	4	3
Standard loan application size	Small-sized firms	EUR 91 186	EUR 124 830	EUR 354 061	EUR 102 595
	Medium-sized firms	EUR 724 439	EUR 682 166	EUR 1 897 660	EUR 551 192
	Large-sized firms	EUR 714 366	EUR 1 194 775	EUR 3 353 915	EUR 1 121 000

Source: Agri-food survey.

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

The analysis for the agriculture sector in the report relies on the *fi-compass* survey on financial needs of EU agricultural enterprises, conducted from April to June 2018 across 24 EU Member States (EU 24): Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, 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 (where four interviews are missing) and Ireland, where the farmers were less confident in sharing information.

Overall, the survey consists of 7 659 respondents, of which 73% own the agricultural enterprise, 8% are member owners, 8% are owner's relatives, 7% administrative managers, 3% other employees, and 1% human resource managers. Table 14 reports the number of respondents by Member State.

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

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

Source: fi-compass survey.

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

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

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

A.5 TG II: Agri-food survey

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

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

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

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

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

Source: Agri-food survey.

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

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