



Financial gap in the EU agricultural sector



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The authors of this study are a consortium of five companies: Sweco (lead), t33, University of Strathclyde – EPRC, infeurope and Spatial Foresight.

Glossary and definitions

Expression	Explanation
EC	European Commission
ECB	European Central Bank
EIB	European Investment Bank
EIF	European Investment Fund
FADN	Farm Accountancy Data Network
SAFE	Survey on the Access to Finance of Enterprises
SME	Small and medium-sized enterprise



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Introduction

This report offers a first look into the financial gap for agricultural enterprises for short-term and for medium and long-term loans¹, based on established methodology used by the European Commission (EC, 2013²) and improved in the calculations used here.

A financial gap occurs when a certain sector or the economy as a whole, shows evidence of unmet financing demand, an imbalance between the demand and supply of financial resources³. The gap may be for a particular type of financial product, such as loans, or a general lack of access to finance, especially for SMEs and mid-caps. Unmet credit includes lending applied for but not obtained as well as lending not applied for, due to expected rejection⁴. The financial gap is a direct consequence of a market failure, defined as an imperfection in the market mechanism that prevents economic efficiency⁵. Analysis of possible market failure and quantification of the financial gap highlight the potential size for financial instruments.

Estimating potential unmet demand for financial resources in a specific sector such as agriculture can be challenging mainly due to data availability. One method is to estimate the number of enterprises not obtaining a loan, while being financially viable and thus apparently creditworthy. Multiplying this number by the average enterprise's loan amount, gives an estimate of the unmet financing needs for financially viable enterprises⁶.

Estimating the unsuccessful but viable enterprises is based on⁷:

- rejected transactions, where the public or private finance provider did not make an offer to the applicant, or the offer by the finance provider was rejected by the applicant, for instance due to the high cost (high interest rate);
- lack of applications, where final recipients did not apply for financing because they expected to be rejected.

The estimation of rejected transactions and lack of applications can be difficult. These estimates are normally obtained via target group surveys.⁸ For a growing number of sectors there are EU-level surveys such as the Survey on the Access to Finance for Enterprises in the EU area (SAFE) of the European Commission (EC) and the European Central Bank (ECB)⁹. Where data is not available, an *ad hoc* survey or specific approximations are, in principle, needed.

The financial gap calculation of this analysis is based on the equation used by the EC in 2013 for the '*Ex-ante assessment of the EU SME Initiative*'¹⁰. The input variables are based on updated data from Eurostat, the Farm Accountancy Data Network (FADN) provided by DG AGRI and the SAFE survey. Where specific data for the agricultural sector was not available, approximations were used, as explained later in the document.

¹ For consistency with the proxy (based on FADN data), in this analysis short-term loans are for a maximum of 12 months, medium and long-terms loans are for more than 12 months. This differs from market practice, where short-term loans are for up to 18 months.

² European Commission (2013), '*Ex-ante assessment of the EU SME Initiative*', Brussels, 5.12.2013 SWD (2013) 517 final.

³ *fi-compass* (2014), '*Ex-ante assessment methodology for financial instruments in the 2014-2020 programming period - General methodology covering all thematic objectives - Volume I*', p.37.

⁴ *fi-compass* (2016), '*Methodological handbook for implementing an ex-ante assessment of agriculture financial instruments under the EAFRD*', p.38.

⁵ *fi-compass* (2014), '*Ex-ante assessment methodology for financial instruments in the 2014-2020 programming period - General methodology covering all thematic objectives - Volume I*', p.15.

⁶ European Commission (2013), '*Ex-ante assessment of the EU SME Initiative*', Brussels, 5.12.2013 SWD (2013) 517 final, p.30.

⁷ *fi-compass* (2014), '*Ex-ante assessment methodology for financial instruments in the 2014-2020 programming period - General methodology covering all thematic objectives - Volume I*', p.47.

⁸ *fi-compass* (2014), '*Ex-ante assessment methodology for financial instruments in the 2014-2020 programming period - General methodology covering all thematic objectives - Volume I*', p.137.

⁹ http://ec.europa.eu/growth/access-to-finance/data-surveys_en.

¹⁰ European Commission (2013), '*Ex-ante assessment of the EU SME Initiative*', pp. 30-32, Brussels, 5.12.2013 SWD (2013) 517 final.



The estimated EU agricultural sector financial gap is:

- for short-term loans EUR 1.56 billion - EUR 4.12 billion;

- for medium and long-term loans EUR 5.50 billion - EUR 14.48 billion.

The total financial gap, therefore, is between EUR 7.06 billion and EUR 18.60 billion.

This is the first part of a two-stage process for evaluating the market gap. A detailed analysis at country level, based on that same methodology, will follow. This is also the first estimate of the agricultural sector financial gap across the EU 28 done since 2013 and is a relevant approach for defining financing needs through financial instruments.

In the report:

- Chapter 1 describes the calculation methodology and defines the variables. It includes data sources and an overview of the figures in the calculations. It explains the approximations used for certain variables where agricultural sector data was not available;
- Chapter 2 presents financial gap estimates;
- Chapter 3 includes final remarks.



1 METHODOLOGY

1.1 The equation

Preliminary computation of the financial gap in the agricultural sector is based on the equation used for the document SME Initiative ex-ante assessment developed by the EC with input from the European Investment Bank (EIB) and the European Investment Fund (EIF) in 2013. This ex-ante assessment did not only highlight an average EU-wide gap for SMEs of EUR 20 billion to EUR 112 billion, for 2009-2012, but it also underpinned the rationale of the SME Initiative and contributed to its design. The expected range for the EU 28 agricultural SME loan gap was estimated in that assessment to be between EUR 1.5 billion and EUR 9 billion. For the latter results, data from FADN provided by DG AGRI has been used.

The equation in the SME Initiative ex-ante assessment is re-used here and has the following structure:

$$\text{Loan financial gap} = \text{Number of enterprises} \times \text{Financially viable enterprises} \times \text{Unsuccessful enterprises} \times \text{Average loan size for enterprises}$$

Where:

- **Financially viable enterprises** are the share of enterprises with turnover growth;

The EC methodology defines two boundaries:

- **the lower** covers the share of high-growth enterprises, *i.e.* enterprises with turnover growth of at least 20% in the previous three years;
- **the upper boundary** covers the share of enterprises with positive turnover growth in the previous six months.

- **Unsuccessful enterprises:** share of financially viable enterprises unsuccessful in obtaining loan financing;

The percentage of financially viable enterprises not obtaining loan finance is:

$$\text{Unsuccessful enterprises} = [\text{enterprises that applied} \times (\text{enterprises rejected} + \text{enterprises refused})] + \text{enterprises discouraged}$$

Where:

- Enterprises that applied = share of enterprises that applied for a bank loan;
- Enterprises rejected = share of enterprises that applied for a bank loan whose demand was rejected by the bank (bank rejection);
- Enterprises refused = share of enterprises that applied for a loan but faced unacceptable costs, *i.e.* high interest rates (enterprise rejection);
- Enterprises discouraged: share of financially viable enterprises that did not apply for a loan for fear of rejection (enterprise unwilling);

- **Average enterprise loan size:** loans granted to enterprises (in EUR).

Table 1.1 summarises the sources of information used for these variables and compares them with the methodology adopted in EC (2013).

**Table 1.1 – Variables, data sources and comparison with EC (2013)**

Variable		Unit	Year	Source	EC (2013)	
					Year	Source
Enterprises		Number	2013	Eurostat	2010	Eurostat
Financially viable enterprises	<i>Lower boundary:</i> share of high-growth enterprises	Percentage	2016	SAFE, September to October 2016, wave 15	2010	Eurostat
	<i>Upper boundary:</i> share of enterprises with positive turnover growth in the last six months	Percentage	2016	SAFE, September to October 2016, wave 15	Average 2009- 2011	SAFE, waves 2009 and 2011
Unsuccessful enterprises	Enterprises that applied	Percentage	2016	SAFE, September to October 2016, wave 15	Average 2009- 2011	SAFE, waves 2009 and 2011
	Enterprises rejected	Percentage	2016	SAFE, September to October 2016, wave 15	Average 2009- 2011	SAFE, waves 2009 and 2011
	Enterprises refused	Percentage	2016	SAFE, September to October 2016, wave 15	Average 2009- 2011	SAFE, waves 2009 and 2011
	Enterprises discouraged	Percentage	2016	SAFE, September to October 2016, wave 15	Average 2009- 2011	SAFE, Waves 2009 and 2011
Average enterprise loan size		EUR	Average 2011-2013	FADN	Average 2010-2011	Bureau Van Dijk's Orbis Database of Company information on liabilities, and the BACH-ESD Database

It has to be noted that there were no specific data on financially viable agricultural enterprises unsuccessful in obtaining a loan. The SAFE survey data (see Box 1.1 for detail) for non-financial enterprises were assumed to be valid also for agricultural enterprises. The SAFE database in fact includes data for enterprises in industry, trade, construction and service sectors, and it excludes agriculture. This hypothesis used for the current calculations is the same as in EC (2013) but was applied only to *agricultural SMEs*¹¹. In this report, agricultural enterprises of all sizes are considered and not only SMEs.

It needs to be said that agricultural businesses sometimes have unpredictable revenue streams affected for example, by bad climate conditions (weather, diseases, floods, etc.) and/or fluctuating commodity prices and/or new trade regimes and situations, so access to credit can be particularly difficult for them. Thus assuming the same figures for agricultural enterprises as for non-agricultural ones could be a reason for under-representing the number of financially

¹¹ In EC (2013) a specific definition of *agricultural SME* is used in the study, based on standard output. *Agricultural SMEs* with a standard output of EUR 0 to 100 000 “represent the SME counterpart in the agricultural sector” (EC, 2013, pp. 36-37).



viable agricultural enterprises unsuccessful in obtaining a loan, which in turn may lead to underestimation of the financial gap.

Box 1.1 – The SAFE survey

This survey was launched by the ECB and EC in 2008 to collect comparable, timely, and frequent data evidence on financing conditions for micro, small, medium-sized and large firms in the EU. It also provides evidence across branches of economic activity, euro area countries, as well as the enterprise age, financial autonomy, and ownership. SAFE includes data for enterprises operating in the industry, trade, construction and service sectors. It does not include agriculture, forestry or fishing.

Part of the survey is run by the ECB every six months to assess developments in financing conditions for enterprises in the euro area. The first survey was in June-July 2009. A more comprehensive survey has been run every year since 2013 (previously every two years) in cooperation with the EC. The 2016 survey¹² covers the EU28 plus Iceland, Turkey, Montenegro, Albania, Serbia and FYROM.

Twice a year, usually in March and October, thousands of businesses in Europe are contacted and asked about their access to finance and about financing conditions. The interviews are conducted over a four-week period mainly by telephone, but respondents can also complete an online questionnaire.

Table 1.2 displays questions from the SAFE survey of September to October 2016 used in the financial gap equation.

Table 1.2 – Variables and the SAFE survey

Variable		Question in the SAFE survey 15, September to October 2016	Used
Financially viable enterprises	<i>Lower boundary:</i> share of high-growth enterprises	<p>Q16b. Over the past three years (2013-2015), how much did your enterprise grow on average per year in terms of turnover?</p> <ul style="list-style-type: none"> • Over 20% per year • Less than 20% per year • No growth • Got smaller • Not applicable / don't know 	Percentage of enterprises that answered 'over 20% per year'
	<i>Upper boundary:</i> the share of enterprises with positive turnover growth in the last six months	<p>Q2a. Have the following company indicators decreased, remained unchanged or increased over the past 6 months?</p> <p>Turnover</p> <ul style="list-style-type: none"> • Increased • Remained unchanged • Decreased • Not applicable / don't know 	Percentage of enterprises that answered 'Increased'
Unsuccessful enterprises	<i>Enterprises that applied</i>	<p>Q7aa. Bank loan (excluding overdraft and credit lines) - Have you applied for the following types of financing in the past 6 months?</p> <ul style="list-style-type: none"> • Applied • Did not apply because of possible rejection • Did not apply because of sufficient internal funds • Did not apply for other reasons • Not applicable / don't know 	Percentage of enterprises that answered 'Applied'

¹² EC (2016), 'Survey on the access to finance of enterprises (SAFE) – Analytical Report 2016'.



Enterprises	rejected	<p><i>Q7ba. Bank loan (excluding overdraft and credit lines) - If you applied and tried to negotiate for this type of financing over the past 6 months, what was the outcome?</i></p> <ul style="list-style-type: none"> • Applied and received everything • Applied and received 75% and above • Applied and received below 75% • Applied but refused because cost too high • Applied but was rejected • Application is still pending • Not applicable / don't know 	Percentage of enterprises that answered 'Applied but was rejected'
	refused	<p><i>Q7ba. Bank loan (excluding overdraft and credit lines) - If you applied and tried to negotiate for this type of financing over the past 6 months, what was the outcome?</i></p> <ul style="list-style-type: none"> • Applied and received everything • Applied and received 75% and above • Applied and received below 75% • Applied but refused because cost too high • Applied but was rejected • Application is still pending • Not applicable / don't know 	Percentage of enterprises that answered 'Applied but refused because cost too high'
	discouraged	<p><i>Q7aa. Bank loan (excluding overdraft and credit lines) - Have you applied for the following types of financing in the past 6 months?</i></p> <ul style="list-style-type: none"> • Applied • Did not apply because of possible rejection • Did not apply because of sufficient internal funds • Did not apply for other reasons • Not applicable / don't know 	Percentage of enterprises that answered 'Did not apply because of possible rejection'

Note: the SAFE report 2016 by country is available in excel here: <http://ec.europa.eu/DocsRoom/documents/24385>

1.2 Analysis of variables used for calculation

The following sections describe the key variables in the following order:





1.2.1 Number of enterprises

The number of agricultural enterprises is taken from the Farm Structure Survey published by Eurostat in 2005, 2007, 2010 and 2013 (latest year available).

Table 1.3 – Number of farms in EU countries, 2013 (Eurostat)

Country	2005	2007	2010	2013
Austria	170 640	165 420	150 170	140 430
Belgium	51 540	48 010	42 850	37 760
Bulgaria	534 610	493 130	370 490	254 410
Croatia	-	181 250	233 280	157 440
Cyprus	45 170	40 120	38 860	35 380
Czech Republic	42 250	39 400	22 860	26 250
Denmark	51 680	44 620	41 360	38 280
Estonia	27 750	23 340	19 610	19 190
Finland	70 620	68 230	63 870	54 400
France	567 140	527 350	516 100	472 210
Germany	389 880	370 480	299 130	285 030
Greece	833 590	860 150	723 060	709 500
Hungary	714 790	626 320	576 810	491 330
Ireland	132 670	128 240	139 890	139 600
Italy	1 728 530	1 679 440	1 620 880	1 010 330
Latvia	128 670	107 750	83 390	81 800
Lithuania	252 950	230 270	199 910	171 800
Luxembourg	2 450	2 300	2 200	2 080
Malta	11 070	11 020	12 530	9 360
Netherlands	81 830	76 740	72 320	67 480
Poland	2 476 470	2 390 960	1 506 620	1 429 010
Portugal	323 920	275 080	305 270	264 420
Romania	4 256 150	3 931 350	3 859 040	3 629 660
Slovakia	68 490	68 990	24 460	23 570
Slovenia	77 170	75 340	74 650	72 380
Spain	1 079 420	1 043 910	989 800	965 000
Sweden	75 810	72 610	71 090	67 150
United Kingdom	286 750	226 650	185 200	183 040
Total	14 482 010	13 808 470	12 245 700	10 838 290

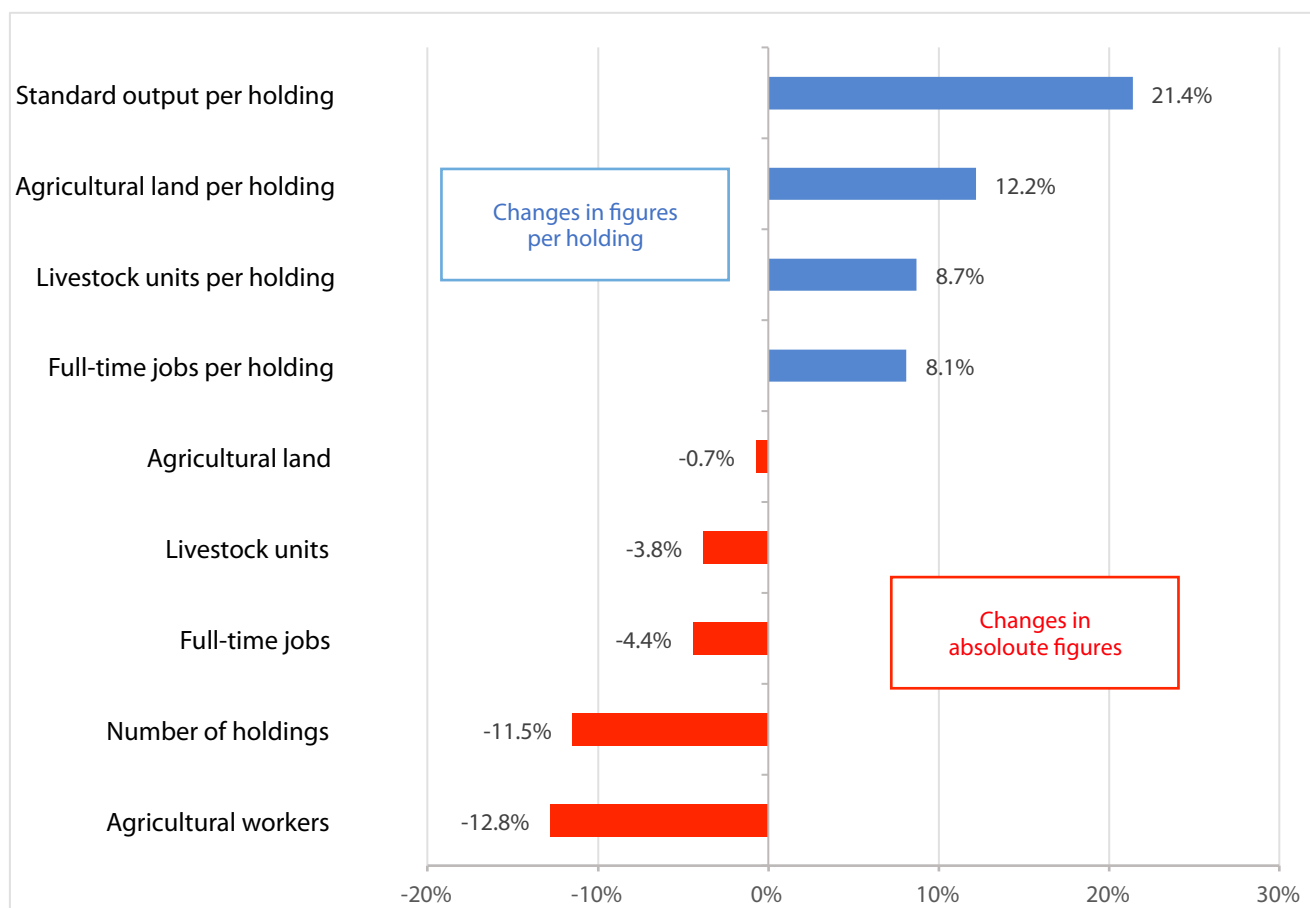
There were 10 838 290 farms in the EU in 2013, a decrease of 12% compared to 2010 and of 25% from 2005. Between 2005 and 2013 the average annual decline was 3.7%. Only in Ireland the number of farms has increased over the observed period, with all other EU Member States experiencing decline, sometimes significant and above 40-50% (Bulgaria, Czech Republic, Italy, Slovakia, Poland). As described in Box 1.2, farms are getting bigger and more productive, with less dependence on labour (as labour used on farms also declines over that period), but there are still



vast numbers of very small farms, primarily run part-time, often by elderly farmers¹³. The possible impact on this dynamic is unclear. On the one hand, fewer farms may reduce potential demand, reducing the financial gap. On the other hand, larger farms are more likely to require (bigger) investment to improve efficiency or productivity, and are more likely to have their loan application accepted. The results of this analysis seem to empirically support the second hypothesis.

Box 1.2 – Trends in EU farms - key characteristics¹⁴

While the long-term decline in the number of agricultural holdings continued, this trend has been accompanied by consolidation into larger, more competitive farms across the EU. Average farm size increased from 14.4 ha of agricultural land in 2010 to 16.1 ha in 2013 (+12%). Farms are growing even more in economic terms. The Standard Output per holding, which measures farm turnover, increased by a remarkable 21%. Competitiveness is further expressed in the lower number of regular agricultural workers (22 million in 2013, down from 25 million in 2010; -13%). Converted into full-time jobs, the decline is less pronounced (-4.4% between 2010 and 2013), indicating a shift towards full-time employment in agriculture. While all key indicators declined in absolute terms, the average per holding increased, indicating bigger, more productive farms.



Source: EC (2015), 'EU farms and farmers in 2013: an update', p.2, EU Agricultural and Farm Economics briefs, No.9, November 2015.

¹³ EC (2015), 'EU farms and farmers in 2013: an update', p.8, EU Agricultural and Farm Economics briefs, No.9, November 2015.

¹⁴ See EC (2015), 'EU farms and farmers in 2013: an update', p.2, EU Agricultural and Farm Economics briefs, No.9, November 2015.



1.2.2 Financially viable enterprises

Because of lack of specific data or information at EU level, the estimate used for financially viable enterprises for the agricultural sector needs to be based on a proxy. This analysis adopts the assumption used in EC (2013) that the share of financially viable SMEs in the non-financial sector is the same for agricultural SMEs¹⁵. This assumption is used for agricultural enterprises of all sizes. According to the methodology in EC (2013) the lower boundary uses data from Eurostat (high-growth SMEs, with turnover growth of at least 20% in the last three years) and the upper boundary uses data from SAFE (proportion of SMEs with turnover growth in the previous six months). However, data from Eurostat (lower boundary) are updated only to 2010¹⁶. Since this indicator is provided also by SAFE since 2011¹⁷, for consistency of data sources as well as across years, the SAFE database is used for both boundaries.

¹⁵ European Commission (2013), 'Ex-ante assessment of the EU SME Initiative', SWD (2013) 517 final, p. 38-39.

¹⁶ Eurostat, Enterprises seeking finance, by type of enterprise and NACE Rev.2 activity – High growth enterprises [acf_s_inf].

¹⁷ Survey April to September 2011.

**Table 1.4 – Percentage of financially viable enterprises (SAFE survey, October 2016)**

Country	Lower boundary	Upper boundary
Austria	10.0%	42.8%
Belgium	13.9%	39.4%
Bulgaria	21.2%	37.4%
Croatia	19.0%	41.0%
Cyprus	8.8%	42.3%
Czech Republic	14.8%	38.7%
Denmark	21.5%	50.2%
Estonia	18.3%	44.3%
Finland	13.8%	44.3%
France	8.7%	39.1%
Germany	11.2%	43.4%
Greece	11.2%	31.4%
Hungary	17.5%	44.8%
Ireland	21.8%	56.8%
Italy	11.5%	30.1%
Latvia	10.2%	27.5%
Lithuania	22.4%	42.7%
Luxembourg	10.7%	41.8%
Malta	16.7%	40.6%
Netherlands	17.7%	55.5%
Poland	15.4%	32.2%
Portugal	14.7%	39.6%
Romania	27.1%	52.2%
Slovakia	15.2%	33.4%
Slovenia	18.0%	47.9%
Spain	12.8%	41.7%
Sweden	19.6%	51.3%
United Kingdom	17.4%	45.7%
EU 28*	13.9%	40.9%

* Figures at EU 28 level cannot be interpreted as an average or sum of the data by country, since all enterprise data in the SAFE database are adjusted and weighted by size, economic activity and country¹⁸.

According to the figures above, the share of financially viable agricultural enterprises at EU level is between 13.9% and 40.9%. Applying the percentages in Table 1.4 to the numbers of agricultural enterprises (Table 1.3), gives estimates of the lower and upper boundaries for the number of enterprises. According to this, **there are from 1.5 million to 4.4 million financially viable agricultural enterprises in the EU.**

¹⁸ For detail, see ECB (2017), 'Survey on the access to finance of enterprises – Methodological information on the survey and user guide for anonymised micro dataset', pp. 7-13.

**Table 1.5 – Estimated number of financially viable agricultural enterprises**

Country	Lower boundary	Upper boundary
Austria	14 006	60 117
Belgium	5 258	14 884
Bulgaria	53 966	95 056
Croatia	29 909	64 535
Cyprus	3 104	14 952
Czech Republic	3 887	10 165
Denmark	8 224	19 209
Estonia	3 511	8 502
Finland	7 526	24 124
France	41 188	184 403
Germany	31 897	123 699
Greece	79 799	222 651
Hungary	85 984	220 150
Ireland	30 488	79 266
Italy	116 346	304 060
Latvia	8 353	22 471
Lithuania	38 485	73 347
Luxembourg	222	870
Malta	1 566	3 801
Netherlands	11 966	37 481
Poland	219 610	460 748
Portugal	38 758	104 840
Romania	985 226	1 893 852
Slovakia	3 583	7 876
Slovenia	13 036	34 706
Spain	123 974	402 257
Sweden	13 163	34 449
United Kingdom	31 827	83 659
EU 28*	1 508 632	4 433 521

* Figures at EU 28 level cannot be interpreted as an average or sum of the data by country, since each enterprise data in the SAFE database are adjusted and weighted by size, economic activity and country¹⁹.

¹⁹ For detail, see ECB (2017), 'Survey on the access to finance of enterprises – Methodological information on the survey and user guide for anonymised micro dataset', pp. 7-13.



1.2.3 Unsuccessful enterprises

Unfortunately, there is no specific data at EU-level detailed per Member State for financially viable agricultural enterprises unsuccessful in obtaining a loan. As anticipated in section 1.1, the number of unsuccessful enterprises is the sum of (i) enterprises that applied for a loan but whose request was rejected by the bank²⁰ or who refused the proposed loan because of high costs, plus (ii) the share of enterprises that did not apply for a loan for fear of rejection. The SAFE survey is again the data source and the share of financially viable enterprises in the non-financial sector unsuccessful in obtaining a loan is assumed to be the same for agricultural enterprises (see Table 1.2. in Box 1.1 for detail). Micro-level data are used, i.e. by extracting the share of enterprises unsuccessful in obtaining a loan only considering financially viable enterprises over total enterprises covered by the survey.

²⁰ This indicator refers to enterprises where the loan application was totally rejected and does not include enterprises with partial rejections.


Table 1.6 – Percentage of financially viable enterprises unsuccessful in obtaining a loan (SAFE survey, October 2016)

Country	Viable enterprises asking for a loan (as % of total viable enterprises)		Viable enterprises with loan rejected (as % of enterprises asking a loan)		Viable enterprises refusing because costs too high (as % of enterprises asking a loan)		Viable enterprises not applying because of possible rejection (as % of total viable enterprises)	
	Lower boundary	Upper boundary	Lower boundary	Upper boundary	Lower boundary	Upper boundary	Lower boundary	Upper boundary
Austria	17.3%	15.8%	22.2%	2.9%	0.0%	0.0%	1.9%	2.7%
Belgium	28.6%	30.3%	0.0%	3.2%	0.0%	1.6%	4.8%	2.4%
Bulgaria	15.5%	16.2%	5.9%	0.0%	0.0%	3.1%	0.9%	2.5%
Croatia	18.6%	25.0%	9.1%	3.0%	0.0%	0.0%	1.7%	1.5%
Cyprus	11.1%	16.7%	0.0%	14.3%	0.0%	0.0%	0.0%	7.1%
Czech Republic	27.5%	17.0%	0.0%	0.0%	0.0%	2.9%	2.5%	1.5%
Denmark	5.8%	7.5%	16.7%	10.5%	0.0%	0.0%	0.0%	0.8%
Estonia	5.3%	12.2%	0.0%	0.0%	0.0%	0.0%	5.3%	6.1%
Finland	27.9%	19.4%	0.0%	4.5%	0.0%	0.0%	1.6%	1.8%
France	39.7%	36.7%	4.2%	5.2%	0.0%	0.0%	2.5%	2.4%
Germany	21.7%	17.1%	14.7%	5.3%	2.9%	2.6%	4.5%	1.6%
Greece	19.6%	20.8%	0.0%	5.7%	9.1%	11.4%	10.7%	14.3%
Hungary	10.9%	11.7%	10.0%	3.8%	0.0%	0.0%	4.3%	4.5%
Ireland	11.3%	13.5%	8.3%	2.6%	0.0%	0.0%	0.9%	3.8%
Italy	31.4%	31.1%	3.7%	5.3%	1.9%	2.0%	3.5%	1.9%
Latvia	19.0%	17.2%	0.0%	20.0%	0.0%	0.0%	0.0%	3.4%
Lithuania	17.6%	14.2%	16.7%	10.5%	0.0%	0.0%	5.9%	3.0%
Luxembourg	30.0%	17.8%	33.3%	12.5%	0.0%	0.0%	0.0%	2.2%
Malta	5.9%	19.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	9.4%	11.2%	0.0%	15.7%	0.0%	0.0%	2.2%	2.4%
Poland	17.0%	16.2%	5.7%	4.1%	5.7%	5.5%	1.5%	2.0%
Portugal	26.3%	26.9%	9.5%	5.1%	0.0%	1.7%	2.5%	3.2%
Romania	8.6%	11.5%	0.0%	0.0%	0.0%	3.3%	5.8%	3.1%
Slovakia	12.7%	14.8%	10.0%	3.7%	0.0%	0.0%	2.5%	3.8%
Slovenia	36.8%	30.5%	0.0%	10.3%	7.1%	3.4%	5.3%	2.1%
Spain	29.4%	26.3%	5.8%	3.2%	0.0%	0.6%	2.3%	3.2%
Sweden	12.6%	10.5%	9.1%	3.8%	9.1%	3.8%	1.1%	0.4%
United Kingdom	10.3%	11.5%	0.0%	2.4%	3.7%	0.0%	3.4%	1.7%
EU 28*	18.8%	19.3%	5.8%	4.9%	1.6%	1.5%	2.9%	2.6%

* Figures at EU 28 level cannot be interpreted as an average or sum of the data by country, since each enterprise data in the SAFE database is adjusted and weighted by size class, economic activity and country²¹.

²¹ For detail, see ECB (2017), 'Survey on the access to finance of enterprises – Methodological information on the survey and user guide for anonymised micro dataset', pp. 7-13.



Table 1.6 shows that **between 18.8% and 19.3% of viable EU agricultural enterprises asked for a loan**. Nearly 6% of enterprises with more than 20% turnover growth in the last three years (lower boundary) and nearly 5% of those with turnover growth in the last year (upper boundary) saw their loan request rejected. Fewer viable enterprises refused the loan, 1.6% for the lower boundary and 1.5% for the upper. Finally, **2.9% of enterprises in the lower boundary and 2.6% of those in the upper did not apply because of possible rejection**. Multiplying these values by the estimated number of financially viable agricultural enterprises (Table 1.5) gives an estimated number of financially viable agricultural enterprises that did not obtain a loan. The estimated total **across the EU 28 is 65 000 to 172 000 financially viable agricultural enterprises not obtaining a loan**.

Table 1.7 – Estimated number of financially viable agricultural enterprises not obtaining a loan

Country	Lower boundary	Upper boundary
Austria	808	1 904
Belgium	250	572
Bulgaria	981	2 895
Croatia	1 014	1 467
Cyprus	0	1 424
Czech Republic	97	203
Denmark	79	301
Estonia	185	521
Finland	123	638
France	1 702	7 979
Germany	2 641	3 704
Greece	9 975	39 759
Hungary	4 673	10 859
Ireland	575	3 303
Italy	6 088	12 590
Latvia	0	1 550
Lithuania	3 396	3 284
Luxembourg	22	39
Malta	0	0
Netherlands	260	1 562
Poland	7 462	16 382
Portugal	1 938	5 266
Romania	56 704	65 556
Slovakia	136	346
Slovenia	1 029	2 192
Spain	4 903	17 190
Sweden	454	418
United Kingdom	1 219	1 638
EU 28*	64 856	170 771

* Figures at EU 28 level cannot be interpreted as an average or sum of the data by country, since each enterprise data in the SAFE database is adjusted and weighted by size, economic activity and country²².

²² For details, see ECB (2017), 'Survey on the access to finance of enterprises – Methodological information on the survey and user guide for anonymised micro dataset', pp. 7-13.



1.2.4 Loan size and loan demand

When calculating the average loan requested by an agricultural SME, the EC (2013) methodology does not distinguish between short, or medium and long-term, but only assumes, based on Van Dijk's Orbis Database and the BACH-ESD Database, that the average for an agricultural SME is between one third and one fourth of the average loan of non-financial SMEs (i.e. EUR 25 000 to EUR 40 000). Since this report intends to distinguish short-term from medium and long-term loan in terms of financial gap, the only potential proxies could be found in the FADN database. FADN collects data on liabilities distinguishing between short-term loans (less than one year) and medium and long-term loans (more than one year). The FADN database uses 12 months as the cut-off of short-term loans from medium and long-term loans. This differs from the normal market practice of 18 months, but this does not impact on the conclusions or reliability of the results.

Using the FADN definition²³ is not an exact measure of loan size but is a good proxy. This assumes that each agricultural enterprise has demanded and obtained a single loan each year. Especially for medium and long-term loans this should be interpreted with caution as any given year may include additional loans from previous years.

The FADN database provides average short-term as well as medium and long-term loans per enterprise, for each country and at EU level, but also includes enterprises reporting zero in their balance sheet liabilities. By using more disaggregated FADN data a more accurate average loan at EU and country level has been calculated, by using the number of agricultural enterprises that report positive figures in their balance sheet liabilities, either for short, or medium and long-term loans (i.e. excluding enterprises with zero loans from the average).

Moreover, FADN includes the number of agricultural enterprises that recorded short as well as medium and long-term loans. This last indicator can also be used as a proxy for short, or medium and long-term loan demand. It is assumed that the number of enterprises reporting a loan greater than zero corresponds to the number of loans obtained by agricultural enterprises (i.e. each agricultural enterprise represents a single demanded and obtained loan). The same hypothesis is assumed to be valid for agricultural enterprises unsuccessful in obtaining loans (i.e. the distribution of short-term as well as medium and long-term loans is the same for agricultural enterprises that demanded and obtained a loan and for those that were unsuccessful).

These disaggregated data are available up to 2013. For consistency, this analysis uses the average of the previous three years for the number of agricultural enterprises with a short, medium or long-term loan. Data on loan demand are displayed in table 1.8. **More than 2.1 million agricultural enterprises reported a loan in their accounts, of which 54% were short-term and 46% medium or long-term.** Based on FADN, **the average short-term loan size at EU level is EUR 44 800 and medium or long-term loan is EUR 184 000 (as an average of the previous three years).**

²³ Value at closing for (long, medium or short-term) loans still to be repaid.

**Table 1.8 – Number of agricultural enterprises with loans and loan size (from FADN, average 2011-2013)**

Country	Number of agricultural enterprises with:		Percentage of enterprises with:	
	Short-term loan	Medium and long-term loan	Short-term loan	Medium and long-term loan
Austria	52 238	39 038	57%	43%
Belgium	478	27 456	2%	98%
Bulgaria	5 341	5 900	48%	52%
Croatia	872	9 579	8%	92%
Cyprus	0	1 017	0%	100%
Czech Republic	12 496	6 410	66%	34%
Denmark	28 680	28 134	50%	50%
Estonia	4 610	3 127	60%	40%
Finland	12 537	28 355	31%	69%
France	298 622	268 352	53%	47%
Germany	181 020	128 997	58%	42%
Greece	3 824	4 488	46%	54%
Hungary	73 728	29 035	72%	28%
Ireland	19 927	27 150	42%	58%
Italy	3 727	17 417	18%	82%
Latvia	9 084	5 949	60%	40%
Lithuania	34 397	11 772	75%	25%
Luxembourg	1 603	1 271	56%	44%
Malta	60	117	34%	66%
Netherlands	51 712	46 226	53%	47%
Poland	206 406	161 118	56%	44%
Portugal	30 731	3 249	90%	10%
Romania	5 553	3 896	59%	41%
Slovakia	1 399	1 556	47%	53%
Slovenia	451	5 267	8%	92%
Spain	20 303	75 519	21%	79%
Sweden	23 935	23 669	50%	50%
United Kingdom	81 402	37 850	68%	32%
EU 28*	1 164 512	995 528	54%	46%

* Figures at EU 28 level cannot be interpreted as an average or sum of the data by country, since data for each enterprise in the FADN database is adjusted by weighted coefficients. Holdings in the sample and in the population are stratified (formed into groups) according to the same criteria: region, specialisation and size²⁴.

²⁴ See FADN (2010), 'Farm Accounting Data Network - An A to Z of methodology', pp. 4-12.



2 GAP CALCULATION

The last step to estimate the financial gap for both lower and upper boundaries, is to multiply:

- the estimated number of financially viable agricultural enterprises unsuccessful in obtaining a loan (as displayed in Table 1.5), by
- the percentage of agricultural enterprises with a loan – used as proxy for loan demand – for short, or medium and long-term loans (as displayed in Table 1.6).

The obtained figures are then multiplied by the average short-term loan size of EUR 44 800 and medium or long-term loan of EUR 184 000 respectively. Results are displayed in the tables below.

Table 2.1 – Estimated financial gap for short-term as well as medium- and long-term loans at country level (EUR)

Country	Lower boundary		Upper boundary	
	Short-term loan	Medium and long-term loan	Short-term loan	Medium and long-term loan
Austria	20 698 002	63 572 870	48 776 906	149 815 811
Belgium	191 553	45 267 932	438 007	103 509 881
Bulgaria	20 866 073	94 741 544	61 566 601	279 540 612
Croatia	3 785 219	170 950 076	5 475 907	247 305 843
Cyprus	0	0	0	261 953 353
Czech Republic	2 874 854	6 060 333	6 014 378	12 678 602
Denmark	1 786 669	7 203 111	6 808 356	27 448 474
Estonia	4 927 308	13 738 316	13 882 056	38 705 939
Finland	1 692 952	15 736 864	8 749 969	81 335 500
France	40 123 175	148 187 957	188 100 559	694 716 641
Germany	69 027 023	202 164 829	96 793 170	283 485 711
Greece	205 401 003	990 766 123	818 714 446	3 949 126 467
Hungary	150 065 765	242 884 176	348 728 522	564 423 470
Ireland	10 898 583	61 027 315	62 574 642	350 390 737
Italy	48 035 454	922 490 112	99 343 293	1 907 824 276
Latvia	0	0	41 914 124	112 813 480
Lithuania	113 236 272	159 271 945	109 517 628	154 041 504
Luxembourg	554 191	1 805 778	965 466	3 145 877
Malta	0	0	0	0
Netherlands	6 147 512	22 585 438	36 908 635	135 599 186
Poland	187 587 219	601 810 861	411 804 167	1 321 135 956
Portugal	78 445 617	34 089 078	213 161 303	92 630 697
Romania	1 491 610 873	4 300 670 967	1 724 484 942	4 972 102 616
Slovakia	2 882 918	13 180 493	7 335 588	33 537 777
Slovenia	3 633 879	174 385 508	7 739 689	371 418 417
Spain	46 498 039	710 829 397	163 029 430	2 492 279 521
Sweden	10 214 630	41 514 176	9 416 309	38 269 649
United Kingdom	37 256 870	71 198 218	50 048 457	95 643 057
EU 28*	1 565 006 622	5 498 698 235	4 120 785 592	14 478 505 168

* Figures at EU 28 level cannot be interpreted as an average or sum of the data by country, since each enterprise data in the SAFE database as well as FADN database is adjusted and weighted by size, economic activity and country.



Table 2.2 – Estimated financial gap for short-term as well as medium- and long-term loans at EU 28 level (EUR)

Lower boundary		Upper boundary	
Short-term loans	Medium and long-term loans	Short-term loans	Medium and long-term loans
1 565 006 622	5 498 698 235	4 120 785 592	14 478 505 168
7 063 704 857		18 599 290 760	

According to the estimates, the financial gaps are:

for short-term loans: EUR 1.56 billion to EUR 4.12 billion

for medium and long-term loans: EUR 5.50 billion to EUR 14.48 billion

The total financial gap, therefore, is between EUR 7.06 billion and EUR 18.60 billion.



3 FINAL REMARKS

This analysis shows a substantial short and longer-term financial gap for EU farmers. The improved economic and financial situation does not seem to have reduced this gap, presumably because the improved access to finance has been more than offset by greater requirements for investments and productive restructuring.

The financing gap for agricultural enterprises calculated in this document is considerably higher than the EC estimates of 2013, when the gap was estimated at between EUR 1.5 billion and EUR 9 billion. However, the two estimates are not completely comparable, given the adaptations and improvements to EC (2013) methodology in this new calculation. In particular:

- The EC (2013) methodology was applied only to *agricultural SMEs*²⁵, while here all agricultural enterprise sizes are considered. Larger enterprises would normally demand larger loans, which could affect the estimate.
- The average loan requested by an agricultural SME in EC (2013) does not distinguish between short, or medium and long-term, but assumes that the average for an agricultural SME is between one third and one fourth of the average loan of non-financial SMEs (i.e. EUR 25 000 to EUR 40 000). The average loan size takes representative samples from Bureau Van Dijk's Orbis Database of Company information on liabilities, and from the BACH-ESD Database of aggregate information on non-financial corporations. These databases do not specifically refer to only agricultural enterprises either. This is corrected in this analysis for the value of loans (EUR 44 700 and EUR 184 000), by using specific disaggregated FADN data considering only agricultural enterprises reporting a non-zero loan in their balance sheet (short, or medium and long-term).
- The upper and lower boundaries in EC (2013) are taken respectively from Eurostat 2010, and from SAFE 2009 and 2011 surveys, which is somehow inconsistent. In this analysis both boundaries are calculated using updated data provided by SAFE (2016). As a consequence of using different sources and different market conditions, the share of financially viable enterprises is higher in this calculation (13.9% and 40.9% vs 5.8% and 32.5%).
- Although the same source is used, the number of agricultural enterprises considered by EC (2013) using Eurostat 2011 was about 1.5 million higher than in this report, which uses data from Eurostat 2013. As explained before, the impact of fewer enterprises is counterbalanced by a higher average size of farms, with an impact on the financing gap which cannot be defined. This does not mean that there is a disproportionate approach, but rather outlines a trend of continued decline in the number of farms across the whole EU with some minor exceptions.

Last, but not least, the economic crisis from 2008-2011 is now over and there is a different financial, investment and economic situation in the EU. Investment behaviour is generally much more active and the financial needs of EU agricultural businesses have changed, as confirmed in this report.

²⁵ See footnote n. 11.

www.fi-compass.eu
contact@fi-compass.eu
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European Commission
Directorate-General
Agriculture and Rural Development
B-1049 Brussels

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