# Support to SME initiative evaluation in the Member States

Contract no. 2019CE16BAT136

## Final Report

Written by t33 srl
*March – 2021*

**EUROPEAN COMMISSION**

Directorate-General for Regional and Urban Policy
REGIO B.2 - Evaluation and European Semester

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2021 EN

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Manuscript completed in March 2021



Luxembourg: Publications Office of the European Union, 2021

ISBN 978-92-76-36159-6
doi: 10.2776/975444

## Foreword

Initially presented in June 2013 in a Commission's and European Investment Bank's joint report to the European Council[1], the SME Initiative (SMEi) has been established to complement and utilise synergies between existing SME support programmes at national and EU level. SMEi blends EU funds from COSME and Horizon 2020 together with European Structural and Investment Funds (ESIF) in cooperation with the European Investment Bank Group to enable additional lending to small and medium-sized enterprises (SMEs).

Spain was the first EU country to put SMEI into practice on 26 January 2015 with Malta launching later that year, then Bulgaria, Finland, Romania and Italy in 2016. Only Italy decided to implement SMEi securitisation instrument, while the other SMEi participating Member States are implementing uncapped portfolio guarantees.

Following the Omnibus Regulation[2] entering into force, the provisions on evaluation of the Common Provision Regulation are also applicable to SMEi Operational Programmes. Thus, managing authorities must ensure that at least an evaluation is carried out to assess effectiveness, efficiency and impact of support from the ESI Funds. A survey conducted among SMEi Member States by Malta, in agreement with the Commission, showed that the majority of participating Member States were not in favour of a joint evaluation of SMEi. However, there was general support for a common methodological approach allowing for country-specific adjustments.

Against this background, this service contract provides a common methodological approach to support SMEi evaluation in the Member States[3]. A draft approach was developed based on literature review and interviews with SMEi managing authorities. This was reviewed based on feedback from a technical seminar organised on 3 March 2020 in Brussels, with representatives of SMEi managing authorities, European Commission officials and two external discussants.

This is the 'Final Report' prepared under the service contract. It provides **the common methodological approach**, including evaluation **purpose** and **objectives**, **tasks** and **methods**. The approach:

- Ensures **robust and comparable SMEi evaluations**, in line with the Common Provision Regulation and according to international evaluation best practice. Where the method requires for more sophisticated methods to be adopted, it does so as these are deemed necessary to help Member States assess the

[1] European Commission and European Investment Bank (2013), Increasing lending to the economy: implementing the EIB capital increase and joint Commission-EIB initiatives, Joint Commission-EIB report to the European Council.

[2] Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012.

[3] The service contract covers mainly ERDF. Other sources/programmes are considered only to the extent that they contribute to the impact of the operations, be it only from the financial point of view or with a more complex mechanism.

opportunity costs of supporting SMEi rather than other instruments or objectives[4].

- Considers the **different SMEi sizes and options** across the Member States and the **possible constraints on the resources** available for the evaluation. On this basis, it offers a modular design of tasks and methods. A **core layer of the evaluation** has been identified, based on higher priority success criteria and related evaluation questions. In addition, given the evaluation questions, use of **methods** is also **modular** in that the conditions under which methods can complement each other or be alternative options are clarified.

While this document is formulated so as to provide useful input to the evaluations of SMEi in the Member States, it only covers some of the necessary sections of a possible terms of reference[5].

[4] On the need for more sophisticated methods to assess the wider economic impact of public programmes and control for unconnected factors that impact on any outcomes, see Green, F. J. (2009), Assessing the impact of policy interventions: the influence of evaluation methodology.

[5] For example, it does not cover timing and deliverables, the required competencies or management arrangements.

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## ACRONYMS

| | |
|---|---|
| **AECM** | Association Européenne du Cautionnement |
| **AIR** | Annual Implementation Report |
| **CATI** | Computer-assisted telephone interviewing |
| **CAWI** | Computer-assisted web interviewing |
| **COSME** | The EU programme for the Competitiveness of Small and Medium-Sized Enterprises |
| **DID** | Difference-in-difference |
| **EIB** | European Investment Bank |
| **EIF** | European Investment Fund |
| **ESIF** | European Structural and Investment Funds |
| **EU** | European Union |
| **MFI** | Monetary Financial Institutions |
| **NACE** | Nomenclature statistique des Activités économiques dans la Communauté Européenne |
| **NUTS** | Nomenclature d'Unités Territoriales Statistiques |
| **OP** | Operational Programme |
| **PSM** | Propensity Score Matching |
| **RDD** | Regression discontinuity design |
| **SAFE** | Survey on the Access to Finance for Enterprises in the EU area |
| **SME** | Small and medium-sized enterprises |
| **SMEi** | SME initiative |

# 1 GENERAL BACKGROUND

Reconstructing the intervention logic of SMEi can be very helpful in identifying the evaluation questions as it can point to relationships or assumptions that the evaluation might wish to investigate further[6]. Therefore, as a first step in designing a common methodology that can help the Member States to prepare their own Terms of Reference to conduct their evaluations, a draft simplified intervention logic of SMEi has been developed. This can be adapted and further developed by the Member States to fit the specific context and Operational Programme (OP) as needed.

As illustrated in Figure 1, SMEi draft simplified intervention logic considers[7]:

- Actual inputs as costs associated with SMEi. These include financial allocations to SMEi programmes net of any repaid resources. Thus, these cover management costs and fees, any calls for guarantees net of recoveries and risk cover fees[8].
- In addition to programme resources, SMEi uses resources from EU centrally managed programmes and the European Investment Bank (EIB) group, which increases capacity to meet final recipient needs. EIB group's resources benefit from International Financial Institution status, including an AAA credit rating and 0% risk weight. The risk management activity calculates risk, pricing, capital allocation and tranche structuring. Programme and EIB resources cover the most and least risky tranches respectively.
- The European Investment Fund (EIF) implements SMEi support, including selecting financial intermediaries. It is remunerated through management costs and fees, comprising an incentive fee to promote alignment of interest. Financial intermediaries benefit from risk-sharing and reduced regulatory capital charges[9] based on SMEi guarantee. A higher (lower) guarantee fee can be expected to be paid by the financial intermediaries the higher (lower) the risk cover fees. In turn, this reduces (increases) the benefit that can be passed to final recipients.
- Under operational agreements signed with the EIF, financial intermediaries commit to build new credit portfolios during a pre-defined inclusion period. Key features of the portfolio and how this differs from standard credit policy are submitted with the financial intermediary expression of interest. Financial intermediaries keep a share of risk of each transaction in their own books, based on the guarantee rate. Moreover, penalties due in case agreed targets are not achieved promote alignment of interest.

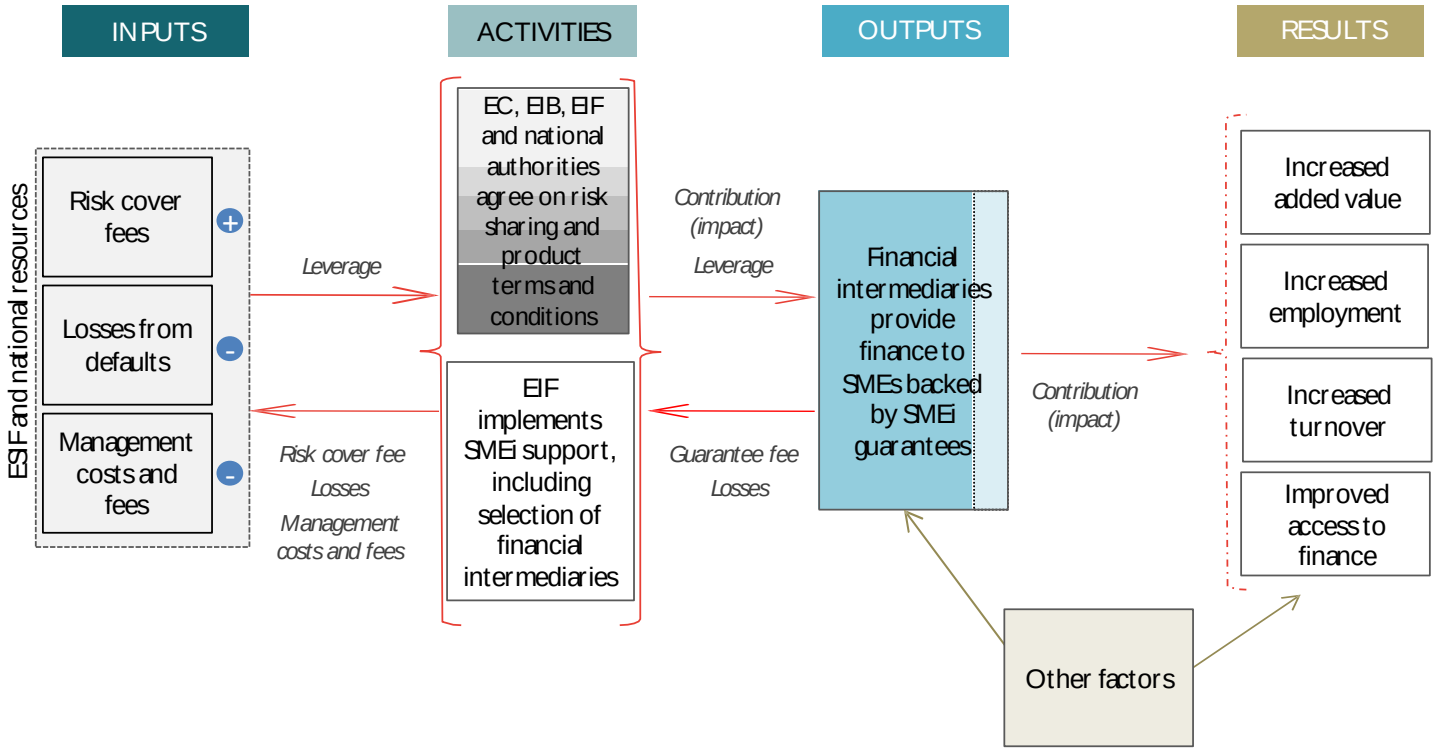
[6] See European Commission (2017), Better regulation Toolbox.

[7] The consultants reviewed evaluations and research covering similar interventions, as well as legislation and Commission's communications addressing SMEi. SMEi Operational Programme documents as well as other SMEi official documents in the Member States, especially EIF calls for expression of interest, were also reviewed. On this basis, a draft simplified intervention logic for SMEi was developed.

[8] Additional costs may also be considered, which are less important according to the literature. These include the opportunity cost of capital employed in the scheme or the cost of administering the scheme borne by the managing authorities. See for instance London Economics (2017), Economic impact evaluation of the Enterprise Finance Guarantee scheme.

[9] Risk weighting method implies that initial capital absorption for SME exposures is affected by whether banks use the standardized or the internal rating-based approach and by whether loans are classified as corporate or retail.

**Figure 1 SMEi draft simplified intervention logic**




Source: t33

- Financial intermediaries are required to: (a) report as part of their expression of interest on financing origination and performance data with respect to SMEs and a proxy of the guaranteed portfolio; (b) manage and service the portfolio in accordance with their standard credit policies applicable to their SME loan book; (c) report on key features of selected final recipients e.g. probability of default, internal scoring/rating, and transactions, e.g. interest rate margin, loss given default, collateralisation rate. This is intended to manage the risk that financial intermediaries include in their guaranteed portfolios enterprises that are not financially viable, as risk sharing with public resources may lead to phenomena of moral hazard[10]; or enterprises that would have been financed even in the absence public support i.e., the intermediaries do not change their financing decision, so called deadweight. Moreover, whereas eligibility and risk assessment is delegated to financial intermediaries, based on agreed criteria, the fund manager should replace any irregular transactions with eligible ones before closure of the OP.
- Guarantee agreements include a methodology to pass the full financial advantage on to supported SMEs, based on reduced interest rate. The EIF relies on the good faith of financial intermediaries when reporting back on the financial advantage

[10] As noted above, SMEi guarantee agreements imply that credit risk of a fraction of the value of each individual loan remains with the lender. This encourages the lender to carefully screen and monitor the loans covered by the guarantee scheme avoiding excessive risk-shifting.

passed on to SMEs[11]. In addition, the total cost of finance may also include other fees e.g., arrangement fee.

- Based on SMEi resources, credit might be provided to viable enterprises that would otherwise not be financed (see Box 1 for the causes that generate a failure in obtaining financing, based on SMEi ex-ante assessment assumptions)[12]. Financing conditions for supported enterprises can also be improved, including increased access to finance (in case of partial rationing), longer-term bank debt, lower financing costs[13].
- SMEs use new finance[14] for investments in tangible and intangible assets as well as working capital. Based on intended change of each SMEi OP, this leads to increased employment, turnover or added value. However, other factors also drive the actual result towards or away from the intended change. Economic benefits also consider any changes in the survival probability of enterprises and the extent to which improvement in supported SME performance was at the expense of competitors.

**Box 1 SME failures in obtaining financing: SMEi ex-ante approach**

SMEi aims to address market failures by facilitating the provision of credit to financially viable enterprises that could not access that credit otherwise. These are enterprises that: (a) have been refused a bank loan; (b) have turned down a bank loan, due to the credit conditions; (c) have been discouraged from applying for a bank loan.

The chart below illustrates discouraged enterprises as a share of total financially viable[15] enterprises in each of SMEi participating Member States in 2016[16], except Malta. It should be noted that the figures refer to enterprise reported behaviour in the past six months. For Italy and Spain only[17], the share also shows the share of enterprises that applied for a loan but either were rejected or refused because of conditions. While the overall proportion of financially viable credit rationed enterprises in the two Member

[11] Insofar as the EIF does not make an own assessment of the probability of default of final recipients.

[12] This is the key rationale of financial additionality as identified in SMEi ex-ante assessment.

[13] These represent additional elements of financial additionality, as generally assessed in the economic literature. See for example D'Ignazio, A., Menon, C. (2012), Evaluating credit guarantees for SMEs: evidence from Italy.

[14] SMEi ex-ante assessment also identified a catalytic effect, under which loans triggered by the initiative would lead to subsequent additional external financing obtainable by the final recipients. This is not considered in the draft simplified intervention logic as such effect was not referenced in the literature reviewed by the consultants.

[15] These enterprises reported positive turnover growth in the last six months according to the 'upper boundary' used to calculate the funding gap in SMEi ex-ante assessment.

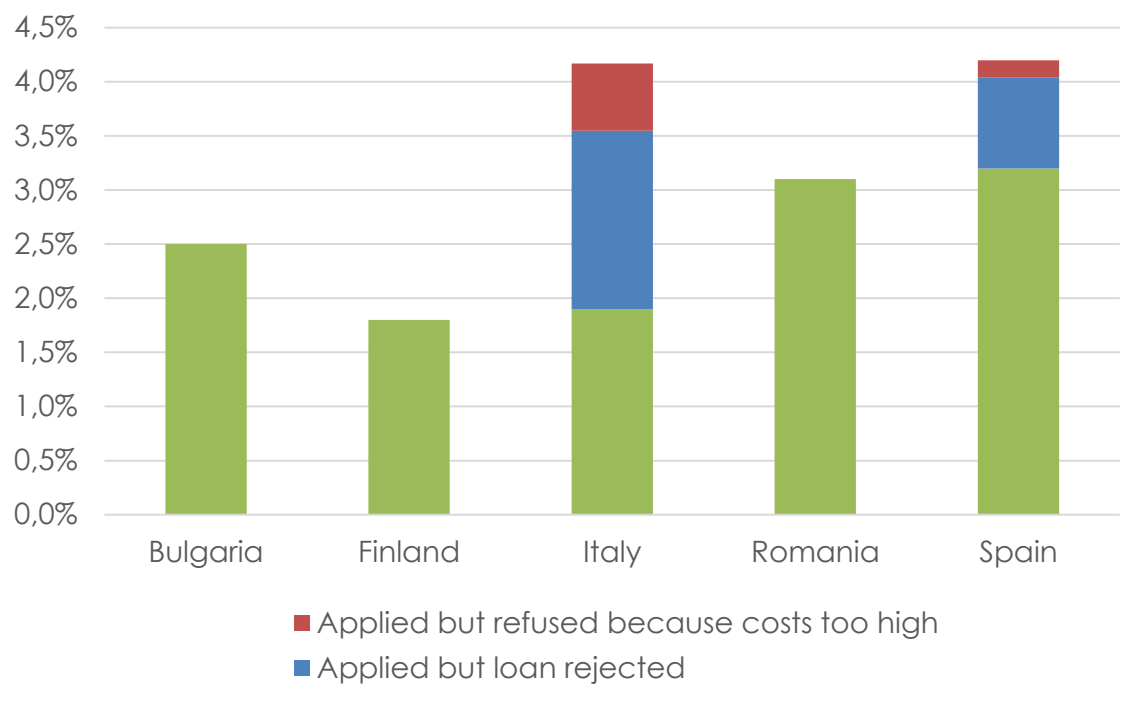
[16] SAFE, September to October 2016, wave 15. For more on SAFE methodology, see European Central Bank (2017), Survey on the access to finance of enterprises – Methodological information on the survey and user guide for anonymised micro dataset, pp. 7-13. The calculation is based on data in fi-compass (2018), Financial gap in the EU agricultural sector.

[17] More replies are available to SAFE question Q7ba 'If you applied and tried to negotiate for a bank loan over the past 6 months, what was the outcome?' for these Member States.

States is similar, the data indicates a more important role for discouraged enterprises in Spain and rejected[18] and refused loan applications in Italy.

Given the different types of credit rationing, public guarantees can encourage banks to finance enterprises they would not consider otherwise, by reducing credit risk, capital absorption[19] and alleviating deleveraging[20].

Public guarantees can also encourage more applications from enterprises that would not apply despite the need or make enterprises more likely to accept a bank offer they would otherwise refuse.




Under SMEi, benefits from the subsidised guarantee provided to financial intermediaries are passed to enterprises by applying a credit spread reduction. This is ensured by applying a guarantee fee to the part of each loan covered by the guarantee, instead of the financial intermediary standard credit risk premium. Financial intermediaries can propose additional improvements on standard conditions for SMEs, including less collateral. On this basis, financial intermediaries provide the EIF with the expected composition and characteristics of the portfolio they intend to build, including the level of collateral.

Source: t33

[18] This refers to enterprises where the loan application was totally rejected and excludes enterprises with partial rejections.

[19] As concerns the extent to which guarantees are important to beneficiary banks for risk transfer or as instruments of capital management, see Chatzouz, M., Gereben, Á., Lang, F., and Torfs, W. (2017), Credit guarantee schemes for SME lending in Western Europe, EIB Working Papers 2017/02. This paper focuses on credit guarantee schemes rather than publicly supported guarantees.

[20] For a paper investigating the deleveraging process since the onset of the financial crisis and how this affected the provision of credit, see for example Mosk, T. and Ongena, S. (2013), The impact of banking sector deleveraging on investment in the European Union, published as chapter in EIB (2013 Investment and Investment Finance in Europe.

While this draft intervention logic is in general also applicable to SMEi securitisation, some key differences need to be considered[21]:

- SMEi securitisation supports existing portfolios of SME and Small Mid-Caps loans, leases or alternative debt finance agreements originated by selected financial intermediaries. Priority is given to transactions that include bank loans backed by guarantees from mutual guarantee institutions. Replenishment of existing portfolios might be allowed subject to due diligence.
- In addition to capital relief and loss protection from synthetic transactions, SMEi securitisation can also provide funding via a cash purchase of securitisation tranches. Certain tranches within SMEi securitisation transactions are priced below market, providing an advantage to financial intermediaries.

In exchange for receiving SMEi support, financial intermediaries generate an additional portfolio of eligible final recipient transactions. The EIF agrees with the financial intermediaries on a methodology to pass on the full benefit of SMEi support to those SMEs financed via the additional portfolio. This implies that the benefit is passed on to SMEs by reducing, for each exposure in the additional portfolio, the standard credit risk premium financial intermediaries would normally charge.

[21] Public support to SME loan securitisation is often intended to stimulate market development. However, review of available documents did not identify this as an explicit objective of SMEi Italy. This is possibly due to Italy having a relatively more mature SME loan securitisation market. See European Investment Bank's Operations Evaluation Division (2017), Evaluation of the EIF's SME Securitisation Activities, 2004-2015.

# 2 PURPOSE AND OBJECTIVES

SMEi evaluation should address success criteria that measure performance, efficiency, effectiveness and impact, based on intervention logic of each SMEi OP. Success criteria have been developed based on review of research and evaluations. These are illustrated in the following tables, together with corresponding rationale, evaluation questions, and tasks[22]. Given possible constraints on the resources available for the evaluation, a modular structure has been designed, where **success criteria with lower priority** have been identified and shown **on dark grey background in the tables**. As presented in the tables, the success criteria aim to both disentangle the effects of SMEi from other factors and to understand its functioning[23]. Further details on judgement criteria, indicators, tasks and methods addressing individual evaluation questions are provided in sections 3 and 4.

[22] The criteria assume that evaluation of SMEi for any financial resources contributed from COSME and Horizon 2020 rest with the European Commission.

[23] See European Commission (2014), The programming period 2014-2020 – Guidance document on monitoring and evaluation of the European Cohesion Fund and the European Regional Development Fund.

**Table 1 SMEi success criteria - Effectiveness**

| **1 Effectiveness** | | | |
|---|---|---|---|
| Success criteria | Rationale | Evaluation questions | Task(s) |
| 1.1 Achievement of expected outputs/ results | This assesses the extent that SMEi could achieve policy objectives under the relevant investment priority. | **EQ1.1** *To what extent has SMEi achieved the expected output and results, based on programme intervention logic?* | 1,2 |
| 1.2 Appropriate target group and territorial balance | Academic research shows that the financial environment for enterprises differs within countries and across target groups. This criterion assesses the extent that SMEi could reach the territories and target groups most in need. | **EQ1.2** *What are the characteristics of SMEi recipients and how do they compare to (different groups of) potential recipients?* | 1,2 |
| 1.3 Suitability of implementation structure | This assesses whether appropriate procedures, mechanisms and infrastructure were in place so the: (a) target group(s) is reached; (b) interests are aligned; (c) benefit from public support is passed to supported enterprises; (d) required reporting is prepared. | **EQ1.3** *How do SMEi implementation mechanisms promote the desired change?* | 2 |
| 1.4 Adequate implementation capacity | This clarifies the extent that national and local institutional capacity was adequate and could benefit from EU-level entrusted entities with their know-how of guarantees and securitisation design. | **EQ1.4** *What was the contribution of the EIF know-how to ensuring adequate implementation capacity?* | 2 |

| 1 Effectiveness | | | |
|---|---|---|---|
| Success criteria | Rationale | Evaluation questions | Task(s) |
| 1.5 Outreach/ relevance | This assesses the extent that SMEi could meet demand from credit rationed viable enterprises, addressing market failure. It considers timing and changing market conditions, as well as any overlapping or complementarities with other public support. | **EQ1.5.1** *How has SMEI intervention rationale changed from conception to implementation?*<br><br>**EQ1.5.2** *What mechanisms were established to adapt SMEi support to changing market conditions?*<br><br>**EQ1.5.3** *How does SMEI support fit with similar instruments financed with Cohesion policy or national resources?* | 1,2 |

*Lower priority criteria shown on dark grey background*

**Table 2 SMEi success criteria - Impact**

| 2 Impact | | | |
|---|---|---|---|
| Success criteria | Rationale | Evaluation questions | Task(s) |
| 2.1 Financial additionality | This establishes whether enterprises would have received a loan from their bank without SMEi support. Financial additionality is an important issue in the rationale for SMEi which should not replace commercial lending (deadweight). | **EQ2.1** *To what extent and at what conditions would SMEi actual recipients have been financed without SMEi support?* | 3 |

| 2 Impact | | | |
|---|---|---|---|
| Success criteria | Rationale | Evaluation questions | Task(s) |
| 2.2 Economic additionality (Enterprise performance) | This compares performance between SMEi supported enterprises and other enterprises. It assesses whether a causal link between SMEi intervention and longer-term achievements can be established, after considering other factors. Key variables include enterprise investment, sales, exports, job creation and productivity (GVA). It also addresses sustainability over time. | **EQ2.2** *How does performance of SMEi recipients compare with potential recipients?* | 3 |
| 2.3 Project additionality[24] | This assesses whether enterprises would have proceeded with their project without SMEi support. It also assesses whether the project would have proceeded with the same timing and scale. | **EQ2.3** *To what extent would actual recipients of SMEi have gone ahead with their project without SMEi support?* | 3 |
| 2.4 Economic benefits | This estimates economic activity created through SMEi support, after accounting for displacement i.e., the degree to which improvements in recipient enterprise performance resulted in an increase in market share at the expense of competitors. Ultimately, removing a finance constraint should enhance the productivity of supported SMEi. | **EQ2.4** *What are the net benefits for the economy, once net benefits for SMEi actual recipients are aggregated and considering the extent to which the growth of SMEi actual recipients displaced other enterprises?* | 3 |

*Lower priority criteria shown on dark grey background*

[24] This criterion only applies where SMEs used support for investments in tangible and intangible assets.

**Table 3 SMEi success criteria - Efficiency**

| **3 Efficiency** | | | |
|---|---|---|---|
| Success criteria | Rationale | Evaluation questions | |
| 3.1 Cost-benefit | This compares SMEi 'additional' benefits and costs (see above for more details on economic benefits). Where possible, it also assesses whether SMEi benefits were at a higher or lower cost compared with initial expectations and similar financial instruments. | **EQ3.1** *How do SMEi economic benefits and costs compare to each other?* | 4 |
| 3.2 Risk optimisation | This assesses whether SMEi design was suitable to the different risk-bearing capacities of risk takers and enabled maximum leverage. | **EQ3.2** *To what extent was risk allocation appropriate considering risk taker capacity for risk?* | 4 |

*Lower priority criteria shown on dark grey background*

# 3 TASKS

Based on successful examples of evaluations and research on similar interventions, this section illustrates the tasks required to address the success criteria and evaluate SMEi in the participating Member States.

### *Task 1 Mapping and enterprise data survey*

This task includes two key components of the methodology core layer. These are the **SMEi mapping** and a **survey of enterprise micro data**. It also includes an overview of national financial markets and evolution of SMEi ex-ante assessment key assumptions as a further possible activity.

With regard to the **SMEi mapping**, the evaluator provides the **main elements** of the SMEi including:

- supported investment priorities and specific objectives;
- type of financial instrument;
- financial intermediaries implementing the initiative;
- signature date of the funding agreement and operational agreements;
- ESIF and programme amounts committed and paid to SMEi, financial intermediaries;
- a description of the main events, including any changes to the funding agreement any top-up support
- ESIF, programme amounts and total financing disbursed to final recipients;
- a summary analysis of the data reported to the EIF at the level of the individual transactions and supported enterprises[25];
- output indicators to which the SMEi contributes, including target and achieved values;
- management costs and fees;
- amount attributable to ESIF support paid back to SMEi.

In addition, the evaluator[26] carries out a **survey of enterprise micro data** available in the Member State[27]. This **identifies data sources** can provide data to control group

[25] If not part of EIF operational reporting, this data could be made available to the managing authorities as part of the evaluation. See Article 16 or Article 18 of the Commission Implementing Decision of 11 September 2014 on the model of funding agreement for the contribution of the European Regional Development Fund and the European Agricultural Fund for Rural Development to joint uncapped guarantee and securitisation financial instruments in favour of small and medium-sized enterprises.

[26] Alternatively, the survey of enterprise micro data can be carried out by the evaluator in their technical offer or the managing authority, when preparing the terms of reference of the evaluation.

comparison of SMEi potential recipients and complement EIF data on SMEi supported enterprises whenever needed. The survey also clarifies the **feasibility** and **level of detail** that can be delivered by each method as well as the **specific approaches** required.

As concerns **administrative** or **commercial datasets** providing enterprise micro data, the data survey should consider:

- **Number of SMEs** included in the dataset. Comparison with statistics on the overall number of SMEs in each Member State provides the extent of market coverage.
- **Depth of information** available. This should clarify what SME characteristics and financial and economic indicator data is available for different types of enterprise. Extent of available information can vary considerably within Member States, depending on reporting obligations of SMEs having different legal status or size.
- **Time period** covered by the data, including before and after the intervention and available information about enterprises which exited the market.

The data survey also covers feasibility of **matching across data sources**. In particular where micro data reported to the EIF includes an enterprise identifier - such as trade register or tax number - that can be used for automated matching with other data sources. If instead EIF implementation data does not include an identifier but basic enterprise information – i.e., enterprise name, address and postal code – additional time should be allowed to ensure matching between data sources as part of the evaluation (if administrative or commercial datasets are used).

Where an SME survey is considered as an option to gather enterprise micro data that is not covered by EIF reported information, the evaluator clarifies whether a desired sample size can be achieved for **supported SMEs**[28], given typical response rates of voluntary enterprise surveys.

As additional possible activity under this task, the evaluator may prepare an overview of the evolution national financial markets. This would provide background and context to assess SMEi effectiveness as well as it could contribute to addressing specific evaluation questions as detailed under task 2. The evaluator may also be required to provide an analysis of how SMEi ex-ante assessment key assumptions evolved during the relevant period.

More details on the methods under this task are provided in section 4.

[27] Under this service contract, a preliminary analysis of SMEi available data was carried out to assess whether the evaluation questions were likely to be answerable - as recommended by the European Commission (2008), Evalsed: The Resource for the Evaluation of Socio-Economic Development Guide on evaluability of evaluation questions. The preliminary analysis clarified that gathering of additional enterprise micro data than reported to the EIF is necessary to answer some of the evaluation questions.

[28] In the Member States participating to SMEi, these can be from just some hundreds to tens of thousands.

***Task 2 Assessment of effectiveness***

Evaluation questions, judgement criteria and indicators, as well as methods under this task are given in Table 4. All criteria are important to assess public support aimed at improving access to finance, as identified in the economic literature. However, given possible constraints on the resources available for the evaluation, **success criteria and related evaluation questions and judgement criteria with lower priority** have been identified. These are shown **on dark grey background** in the table. In addition, even under success criteria having a higher priority, it might not be feasible to address those **judgement criteria that can only be addressed through an SME survey**, where this is not allowed by the evaluation budget. These are also shown **on dark grey background** in the table.

Most judgement criteria can be addressed through **desk analysis** and **EIF and financial intermediary interviews**. An **SME survey** could gather data about basic characteristics of SMEi actual and potential recipients, as well as more detailed enterprise information including use of other support and external finance. More details on how an SME survey and other methods can contribute to answer the evaluation questions are provided in section 4.

**Table 4 Evaluation matrix – Effectiveness**

| **1.1 Achievement of expected output and results** | | |
|---|---|---|
| ***EQ1.1 To what extent has SMEi achieved the expected output and results, based on programme intervention logic?*** | | |
| Judgement criteria | Indicators | Method |
| SMEi support received | Number of final recipient transactions<br><br>Amount of finance received through SMEi support | Desk analysis |
| Progress with achieving the expected output and results | Comparison of output and results achieved values with indicator targets | Desk analysis |

| **1.2 Appropriate target group and territorial balance** | | |
|---|---|---|
| ***EQ1.2 What are the characteristics of SMEi recipients and how do they compare to objectives and (different groups of) potential recipients?*** | | |
| Judgement criteria | Indicators | Method |
| Characteristics of SMEi actual recipients compared to initial objectives, potential recipients | Legal status<br><br>Size[29], if a micro, small or medium-sized enterprise based on Commission Recommendation 2003/361/EC<br><br>Age class i.e., based on years since establishment[30].<br><br>SME status, if active or inactive (if administrative data is used) to indicate sustainability of effects from support<br><br>Business sector, based on NACE taxonomy<br><br>1-year probability of default[31] | Desk analysis<br><br>SME survey<br><br>EIF interview<br><br>Financial intermediary interviews |
| SMEi recipient ownership characteristics compared to potential recipients | Characteristics of the owner, including sex[32] and belonging to a minority group[32]<br><br>Recent change in ownership[33] i.e., before applying for support | SME survey |

[29] Literature shows that micro enterprises are more likely to be credit rationed.

[30] Literature highlights that banks are usually less prone to lend to younger enterprises.

[31] For default definition, see Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

[32] Some literature shows that women and minority groups are more likely to need public support to access finance.

[33] Literature shows that changes in senior personnel may be perceived as an increased risk of less entrepreneurial capability.

| 1.2 Appropriate target group and territorial balance | | |
|---|---|---|
| ***EQ1.2 What are the characteristics of SMEi recipients and how do they compare to objectives and (different groups of) potential recipients?*** | | |
| Judgement criteria | Indicators | Method |
| Localisation characteristics of SMEi actual and potential recipients | Region (Eurostat NUTS2)<br>County (NUTS3)<br>Municipality (LAU2)<br>For NUTS3 regions, it is possible to add other indicators[34]:<br>Development level – GDP per capita (in categories)<br>Urbanisation – Predominantly urban, intermediate or predominantly rural[35]<br>Accessibility – Classification by various taxonomy developed at EU level, e.g., ESPON or Eurostat | Desk analysis<br>EIF interview<br>Financial intermediary interviews |
| Use of external finance by SMEi actual and potential recipients | Enterprise accessed external finance or only used internal finance | SME survey |
| Other public support received by SMEi actual and potential recipients i.e., grant or financial instrument | Other grant support received<br>Other financial support received | SME survey |

*Lower priority criteria are shown on dark grey background*

[34] These indicators provide information on factors which could affect SME performance as well as access to finance. Literature highlights that companies from deprived zones are usually more likely to require public support to access finance than enterprises from more developed territories.

[35] Eurostat defines predominantly urban NUTS3 regions as having more than 80 % of the population living in urban clusters. An urban cluster is a cluster of contiguous grid cells of 1 km² (including diagonals) with a population density of at least 300 inhabitants per km² and a minimum population of 5 000 inhabitant. Intermediate NUTS3 regions have more than 50 % and up to 80 % of the population living in urban clusters. Predominantly rural NUTS3 regions have at least 50 % of the population living in rural grid cells.

| 1.3 Suitability of implementation structure | | |
|---|---|---|
| ***EQ1.3 How do SMEi implementation mechanisms promote the desired change?*** | | |
| Judgement criteria | Indicators | Method |
| SMEi is attractive to financial intermediaries | Rationale behind financial intermediaries participation to SMEi<br><br>Key parameters of support, including guarantee rate and guarantee fee<br><br>Process and factors considered for their establishment | Financial intermediary interviews<br><br>EIF interview |
| Implementation mechanisms allow targeting of viable enterprises unable to access finance | Key parameters of support, including guarantee rate and guarantee fee<br><br>Process and factors considered for their establishment | Desk analysis<br><br>SME survey<br><br>EIF interview |
| Implementation mechanisms ensure that the benefit from public support is passed to final recipients | Key parameters of support, including guarantee rate and guarantee fee<br><br>Process and factors considered for their establishment | Desk analysis<br><br>SME survey<br><br>EIF interview |
| Implementation mechanisms incentivise fund manager and financial intermediaries performance | Key parameters of support, including management costs and fees, penalties for underperformance and reallocation of resources among financial intermediaries<br><br>Process and factors considered for their establishment | Desk analysis<br><br>EIF interview |

*Lower priority criteria are shown on dark grey background*

| 1.4 Adequate implementation capacity | | |
|---|---|---|
| ***EQ1.4 What was the contribution of the EIF know-how to ensuring adequate implementation capacity?*** | | |
| Judgement criteria | Indicators | Method |
| EIF know-how helped ensure adequate implementation capacity | Mechanisms ensuring the transfer of capacity to national and local institutions | EIF interview<br><br>Financial intermediary interviews |

*Lower priority criteria are shown on dark grey background*

| 1.5 Outreach/relevance | | |
|---|---|---|
| ***EQ1.5.1 How has SMEI intervention rationale changed from conception to implementation?*** | | |
| Judgement criteria | Indicators | Method |
| Extent rationale changed from SMEi conception to implementation | Timeline of SMEi establishment and implementation<br><br>Indicators of evolution of national financial markets<br><br>Implications for rationale of intervention | Desk analysis<br><br>EIF interview<br><br>Financial intermediary interviews |
| ***EQ1.5.2 What mechanisms were established to adapt SMEi support to changing market conditions?*** | | |
| Judgement criteria | Indicators | Method |
| Extent SMEi could adapt to changed conditions and any challenges | Mechanisms to adapt to market changes and extent these were used | EIF interview |
| ***EQ1.5.3 How does SMEI support fit with similar instruments financed with Cohesion policy or national resources?*** | | |
| Judgement criteria | Indicators | Method |
| Extent of overlap or synergies with other public support | Comparison between SMEi features and main public interventions with similar objectives and target groups | Desk analysis<br><br>EIF Interview<br><br>Financial intermediary interviews |

*Lower priority criteria are shown on dark grey background*

***Task 3 Assessment of impact***

Evaluation questions, judgement criteria and indicators, as well as methods under this task are given in Table 5. All criteria are important to assess public support aimed at improving access to finance, as identified in the economic literature. However, given possible constraints on the resources available for the evaluation, **success criteria and related evaluation questions and judgement criteria with lower priority** have been identified. These are shown **on dark grey background** in the table. In addition, even under success criteria having a higher priority, it might not be feasible to address those **judgement criteria that can only be addressed through an SME survey**, where this is not allowed by the evaluation budget. These are also shown **on dark grey background** in the table.

In terms of methods, enterprise micro data for impact assessment comes either from administrative registers / commercial datasets or SME survey, or both. Data analysis is statistical / econometric or based on a **counterfactual approach** whenever suitable, as this is the most common standard for impact evaluation of guarantee support. In particular, judgement criteria related to additionality – from EQ2.1 to EQ2.3 – can be addressed by counterfactual analysis or control group statistical comparison based on SME survey, as further detailed in section 4. Economic additionality should be assessed with reference to each SMEi OP intended outcomes. Moreover, project additionality can only be assessed where SMEs used support for investments in tangible and intangible assets. Proxies based on **SME survey** are required to estimate net benefits for the economy. More details on how the individual methods can contribute to answering the evaluation questions are provided in section 4.

**Table 5 Evaluation matrix – Impact**

| **2.1 Financial additionality** | | |
|---|---|---|
| ***EQ2.1 To what extent and at what conditions would SMEi actual recipients have been financed without SMEi support?*** | | |
| Judgement criteria | Indicators | Method |
| Different capacity of SMEi actual and potential recipients to access finance | Financial indicators at the time and after receiving SMEi support e.g., value of liabilities (credits and debts), creditworthiness[36] | Analysis of micro data<br><br>Counterfactual analysis |
| | Ability to get a loan without SMEi<br><br>Ability to meet demands from creditors<br><br>Reasons offered by bank for taking out SMEi supported finance<br><br>Reasons why unconstrained enterprises chose SMEi<br><br>Value and type of collateral available | SME survey |

[36] Mariani M., Mealli F., Pirani E. (2013), Gli effetti delle garanzie pubbliche al credito: due misure a confronto, IRPET, provides an example of this indicator based on Altman studies.

| | | |
|---|---|---|
| | Perceived key benefits in terms of access to finance for borrowers under SMEi | Financial intermediary interviews |

| **2.2 Economic additionality (Enterprise performance)** | | |
|---|---|---|
| ***EQ2.2 How does performance of SMEi recipients compare with potential recipients?*** | | |
| Judgement criteria | Indicators | Method |
| Economic performance difference between SMEi actual and potential recipients | Variation in financial and investment performance indicators e.g., value of fixed and current assets, liabilities, creditworthiness<br><br>Variation in economic performance indicators e.g., turnover, gross value added, profit, staff costs and total costs | Analysis of micro data<br><br>Counterfactual analysis |
| | SME self-reported performance indicators | SME survey |

| **2.3 Project additionality** | | |
|---|---|---|
| ***EQ2.3 To what extent would actual recipients of SMEi have gone ahead with their investment without SMEi support?*** | | |
| Judgement criteria | Indicators | Method |
| Different investment capacity of SMEi actual and potential recipients | Variation in investment indicators e.g., value of fixed and current assets | Analysis of micro data<br><br>Counterfactual analysis |
| Extent actual recipients of SMEi would have gone ahead with their investment project | Share of SMEi actual recipients who would have gone ahead with their investment project<br><br>Scale, scope and timing in the absence of funding | SME survey |

*Lower priority criteria are shown on dark grey background*

| **2.4 Economic benefits** | | |
|---|---|---|
| ***EQ2.4 What are the net benefits for the economy, once net benefits for SMEi actual recipients are aggregated and considering the extent to which the growth of SMEi actual recipients displaced other enterprises?*** | | |
| Judgement criteria | Indicators | Method |
| Net benefits for the economy | Share of non-displacing[37] SMEi actual recipient businesses | SME survey |

[37] This can be estimated by considering the location of their customer base, competition in their main market and the expectation that competitors would take up current sales over the next year if

| 2.4 Economic benefits | | |
|---|---|---|
| ***EQ2.4 What are the net benefits for the economy, once net benefits for SMEi actual recipients are aggregated and considering the extent to which the growth of SMEi actual recipients displaced other enterprises?*** | | |
| Judgement criteria | Indicators | Method |
| | Aggregated net benefits for SMEi actual recipients | |
| | Better understanding by banks of the risk profile of SMEs | Financial intermediary interviews |

*Lower priority criteria are shown on dark grey background*

the enterprise were to cease trading. See for example London Economics (2017), Economic impact evaluation of the Enterprise Finance Guarantee scheme.

***Task 4 Assessment of efficiency***

Evaluation questions, judgement criteria and indicators, as well as methods under this task are given in Table 6. All criteria are important to assess public support aimed at easing access to finance, as identified in the economic literature. However, given possible constraints on the resources available for the evaluation, **success criteria and related evaluation questions and judgement criteria addressing efficiency were given a lower priority**. For this reason, these are shown **on dark grey background** in the table.

In addition, assessment of whether SMEi implies a welfare gain or loss to the economy is only possible based on conditions to calculate net benefits described under task 3. **EIF interview** provides insight on both cost-effectiveness and risk optimisation as further detailed in section 4.

**Table 6 Evaluation matrix - Efficiency**

| **3.1 Cost-effectiveness** | | |
|---|---|---|
| ***EQ3.1 How do SMEi economic benefits and costs compare to each other?*** | | |
| Judgement criteria | Indicators | Tasks/Methods |
| There is a welfare gain or loss to the economy from SMEi | Benefit to cost ratios | EIF interview (for cost, benefit from EQ2.4) |

*Lower priority criteria are shown on dark grey background*

| **3.2 Risk optimisation** | | |
|---|---|---|
| ***EQ3.2 To what extent was risk allocation appropriate considering risk taker capacity for risk?*** | | |
| Judgement criteria | Indicators | Tasks/Methods |
| Capital set aside to cover losses from disbursed loans | Method to determine the amount to be set aside<br>Expected versus actual losses<br>Timing for release of resources set aside | EIF interview |
| Allocation of risk tranches between ESIF, Horizon 2020 and COSME, EIF, EIB | Approach and method to allocate risk and actual risk sharing | EIF interview |

*Lower priority criteria are shown on dark grey background*

# 4 METHODS

This section describes the methods to carry out the tasks described under section 3. Methods address the evaluation questions, aiming to both disentangle the effects of SMEi from other factors and to understand its functioning[38] (see Box 2 for hypotheses of the expected change in the behaviour of market actors). The methods to assess 'why and how it works?' include **desk analysis**, **SME survey**, **interviews with EIF and financial intermediaries**, while **counterfactual analysis** or control group comparison based on an SME survey aim to answer the 'does it work?' question.

Figure 2 illustrates what methods address individual evaluation questions, while the following tables clarify how methods work together to address specific evaluation questions. As clarified by the figure, **SME survey** can provide data and evidence to address multiple evaluation questions. In particular it can provide:

- detailed characteristics of SMEs, indications on their possible credit rationing, SME views on how SMEi did work;
- data to control group comparison, especially where enterprise micro data from administrative sources or commercial dataset does not ensure a sufficient coverage;
- proxies of displacement effect to estimate the net benefits for the economy.

On the other hand, enterprise micro data from administrative sources or commercial dataset can contribute to assess financial and economic additionality by:

- providing detailed information on time series which are needed for counterfactual analysis;
- ensuring higher standards of quality and comparability of information.

Based on such advantages and disadvantages, it is recommended that SMEi evaluations use statistical analysis based on SME survey and counterfactual analysis based on administrative micro data as **complementary methods**. However, one of the two methods can be adopted in the case the other is not feasible in the specific context, or where the evaluation budget does not allow for both methods to be implemented.

Full details on how the specific methods address individual evaluation questions as well as related judgement criteria and indicators are in the following sections as well as in section 3. While specific methods have been identified to address evaluation questions, SMEi managing authorities may consider complementing these with other methods, including:

- **focus group and stakeholder consultation**, for instance to assess SMEi outreach / relevance, whether the rationale of the initiative has evolved over time e.g., top up budget allocation, or how SMEi fits with other public support instruments and how risk is allocated and managed;
- **case studies** to elicit the key mechanisms of SMEi theory of change[39] and identify behavioural changes at the level of the financial intermediaries and SMEi recipients.

[38] See European Commission (2014), The programming period 2014-2020 – Guidance document on monitoring and evaluation of the European Cohesion Fund and the European Regional Development Fund.

[39] For an example on the use of case studies, see European Commission (2016), Financial instruments for Enterprises – Work page 3 Ex-post evaluation of Cohesion Policy programmes

**Box 2 Common methodological approach and theory-based impact evaluation**

Theory-based evaluation[40] is particularly appropriate to find and articulate a theory which policy makers believe make a policy intervention effective. The **intervention theory** can then be tested to assess how and why and in what context it produces intended and unintended effects[41].

By getting inside the black box of the intervention, theory-based evaluation illustrates the underlying **mechanisms** that make the intervention work. Mechanisms are not the input-output-outcome. Instead, they concern amongst others, **beliefs, desires, cognitions, incentives and other decision-making processes** that influence behavioural choices and actions. Differently from other ESIF interventions, mechanisms for SMEi should consider the implementation role of parties operating on a fully commercial basis - as it is also the case of other ESIF support through financial instruments.

Evaluation questions in this document have been developed based on review of SMEi official documents and relevant literature, as well as interviews with some SMEi participating Member States and feedback from a technical seminar[42]. They reflect the importance of careful design for success of public guarantee schemes, as emphasised in the economic literature. Where evaluation questions are designed to fit SMEi programme theories across all participating Member States, they may need to be further developed to address the individual programme theories.

Evaluation questions test hypotheses on the **changes in resources and reasoning** of stakeholders that underlie the success of individual SMEi, by leading them to **different choices** than they would make without support. They address the SMEi management structure and operating rules - including on risk-sharing and the key features of the guarantees provided - and investigate whether and how the SMEi triggers **different change mechanisms** across different types of financial intermediaries and SMEi recipients. In addition, evaluation questions acknowledge that different mechanisms are possibly at work depending on the types of credit rationing and benefits passed to enterprises. They explicitly consider the **context** in which SMEi operates, including specific elements that can be expected to work in close interaction with the mechanisms e.g., availability and use of other types of guarantees, including business and personal guarantees and collateral. Where the hypotheses being tested focus on contractual arrangements establishing rules and setting incentives of the parties, they also call into question the capacities of those parties as well as the intrinsic trade-offs of market-

2007-2013 focusing on the European Regional Development Fund (ERDF) and the Cohesion Fund (CF).

[40] For guidance, FAQs and reference materials and resources on the theory-based impact evaluation approach, see ec.europa.eu/regional_policy/en/policy/evaluations/guidance.

[41] On this basis, theory-based evaluation also provides a narrative linking the specific intervention to the policy specific context, allows for generalisation to other settings and timeframes, and supports policy understanding and communication to stakeholders. See Riché M. (2013), Theory Based Evaluation: A wealth of approaches and an untapped potential, European Commission.

[42] Participants to the seminar included representatives of SMEi managing authorities, European Commission officials and two external discussants. The seminar was held in Brussels on March 3, 2020.

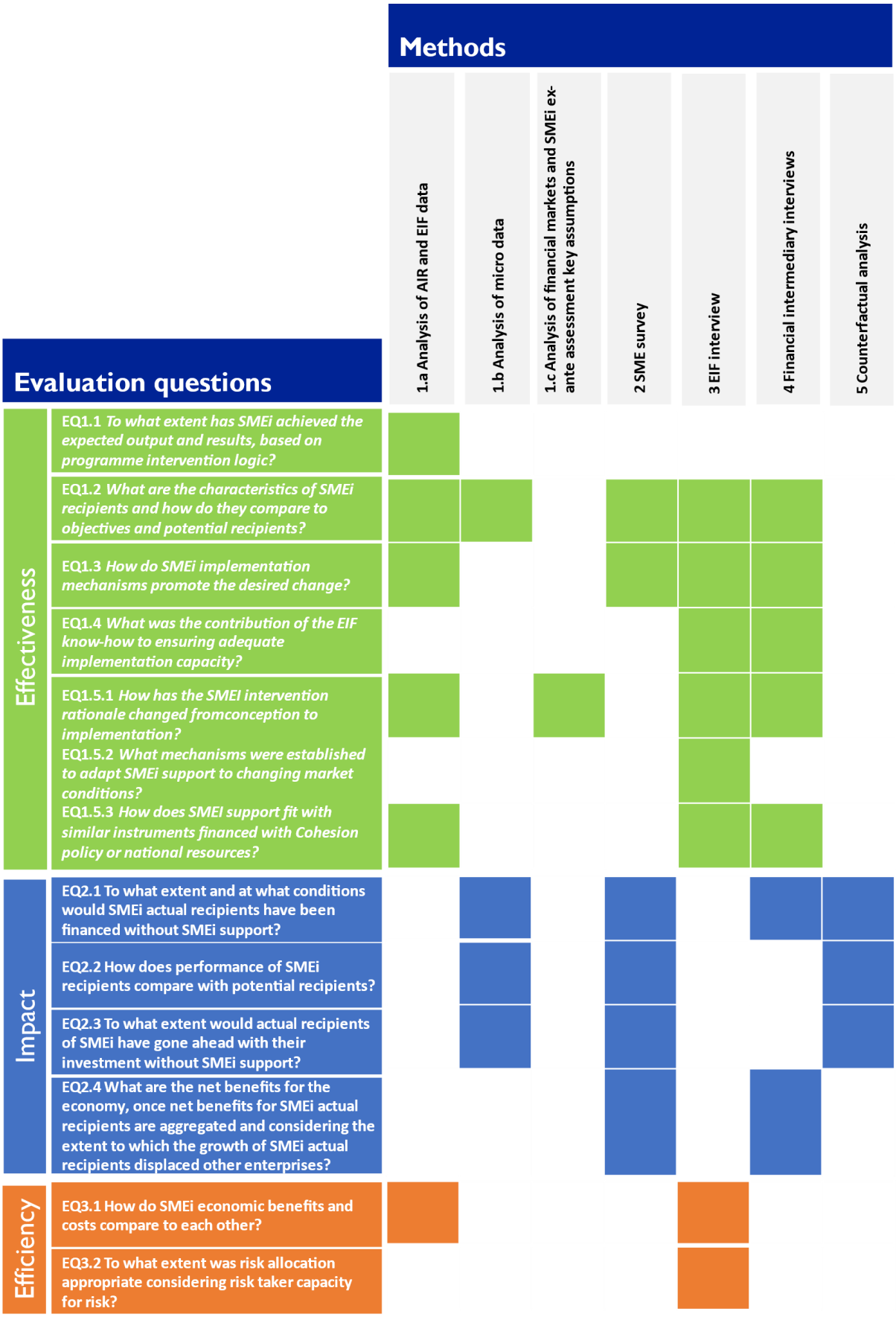
based instruments.

Key hypotheses being tested are inter alia:

- Administrative capacity and stakeholder involvement allow to design SMEi according to the expected needs of national financial markets over the relevant period.
- Risk takers agree on conditions that suit their risk-taking capacity while allowing to improve access to finance for credit-rationed viable enterprises.
- Terms and conditions set in the funding agreement ensure EIF mandate as fund manager is aligned with SMEi intended results.
- EIF procedures for selecting financial intermediaries as well as terms and conditions of operational agreements ensure financial intermediaries: (a) have an interest to participate to SMEi, due to risk-sharing and reduced regulatory capital charges; (b) have the capacity and incentives to implement SMEi by providing finance to eligible enterprises that are viable but credit rationed.
- Operational agreements also have sufficient flexibility to ensure unexpected changes in the national financial markets do not prevent particular mechanisms from being triggered;
- Increased finance or better financing conditions encourage SMEi recipients to build capability that would not have built otherwise and can achieve the intended change.

Source: t33

**Figure 2 How methods address evaluation questions (overview)**




Source: t33

**Table 7 How methods work together to address individual evaluation questions (effectiveness)**

| Effectiveness | |
|---|---|
| **EQ** | **Role of methods** |
| **EQ1.1** | • Annual Implementation Report (AIR) and EIF data analysis provides information on the extent to which SMEi achieved expected output and results in the respective participating Member State. |
| **EQ1.2** | • EIF data provides basic features of SMEi recipients and the support provided, e.g., credit amounts, 1-year probability of default, maturity.<br>• SME survey can provide complementary details on SMEi recipient enterprises e.g., owner characteristics, and information on potential recipients.<br>• EIF and financial intermediary interviews complement information on SMEi recipients and support provided, where detailed data is not available. |
| **EQ1.3** | • SME survey provide details on SMEi implementation e.g., SMEi awareness, timing of loan approval.<br>• EIF and financial intermediary interviews provide different perspectives on how SMEi worked e.g., implementation mechanisms and conditions, attractiveness to financial intermediaries. |
| **EQ1.4** | • EIF and financial intermediary interviews provide different perspectives on EIF contribution to build implementation capacity. |
| **EQ1.5.1** | • AIR and EIF data analysis informs on the timing of SMEi set-up and implementation.<br>• EIF and financial intermediary interviews provide insight into market change and implications for SMEi rationale. |
| **EQ1.5.2** | • EIF interview provides insight into how SMEi was capable to adapt to market change. |
| **EQ1.5.3** | • AIR data analysis gives details on other similar programmes i.e., Cohesion data.<br>• EIF and financial intermediary interviews give details on any synergies or overlaps with other similar instruments, under ESIF or using other national or EU resources. |

Source: t33

**Table 8 How methods work together to address individual evaluation questions (impact)**

| Impact | |
|---|---|
| **EQ** | **Role of methods** |
| **EQ2.1** | • Counterfactual analysis provides an assessment of financial additionality.<br>• Depending on suitability of micro data, SME survey can provide an alternative or complementary assessment. |

| Impact | |
|---|---|
| **EQ** | **Role of methods** |
| | • Financial intermediary interviews provide complementary information. |
| **EQ2.2** | • Counterfactual analysis provides an assessment of economic additionality.<br>• Depending on suitability of micro data, SME survey can provide an alternative or complementary assessment, based on 'self-reported' benefits. |
| **EQ2.3** | • Counterfactual analysis provides an assessment of project additionality based on balance sheet investment indicators.<br>• SME survey provides perceptions on scale, scope and timing of projects without SMEi support (where SMEi support has been used for investment) |
| **EQ2.4** | • If carried out, SME survey provides proxies for displacement.<br>• Financial intermediary interviews give any improved understanding of SME risk profile. |

Source: t33

**Table 9 How methods work together to address individual evaluation questions (efficiency)**

| Efficiency | |
|---|---|
| **EQ** | **Role of methods** |
| **EQ3.1** | • Benefits are from EQ2.4.<br>• EIF interview provides SMEi costs. |
| **EQ3.2** | • EIF interview provide information to assess suitability of risk allocation. |

Source: t33

### *4.1 Desk analysis*

This section illustrates the methods under desk analysis, including analysis of AIR and EIF data (4.1.a), enterprise micro data (4.1.b), financial markets and SMEi ex-ante assessment key assumptions (4.1.c).

#### 4.1.a Analysis of AIR and EIF data

Analysis will be based on:

- AIR data, including based on Article 46 of Regulation (EU) No 1303/2013[43]; and
- EIF information and data.

Table 10 details what evaluation questions AIR data can help address. The analysis uses time series based on annual submissions to clarify implementation progress over the relevant period. As concerns information addressing SMEi timeline, this may need to be complemented with further data identifying other key implementation steps e.g., date of signature of the operational agreements with financial intermediaries.

**Table 10 Contribution of AIR data to evaluation questions**

| AIR data | Evaluation question |
|---|---|
| Output and results indicator(s), target and achieved values<br><br>Total value of new debt finance created by SMEi | **EQ1.1** *To what extent has SMEi achieved the expected output and results, based on programme intervention logic?* |
| Number of final recipients supported by the financial product, by size type | **EQ1.2** *What are the characteristics of SMEi recipients and how do they compare to (different groups of) potential recipients?* |
| Date of completion of the ex-ante assessment Date of signature of the funding agreement<br><br>Programme contributions committed with final recipients<br><br>Programme contributions paid to final recipients | **EQ1.5.1** *How has SMEI intervention rationale changed from conception to implementation?* |
| This includes comparison between SMEi and other comparable financial instruments across many of the variables reported on the basis of Article 46 CPR | **EQ1.5.3** *How does SMEI support fit with similar instruments financed with Cohesion policy or national resources?* |

Source: t33

[43] See also European Commission, Annotated template for reporting on financial instruments according to Article 46 Common provisions regulation. The dataset includes additional information relevant to the evaluation general module, as described below.

EIF information includes call for expression of interest documentation. Review of this documentation gives the terms of SMEi support, thus providing insight into the implementation mechanisms established to promote the desired change (see EQ 1.3).

The analysis also considers details on the individual supported enterprises gathered by the EIF, including[44]:

- Enterprise name;
- Address, Postal Code, Region (NUTS2);
- Date of establishment;
- Sector (NACE2[45]);
- Number of employees;
- Total turnover (EUR);
- Total assets (EUR);
- SME internal scoring/rating (Rating class), if applicable;
- Financial Intermediary rating model, if applicable;
- 1-year probability of default.

This data contributes to addressing EQ1.2 and should be available for enterprises supported by SMEi guarantee option as well as for enterprises on the additional portfolio generated under the securitisation instrument[46].

Moreover, the analysis should also cover the key features of final recipient transactions and modifications, payment demand and loss recovery schedules, which are also reported by financial intermediaries to the EIF. Maturity of the finance provided to SMEs is especially important as, given all other things being equal, risks generally increase for longer maturities.

[44] This list is based on review of SMEi indicative term sheets. It should be noted that data reported to the managing authority may be more limited – see Article 16 of Commission Implementing Decision of 11 September 2014 on the model of funding agreement for the contribution of the European Regional Development Fund and the European Agricultural Fund for Rural Development to joint uncapped guarantee and securitisation financial instruments in favour of small and medium-sized enterprises. Additional information may be obtained based on duties stipulated under Article 18 of the same Commission Implementing Decision.

[45] NACE is the statistical classification system of economic activities in the European Union.

[46] See EIF, Annex II to the Open Call for Expression of Interest to select Financial Intermediaries under the SME Initiative Italy – Securitisation Instrument – Indicative SMEi transactions term sheet.

**Figure 3 Example of new financial recipient transactions reporting requirements**

| A.1.1 SME ID | A.2.1 SME Loan Transaction ID | A.2.1.1 SME LoanTransaction Type | A.2.2 Currency | A.2.3 Purpose | A.2.4 Principal amount | A.2.4.1 Purchase price | A.2.4.2 Down payment | A.2.5 Maturity (months) | A.2.6 Grace period (months) | A.2.7 Signature date | A.2.8 First disbursement/Lease period start date | A.2.9 First installment date | A.2.10 Amortization profile | A.2.11 Payment frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory |

| A.2.12 Reference Rate | A.2.13 Interest Rate Margin | A.2.13.1 Risk Margin | A.2.14 Guarantee Fee rate | A.2.15 Loss Given Default | A.2.16 Collateralisation Rate | A.2.16.1 Main type of collateral | A.2.17 Publication of Final Recipient (Y/N) | A.2.18 Gross Grant equivalent | A.2.19 Total project costs | A.2.21.1 EU Program (H2020/COSME/n/a) | A.2.21.2 Type of Innovation (code) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mandatory | Mandatory | Mandatory | Not applicable | Mandatory | Mandatory, if applicable | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory, when relevant | Mandatory when relevant | Optional |

Source: EIF, SMEi Spain Indicative direct guarantee term sheet

### 4.1.b Analysis of micro data

Data survey (see section 3 – Task 1) confirms the availability of suitable micro data on SMEi supported enterprises and enterprises potentially eligible as final recipients based on SMEi objectives. On this basis, analysis of micro data contributes to addressing EQ1.2 and is also the basis for counterfactual analysis (see section 4.5).

Based on a review of academic research and evaluations, the most relevant sources of micro data in SMEi countries have been identified[47]. Information sourced in the banking sector e.g., credit registers, could be confidential and potentially not disclosed/disclosable to evaluators. In this case, the feasibility to have some analyses carried out directly by the banking sector could be investigated.

**Box 3 Main sources of enterprise micro data in SMEi Member States**

**Bureau van Dijk** data bases include information on around 21 million companies across Europe. It can be used to research individual companies, search for companies with specific profiles and for analysis. In particular, Orbis-Amadeus is a comprehensive, pan-European database – see details below on coverage of SMEi Member States - containing accounting information for both publicly traded and privately held companies.

**CERVED** dataset provides financial accounts for the universe of **Italian** firms that have the legal structure of limited liability corporations. It provides **classified financial statements**; that is, the balance sheets of the firms processed by the CERVED to ensure accounting consistency overtime and across-firms. The dataset also includes **non-classified financial accounts**. These are in principle more similar to the actual balance sheets used by the bank at the time of the application, although banks may also use provisional financial statements. CERVED also provides official and non-official data

[47] Enterprise micro data used in the reviewed literature is in most cases, and except for credit registers, from commercial providers. Commercial databases maintain and enrich information from public sources, such as Kaupparekisteri in Finland, InfoCamere in Italy or Central de Balances in Spain. Some literature in Spain use data made available by a Spanish financial institution for research purposes.

on private partnerships and sole proprietorships, which are widespread legal structures for very small firms.

**Credit registers**. In Italy, the credit register of the **Bank of Italy** collects data at the firm level on financial variables, such as loans, either granted or disbursed by banks, bad loans and interest rates. This archive was set up for surveillance purposes. Only loans exceeding an EUR 30 000 threshold are included, except for bad loans which are included regardless of their amount. Thus, this data fails to include the very small firms, which might borrow for amounts below that threshold. In Spain, the central credit register of the **Bank of Spain** contains detailed information on all bank credit to non-financial institutions above EUR 6000, including credit amount, maturity, creditworthiness and the existence of collateral. In addition, the dataset includes the fiscal identity of both borrower and lender, enabling to establish a matched bank-firm dataset.

Other datasets include, in Italy, the MET (Monitoraggio Economia e Territorio) research centre unique database, which builds on an extensive sample survey of Italian industrial firms ensuring 3-digit NACE coverage. MET survey maps financial constraints, as well as business structures and strategies in terms of investments, R&D, innovation and internationalization processes, also including firms with less than 10 employees. MET survey provides information on the innovation performance and relevant specific intangibles e.g., networking capacity, internationalisation processes, which are not covered by balance sheets. The survey sample covered over 23 000 enterprises in 2015 and 2017.

Open data sources can also provide relevant microdata. For example, the Romanian Ministry of Finance database[48] includes information on enterprises that has been already used for evaluation purposes e.g., the evaluation of support to microenterprise development – Key Area of Intervention 4.3 of 2007-2013 ERDF Regional Operational Programme. This can be integrated with the commercial Listafirme.ro database.

Source: t33

Example of financial indicators available from a commercial data source is given in Figure 4.

**Figure 4 Selected financial indicators extracted from the Orbis Database**

| **1 Balance sheet** |
| --- |
| *Label and definition* |
| • **Current liabilities**. Current liabilities of the company<br>• **Current ratio**. Current assets / Current liabilities<br>• **Fixed assets**. Total amount (after depreciation) of non-current assets<br>• **Loans**. Short term financial debts<br>• **Long term debt**. Long term financial debts<br>• **Material costs**. Detail of the purchases of goods. No services<br>• **Shareholders' funds**. Total equity<br>• **Tangible fixed assets**. All tangible assets such as buildings, machinery, etc.<br>• **Total assets**. Total assets (Fixed assets + Current assets)<br>• **Working capital**. Indicates how much capital is used by day-to-day activities = |

[48] See data.gov.ro/dataset

Stocks + Debtors – creditors

**2 Business characteristics**

*Label and definition*

- **Bureau Van Dijk's (BvD) independence indicator**. BvD Independence indicator, which differentiates companies according to their ownership structure
- **Listed/Delisted/Unlisted**. Whether the company is listed, unlisted or has been delisted
- **NACE Rev. 2 division code**. NACE Rev. 2 main division code
- **NACE Rev. 2 main section**. NACE Rev. 2 main section description
- **Number of employees**. Total number of employees included in the company's payroll
- **Number of patents**. Number of patents owned by the company
- **Number of trademarks**. Number of trademarks owned by the company
- **Peer Group Size**. Size of the BvD standard peer group
- **Standardised legal form**. Standardised legal form

**3 Income Statement**

*Label and definition*

- **Added value**. Profit + Depreciation + Taxation + Interests paid + Cost of employees
- **Cash flow**. Profit + Depreciation
- **Cost of Employees**. Detail of all the employees costs of the company
- **EBITDA**. Operating profit + Depreciation
- **Gross profit**. Operating revenue – Cost of goods sold
- **Interest paid**. Total amount of interest charges paid for shares or loans
- **Operating revenue (Turnover)**. Total operating revenues (Net sales + Other operating revenues + Stock variations)

**4 Ratios**

*Label and definition*

- **P/L before tax**. Operating profit + financial profit
- **Profit margin**. (Profit before tax / Operating revenue) * 100
- **Liquidity ratio**. (Current assets – Stocks) / Current liabilities
- **ROA using P/L before tax**. (Profit before tax / Total assets) * 100
- **ROE using P/L before tax**. (Profit before tax / Shareholders funds) * 100
- **Solvency ratio (Asset based)**. (Shareholders' funds / Total assets) * 100

Source: Asdrubali and Signore (2015)[49]

Examples of advantages and disadvantages of commercial datasets are illustrated in Box 4.

**Box 4 Examples of advantages and disadvantages of commercial datasets**

At international level, Bureau van Dijk ORBIS database provides administrative information on non-listed SMEs at firm-level. Amadeus is the ORBIS European subset. The main sources of this database are official business registers from Chambers of Commerce, company annual reports, newswires, and webpages.

Kalemil-Özcan S. et alii (2015)[50] identified key advantages of using Amadeus Orbis at international and EU level as it:

[49] Asdrubali, P., Signore, S. (2015), The Economic Impact of EU Guarantees on Credit to SMEs Evidence from CESEE Countries, EIF Working Paper 2015/29.

- Contains more information than Census and other international databases, because it covers balance-sheets and financial performance (e.g. debt, equity, assets, or bank loans) and non-listed companies.
- Ensures a more frequent data coverage than a Census, i.e. with more data points over time.
- Provides data with a detailed industrial classification up to 4-digits NACE code for each SME.
- Organises public data in a standard global form ensuring easier international comparison.

The following table, elaborated from the aforementioned paper, provides an overview of the Amadeus coverage for five of SMEi Member States[51].

| Member State | Number of enterprises (estimate) | Source |
|---|---|---|
| Bulgaria | Less than 10% of the active companies | Creditreform |
| Finland | 120 000 | Suomen Asiakastieto Oy |
| Italy | 900 000 | Not specified in the paper (but AIDA is the national source of Amadeus) |
| Romania | 500 000 | Chamber of Commerce and Industry of Romania |
| Spain | 776 000 | Informa |

This paper also identifies some challenges of Amadeus[52]:

- There is a reporting lag of roughly two years, meaning that a firm's filing in 2010 will appear in the database in 2012.
- Certain companies are removed from the database if there is no reporting for some time, even if the firm continues operating without reporting.
- Data cleaning and checking procedures have to be carried out, as it is however required for any data analysis.
- AMADEUS is a commercial database with relevant costs.

Source: t33

[50] Kalemil-Özcan S. et alii (2015), How to Construct Nationally Representative Firm Level Data from the ORBIS Global Database.

[51] Malta is covered by the database, but the paper has not reviewed this specific country.

[52] The paper also proposes solutions to overcome some of the drawbacks.

Based on available data, this method compares – samples of – SMEi actual and potential recipients across structural features as well as financial and economic indicators. Significance of differences between actual and potential recipient characteristics is verified using statistical testing such as F-statistics and p-values.

In addition, the method should propose a data weighting approach that aligns actual and potential recipients as much as possible based on basic characteristics such as business sector, age, legal status and localisation, as suggested by literature. This enables actual recipients to be 'matched' to potential recipients with similar characteristics that did not receive SMEi support. Descriptive statistics are proposed to compare actual to potential recipient characteristics adjusted by this weighting. An ad hoc verification index provides indications of group similarities after weighting.

#### 4.1.c Analysis of financial markets and SMEi ex-ante assessment key assumptions

This method provides the overall context for the evaluation and contributes to addressing EQ1.5.1. It prepares an overview of national financial markets, in particular loan/portfolio guarantees. Box 5 includes a preliminary structure for this overview, including details on data availability from the ECB and other relevant sources allowing for comparison across Member States. The analysis is complemented with other indicators published by national authorities and stakeholders, such as central banks or associations of financial institutions e.g., as concerns evolution at sub-national level. It also includes a description of key regulatory changes during the relevant period, especially as concerns bank capital requirements.

**Box 5 Preliminary structure for an overview of national loan/portfolio guarantees markets**

**1. Loan volumes and borrowing costs**

- Outstanding loans and cost-of-borrowing for non-financial corporations

The European Central Bank datasets on the volume of outstanding loans include only the Euro area countries, from 2003 to 2019, based on the Monetary Financial Institutions (MFI) interest rate statistics. Outstanding loans are classified based on loans maturity, and on loans vis-à-vis the Euro area and to the Euro area.

The cost-of-borrowing for non-financial corporations is based on the MFI interest rate statistics. It represents a weighted average of rates on short-term and long-term loans to non-financial corporations. Data are available for the Euro area countries. The available European Central Bank data covers the period from 2003 to 2019 for the Euro area members.

- Small loans to non-financial corporations, new business volumes (nominal and as share of total)

The European Central Bank data covers the Euro area countries, from 2003 to 2019. Data are also available for Romania from 2010, while Bulgaria is not included. The indicator is based on the MFI interest rate statistics. Loans are classified as small (<EUR 0.25 million), medium-sized (EUR 0.25 – EUR 1 million), large (> EUR 1 million).

- Interest rates by loan size and maturity

The European Central Bank datasets include data for the Euro area countries from 2003 to 2019. Data for Romania and Bulgaria are also available from 2007. The indicator is based on the MFI interest rate statistics. Three different loan size categories are considered, as mentioned above. Interest rate data are further broken down according to loan maturity, where interest rates on loans with a maturity less than three years serve as a proxy for short term lending, 3 to 5 years for medium term lending and 10 years and more for long term lending.

**2. SME financing from a supply perspective**

- Net changes in credit standards applied to the approval of loans or credit lines for

SMEs and large enterprises

The indicators are based on the European Central Bank Lending Survey Statistics. The available data covers the Euro area members, from 2003 to 2019.

- Factors contributing to changes in credit standards for SMEs

The indicators are based on the European Central Bank Lending Survey Statistics. The available data covers the period from 2003 to 2019 for the Euro area members.

**3. SME financing from a demand perspective**

- Sources of external financing for SMEs

The European Central Bank data covers the Euro area countries, from 2014 to 2019. Data for Bulgaria and Romania is available from the European Commission for relevant waves of the survey.

- Share of SMEs ranking access to finance as a highly important issue

The European Central Bank provides data from 2009 to 2019 for the Euro area countries. Data for Bulgaria and Romania is available from the European Commission for relevant waves of the survey.

- Factors driving the availability of external financing to SMEs

The European Central Bank provides data from 2009 to 2019 for the Euro area countries. Data for Bulgaria and Romania is available from the European Commission for relevant waves of the survey.

**4. SME guarantees[53]**

- Volume of outstanding guarantees in portfolio, nominal and scaled by GDP

Data is available for the members of Association Européenne du Cautionnement (AECM) from 2015 to 2018. Malta is not covered.

- Volume of new guarantees granted, nominal and by GDP

Data is available for the AECM members from 2015 to 2018. Malta is not covered.

- Number of SME beneficiaries

Data is available for the AECM members from 2015 to 2018. Malta is not covered.

Source: t33

Analysis of financial markets also enables a quantitative analysis of the evolution of key assumptions in the ex-ante assessment[54]. This implies updating individual assumptions

[53] Data availability as from reports and statistics produced by the AECM, at: aecm.eu/communication/statistics/

[54] SMEi ex-ante assessment include assumptions: (1) that are general and were used to evaluating SMEi options: these concern regulatory aspects, SMEi required critical mass, conditionalities to be applied to contractual arrangements and design of the instrument – see Annex 1 to Chapter 2; (2) underlying the leverage calculations – see Annex 2 to Chapter 2; (3) used in the funding gap

used in SMEi ex-ante assessment for funding gap calculation[55]. To estimate the potential unmet SME demand for finance, SMEi ex-ante assessment uses data from SAFE of the European Commission and the European Central Bank[56]. Based on this data, SMEi ex-ante assessment:

- estimates the number of enterprises not obtaining a loan, while being financially viable;
- multiplies this number by the average enterprise loan amount to estimate the funding gap.

SMEi ex-ante assessment method defines two boundaries for financially viable enterprises:

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

Estimating unsuccessful enterprises (see also Box 1) is based on:

- rejected transactions, where the lender did not make an offer to the applicant;
- 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 of expectation to be rejected.

Table 11 details the variables used by SMEi ex-ante assessment funding gap calculation which would need updating under this method.

estimation process; (4) concerning the funding gap coverage. The consultants considered (3) to be the key assumptions referred to in the tender specifications. The ex-ante assessment also provides analyses of SME difficulties in accessing finance and the expected evolution of SME financing gap. In this document, such analyses are covered under the overview of national financial markets.

[55] European Commission (2013), Ex-ante assessment of the EU SME Initiative, SWD (2013) 517 final.

[56] See ec.europa.eu/growth/access-to-finance/data-surveys_en

**Table 11 Data sources and variables used by SMEi ex-ante assessment to calculate the funding gap**

| Variable | | Source | Year |
|---|---|---|---|
| Enterprises | | Eurostat | 2010 |
| Financially viable enterprises | Lower boundary: share of high growth enterprises | Eurostat | 2010 |
| | Upper boundary: share of enterprises with positive turnover growth in the last six months | SAFE, waves 2009 and 2011 | Average 2009- 2011 |
| Unsuccessful enterprises | Enterprises that applied | SAFE, waves 2009 and 2011 | Average 2009-2011 |
| | Enterprises rejected | SAFE, waves 2009 and 2011 | Average 2009-2011 |
| | Enterprises refused | SAFE, waves 2009 and 2011 | Average 2009-2011 |
| | Enterprises discouraged | SAFE, waves 2009 and 2011 | Average 2009-2011 |
| Average enterprise loan size | | BvD's Orbis Database of Company information on liabilities, and the BACH-ESD Database | Average 2010-2011 |

Source: fi-compass

### *4.2 SME survey*

This method gathers enterprise micro data on actual and potential SMEi recipients, allowing for control group comparison. Under the paradigm of theory-based impact evaluation, this method complements analysis of administrative micro data and helps address the 'how' and 'why' SMEi works. It also contributes to the estimation of benefits.

In particular, this method could contribute to answering:

- **EQ1.2** *What are the characteristics of SMEi recipients and how do they compare to (different groups of) potential recipients?*
- **EQ1.3** *How do SMEi implementation mechanisms promote the desired change?*
- **EQ2.1** *To what extent and at what conditions would SMEi actual recipients have been financed without SMEi support?*
- **EQ2.2** *How does performance of SMEi recipients compare with potential recipients?*
- **EQ2.3** *To what extent would actual recipients of SMEi have gone ahead with their investment without SMEi support?*
- **EQ2.4** *What are the net benefits for the economy, once net benefits for SMEi actual recipients are aggregated and considering the extent to which the growth of SMEi actual recipients displaced other enterprises?*

Table 12 provides dimensions a survey questionnaire could address to complement data from administrative or commercial datasets, or where necessary information is not available from those sources.

**Table 12 Possible dimensions of the survey questionnaire[57]**

| |
|---|
| **1 Profile of enterprise** |
| • Business profile<br>• Business practices, including formal business practices and cutting-edge technology<br>• Ownership characteristics, including age, management experience, qualification, underrepresented owners |
| **2 Finance-seeking and application process** |
| • Finance-seeking process, including reasons for seeking finance, awareness of SMEi, alternative sources of finance, number of applications<br>• Applications, including when SMEi was first discussed with lender, bank service satisfaction<br>• Sources of external advice |
| **3 Financial and project additionality** |
| • Self-reported financial additionality, including ability to get a loan without SMEi support (deadweight), reasons why unconstrained businesses chose SMEi, reasons given by bank for taking out an SMEi loan, value and type of collateral available to borrowers, pressure on cashflow and ability to meet demands from creditors<br>• Self-reported project additionality i.e., if the enterprise would have not proceeded with their project without the finance, or not with the same timing or scale |
| **4 Benefits and contribution** |
| • Self-reported benefits and loan finance contribution<br>• Location of the customer base and competition in main markets, which helps assess any displacement[58] |

Source: t33

An example survey questionnaire would include questions as illustrated in Table 13. Most questions expect single-option replies, unless explicitly mentioned in the table.

For SMEi recipients, the survey would focus on the years since they received SMEi support. If SMEi support was received over multiple years, data analysis would need to provide detail by cohorts. Additionally, where a single enterprise received support in multiple years, the survey would need to focus on a specific year e.g., the year in which the largest amount of finance was drawn. More generally, formulation of some questions depends on the timing the questionnaire is submitted compared to when SMEi support was provided, thus may need to be adapted to the specific situations in SMEi Member States.

[57] Dimensions of the proposed survey questionnaire and specific questions build on various sources and in particular on Allinson, G., Robson, P., and Stone, I. (2013), Economic evaluation of the Enterprise Finance Guarantee scheme.

[58] See for example London Economics (2017), Economic impact evaluation of the Enterprise Finance Guarantee scheme.

**Table 13 Example survey questions**

| 1 General characteristics of the enterprise | Dimension[59] |
|---|---|
| 1.1 How would you characterise your enterprise?<br>*[Subsidiary, branch, autonomous profit-oriented enterprise, a non-profit enterprise]* | 1 |
| 1.2 In which region is your enterprise located? *[Based on NUTS]* | 1 |
| 1.3 What is the main activity of your company? *[Based on NACE]* | 1 |
| 1.4 How many persons does your enterprise currently employ in full time or part time in *country* at all locations? *[Range-based; headcount, excluding unpaid family workers and freelancers working regularly for enterprise]* | 1 |
| 1.5 In which year was your enterprise registered? *[Year]* | 1 |
| 1.6 What was the annual turnover of your enterprise in *country* in *year*?<br>*[Range-based; currency conversion for non-euro countries]* | 1 |
| 1.7 Did your enterprise receive any *[other, for SMEi recipients]* public support during the last *n* years? | 1 |
| 1.8 Which formal business practices are used in your enterprise? *[Multiple options]* | 1 |
| 1.9 How intensive do you believe competition to be in your enterprise main markets[60]? | 4 |
| 1.10 Where are your current customers based? | 4 |
| 1.11 Who owns the largest stake in your enterprise? | 1 |
| 1.12 What experience do owners have of business management? *[Range-based, years of experience]* | 1 |
| 1.13 What is their level of educational attainment? *[Based on qualification framework]* | 1 |
| 1.14 Over *start year – end year*, how much did your enterprise grow on average per year? *[Range-based]* | 1 |
| **2 Finance-seeking and application process** | **Dimension** |
| 2.1 Have you applied for credit financing in *year*? *[Final template to indicate the year]* | 2 |
| 2.2 What was main reason for seeking external finance? | 2 |
| 2.3 What was the reason working capital was sought? *[Depending on* | 2 |

[59] According to dimensions in Table 12.

[60] This question helps assess any displacement effects. See for example London Economics (2017), Economic impact evaluation of the Enterprise Finance Guarantee scheme.

| | |
|---|---|
| *answer to 2.2]* | |
| 2.4 What business and personal collateral was available at the time your enterprise applied for finance? | 3 |
| 2.5 Was your enterprise experiencing any pressure on cashflow and ability to meet demands from creditors, at the time it applied for finance? | 3 |
| 2.6 From what sources did you know about SMEi? | 2 |
| 2.7 How many applications for finance did you submit before securing SMEi support? | 2 |
| 2.8 When was SMEi first discussed with the bank? | 2 |
| 2.9 What reasons were offered by the bank for taking out SMEi guaranteed finance? | 2 |
| 2.10 How long did it take before the bank reaching a decision? | 2 |
| 2.11 Did the financing decision time have any impact on your business? | 2 |
| 2.12 How clear was the explanation by the bank that you remained fully liable for the loan? | 2 |
| 2.13 How clear was the explanation by the bank that the interest rate was below the rate your enterprise would have been charged without SMEi support? | 2 |
| 2.14 Did your enterprise use any external sources of information, advice or support to help raising finance? | 2 |
| **3 Financial and project additionality** | **Dimension** |
| 3.1 In your opinion, would other external finance or a loan without SMEi guarantee have been available to you? | 3 |
| 3.2 If that was likely, for what reason did you choose SMEi, rather than opting for other finance? | 3 |
| 3.3 How likely is it is that would you have gone ahead with your project without SMEi support? | 3 |
| 3.4 Would its scale, scope and timing have been the same without funding? | 3 |
| **4 Benefits and contribution** | **Dimension** |
| 4.1 Over the past *n* years, how much did your enterprise grow on average per year in terms of employment? | 4 |
| 4.2 Over the past *n* years, how much did your enterprise grow on average per year in terms of turnover? | 4 |
| 4.3 Over the past *n* years, how much did your enterprise grow on average per year in terms of profitability? | 4 |
| 4.4 Over the past *n* years, how much did your enterprise grow on average per year in terms of labour productivity? | 4 |
| 4.5 Over the past *n* years, how much did your enterprise grow on average per year in terms of exports? | 4 |

| | |
|---|---|
| 4.6 Which (if any) do you believe to be the direct benefits to your enterprise as a result of having received finance? *[Separately for employment, turnover, survival, new or improved products or services, new or improved processes, value added per employee, reduced costs, increased export]* | 4 |
| 4.7 To what extent it would have otherwise been possible for your enterprise to achieve similar business outcomes? *[Including different timing]* | 4 |

Source: t33

Table 14 indicates which enterprise groups each questionnaire dimension could target[61]. Literature review shows that an expected average interview duration could be around 25 minutes for SMEi recipients and 15 minutes for potential recipients.

**Table 14 Questionnaire dimensions and enterprise target groups**

| Section | SMEi final recipients | Non recipients using loan finance | Non recipients not using loan finance |
|---|---|---|---|
| 1. General characteristics of the enterprise | ✓ | ✓ | ✓ |
| 2. Finance-seeking and SMEi application process | ✓ | ✓* | |
| 3. Financial and project additionality | ✓ | ✓* | |
| 4. Benefits and contribution | ✓ | ✓ | ✓ |

* Excluding SMEi-related questions

The sample of potential SMEi recipients would need to be drawn from the general business population by matching SMEi recipients basic characteristics e.g., in terms of size, business age, broad business sector. For analysis, the achieved sample of SMEi actual and potential recipients should be weighted by basic characteristics to reflect the population of SMEi actual recipients overall.

Within potential SMEi recipients[62], comparison with particular groups of enterprises may provide specific insight. For example, enterprises who did and did not apply for finance

[61] Based on Allinson, G., Robson, P., and Stone, I. (2013), Economic evaluation of the Enterprise Finance Guarantee scheme.

[62] Literature clarifies that unsuccessful SMEi applicants would be the most suitable control group, minimising selection bias. See, for example, in Martini, A., and Bondonio, D. (2012), Counterfactual impact evaluation of Cohesion Policy: impact and cost-effectiveness of investment subsidies in Italy. The authors clarify that unsuccessful applicants share with recipients of support 'the same desire to invest, which is an important proxy of unobservable such as business strategies and

are obvious comparison groups. Within enterprises that did apply for finance, those that received some, but not all, of the funds they applied for (volume rationed), could be another comparison group[63].

The method should determine a sample size to ensure the required accuracy and confidence level. This should consider an expected response rate, which, based on reviewed literature, could be at around 15-20% for actual recipients and 5-10% for potential recipients[64]. When identifying comparison groups, the method should consider that enterprises applying for external finance are only a fraction of the total business population, which may imply using disproportional stratified sampling.

managerial abilities, as well as specific market trends to which the firms are exposed'. Nonetheless it is understood that SME apply for finance at financial intermediaries rather than for SMEi support. In this sense, there are no unsuccessful SMEi applicants.

[63] However, questions in Table 13 do not address the outcome of the loan application.

[64] This refers to achieved interviews as a share of usable sample and it is only indicative, as response rates would depend on a number of factors, including the specific country and timing of the interviews. However, research literature indicates that even small-scale interventions in deprived areas can generate (micro) business respondents that are capable of understanding standard evaluation terminology. See for example, Cowling, M. (2019), LDBG Loan and Grant Funding Recipients - Draft Evaluation Report.

### *4.3 EIF interview*

Under the paradigm of theory-based impact evaluation, this method helps address the 'how' and 'why' SMEi works. In particular, it could contribute to addressing:

- **EQ1.2** *What are the characteristics of SMEi recipients and how do they compare to (different groups of) potential recipients?*
- **EQ1.3** *How do SMEi implementation mechanisms promote the desired change?*
- **EQ1.4** *What was the contribution of the EIF know-how to ensuring adequate implementation capacity?*
- **EQ1.5.1** *How has SMEi intervention rationale changed from conception to implementation?*
- **EQ1.5.2** *What mechanisms were established to adapt SMEi support to changing market conditions?*
- **EQ1.5.3** *How does SMEi support fit with similar instruments financed with Cohesion policy or national resources?*
- **EQ3.2** *To what extent was risk allocation appropriate considering risk taker capacity for risk?*

An example template for semi-structured interview is illustrated in Table 15.

**Table 15 Example template for EIF interview**

| Question | EQ |
|---|---|
| **1** What was the process to establish the key parameters of the support provided e.g., guarantee rate, guarantee fee? | EQ1.3 |
| **2** What factors were considered to decide a specific guarantee rate? How does the rate differ from other guarantees provided by the EIF in the country? | EQ1.3 |
| **3** What factors were considered to decide a specific guarantee fee? How does this relate to the cover fees for risk takers? | EQ1.3 |
| **4** What factors were considered to decide on minimum and maximum portfolio volume for each financial intermediary? | EQ1.3 |
| **5** How did the conditions offered by lenders under SMEi expression for interest differ from their standard policy e.g., in terms of probability of defaults of SME borrowers, loan maturities, required collateral? | EQ1.3 |
| **6** To what extent and for what reasons did the conditions offered by lenders during implementation differ from their initial objectives under SMEi expression of interest? | EQ1.3 |
| **7** How do penalties provide incentives to financial intermediaries to reach the agreed volumes? | EQ1.3 |
| **8** How do you ensure eligibility of expenditure and what if any were the main challenges with ensuring compliance with relevant rules? | EQ1.3 |

| Question | EQ |
|---|---|
| **9** How did you ensure that financial intermediaries have the necessary capacity to manage ESIF support? | EQ1.4 |
| **10** What was the contribution of the different financial intermediaries to the achievement of SMEi objectives? E.g. addressing different market segments, geographies, or just complementing each other on the same markets. | EQ1.3 |
| **11** How did the financial market change from SMEi establishment to implementation and what implications for SMEi rationale of intervention? | EQ1.5.1 |
| **12** What were the implications of the low interest rate environment on SMEi implementation? | EQ1.5.1 |
| **13** What is the envisaged total agreed for management costs and fees? | EQ3.1 |
| **14** What amount was set aside to cover losses from guaranteed loans and how did you estimate that amount was necessary? What is the timing for these resources to be released? | EQ3.2 |
| **15** Who were the risk takers and did they include any promotional banks? | EQ3.2 |
| **16** What are the risk cover fees for risk takers? | EQ3.1 |
| **17** Given risk tranches and actual losses, what have been the implications for the capital set aside by the individual risk takers? | EQ3.2 |
| **18** Have you identified improvements to risk sharing, given the different policies and risk-bearing capacity of the guarantors? | EQ3.2 |
| **19** What synergies or overlaps with other private or publicly supported SME guarantee instruments? Did the fact that part of SMEi resources are not subject to State Aid allowed for higher benefit for the SMEs than other comparable public support? | EQ1.5.3 |

Source: t33

### *4.4 Financial intermediary interviews*

Under the paradigm of theory-based impact evaluation, this method helps address the 'how' and 'why' SMEi works. In particular, it could contribute to addressing:

- **EQ1.2** *What are the characteristics of SMEi recipients and how do they compare to (different groups of) potential recipients?*
- **EQ1.3** *How do SMEi implementation mechanisms promote the desired change?*
- **EQ1.4** *What was the contribution of the EIF know-how to ensuring adequate implementation capacity?*
- **EQ1.5.1** *How has SMEI intervention rationale changed from conception to implementation?*
- **EQ1.5.3** *How does SMEI support fit with similar instruments financed with Cohesion policy or national resources?*
- **EQ2.1** *To what extent and at what conditions would SMEi actual recipients have been financed without SMEi support?*
- **EQ2.4** *What are the net benefits for the economy, once net benefits for SMEi actual recipients are aggregated and considering the extent to which the growth of SMEi actual recipients displaced other enterprises?*

An example template for semi-structured interview is illustrated in Table 16.

**Table 16 Example template for financial intermediary interview**

| Question | EQ |
|---|---|
| **1** How important was the use of SME credit guarantees for your bank at the time you applied for SMEi? What types of guarantees were being used e.g., mutual or public, loan-by-loan or portfolio-type? | EQ1.3<br>EQ1.5.3 |
| **2** What were the main reasons for using guarantees? | EQ1.3<br>EQ1.5.3 |
| **3** What was the rationale behind your decision to apply for SMEi support? [Including risk-sharing and capital relief motives, as well as the possibility to offer improved financing conditions to clients and reaching potential clients] | EQ1.3<br>EQ1.5.3 |
| **4** As it concerns capital management, do you think SMEi allows better capital relief than it can be obtained from other credit guarantee schemes available in your country? | EQ1.3 |
| **5** Do you think SMEi guarantee to be especially suitable for specific eligible applicant enterprises? | EQ1.3 |
| **6** In your view, what are the main reasons that could make the conditions offered to SME during implementation differ from initial objectives under SMEi expression of interest? | EQ1.2 |
| **7** How would you assess the claim management process under SMEi in terms of efficiency and transparency? E.g., timing of payment of claims | EQ1.3 |
| **8** In your opinion, how difficult is it for a bank to manage SMEi and what could be the main challenges? | EQ1.3 |

| Question | EQ |
|---|---|
| **9** Did your bank have previous experience of dealing with ESIF support? How did interaction with EIF help to ensure the necessary capacity? | EQ1.4 |
| **10** In your opinion, how do the costs for administration of SMEi compare to other credit guarantees used by your bank? E.g., ensure eligibility, compliance with state aid rules, publicity requirements | EQ1.3 |
| **11** In your view, what are the key implications of a low interest rate environment for the capacity to disburse SMEi-supported credit? | EQ1.5.1 |
| **12** In your view, what are the key benefits in terms of access to finance for borrowers under SMEi e.g., in terms of collateral, probability of default of SME borrowers, loan maturity? How did that compare to other types of credit guarantees used by your bank? | EQ2.1 |
| **13** In your opinion, to what extent can SMEi contribute to a better understanding by participating banks of the risk profile of SMEs? | EQ2.4 |

Source: t33

### *4.5 Counterfactual analysis*

Based on data reported to the EIF on SMEi recipients and additional micro data (see section 4.1), counterfactual analysis contributes to addressing evaluation questions assessing SMEi impact (see section 3 for details):

- **EQ2.1** *To what extent and at what conditions would SMEi actual recipients have been financed without SMEi support?*
- **EQ2.2** *How does performance of SMEi recipients compare with potential recipients?*
- **EQ2.3** *To what extent would actual recipients of SMEi have gone ahead with their investment without SMEi support?*

**Box 6 Counterfactual approaches**

Counterfactual approaches for impact evaluation are particularly suitable for evaluating the effectiveness of credit guarantee schemes as stated by the World Bank toolkit[65]. Counterfactual evaluation of the effect includes estimating the difference between the outcome variable after the intervention and the counterfactual value if the intervention had not been implemented. The underpinning principle behind this analysis is to quantify the policy effect as the difference between the (factual) result of the variable after policy implementation and the counterfactual result if the provision had not been adopted. As with any non-experimental method based on available information and a lack of experimental counterfactual data is not observable, caution shall be applied to reduce the risk of selection bias. This tries to minimise the problem of non-null differences in initial conditions to give a reliable estimate of the counterfactual effect.

The main counterfactual methods include regression discontinuity design, propensity score matching, and difference-in-difference estimates.

Source: t33

This method builds on four pillars, as illustrated in Figure 5 and described in more details below.

**Figure 5 Pillars of the module for quasi-experimental designs**


Source: t33

[65] World Bank (2018), Toolkit for impact evaluation of public credit guarantee schemes for SMEs, World Bank Group.

**Data availability.** Use of this method requires to assess the availability of sufficient and suitable data, that is comparable between treated and control units, as further detailed under section 3.

**Choice of specific methods**. Choice of the methodological approach requires assessing the suitability of specific counterfactual techniques based on SMEi specificities, as well as the identification of the appropriate outcome variables of the econometric model. The methods include regression discontinuity design, propensity score matching and difference-in-difference estimation[66].

**Box 7 Counterfactual methods considered for suitability**

**Regression discontinuity design (RDD)** is used to assess interventions that have a continuous eligibility index with a clearly defined cut-off score to determine who is eligible and who is not. This approach can only be applied if information about scoring is available and can be used for the estimates. RDD takes advantage of existing programme rules, thus can be used without changing programme design. It can be a retrospective tool as it does not rely on random assignment. The RDD strategy exploits discontinuity around the cut-off score to estimate the counterfactual.

**Propensity Score Matching (PSM)** is a non-experimental approach that can be used to identify a control group that is statistically equivalent to the treatment group. The idea behind matching is to compare each firm in the treatment group to a control group firm that is very similar. As there are many dimensions (firm size, profitability, leverage, urban-rural location, etc.) which the evaluator can use to match firms, PSM can incorporate many different characteristics. PSM essentially uses statistical techniques to construct an artificial control group by identifying for each SME being reviewed a non-treatment SME that has the most similar characteristics possible. PSM combines measures into a single score, the propensity score, which represents the predicted probability of participating in the credit guarantee scheme. Firms with similar propensity scores have a similar likelihood of receiving the intervention, thus can be compared across the treatment and control groups. The estimate generally uses a logit model. Various estimators match observations as such as Nearest Neighbour Matching, Radius Matching, Kernel Matching and Stratification Matching. The impact of the intervention will then be measured as the difference in outcomes between the treated group and the control group. Literature review shows a wide range of options for measuring the propensity score. In some cases, this is estimated separately by enterprise year of registration or specific eligibility conditions e.g., if more calls for application. Non-eligible enterprises are excluded automatically from the control group.

The **difference-in-difference (DID)** method compares changes in the outcome of interest over time between the population enrolled in a programme (treatment group) and the population that is not (control group). Use of the DID estimator requires data on the outcomes of interest for both the treatment and control groups for periods before and after the intervention.

[66] For an alternative approach see D'Ignazio, A., Menon, C. (2017), Evaluating credit guarantees for SMEs: evidence from Italy. The paper proposes an alternative approach to regression discontinuity design and propensity score matching based on the use of instrument variable procedure.

The key assumption of DID analysis is that without treatment the change in outcomes for the treatment group would be identical to the change in outcomes for the control group. While this assumption is not formally testable, its validity should always be carefully examined to ensure the DID impact is not biased. If data are available for several years before the treatment, then an easy way to assess the validity of the trend equality assumption is whether pre-treatment trends were equal between the two groups. It is also useful to control for baseline characteristics between the treatment and control groups. As in the case of PSM, literature review shows that eligibility features can be used to define the control group[67].

Source: t33

Literature review allows identifying **outcome variables** that are used more frequently in econometric models measuring the net effects of public guarantees. A first set of outcome variables relates to financial additionality i.e., the different capacity of SMEi recipients to access finance, and includes variables such as the ratio between long-term and short-term debt, financial debt costs / total debt, amount of loans, interest rates, probability of bad loans, trade debts, or creditworthiness indexes as a z-score. The second category is about project and economic additionality as defined within the framework of SMEi evaluation and includes variables such as the amount of tangible and intangible assets, total investments, turnover, sales, value added, number of full-time equivalent (FTE) employees, productivity[68]. The appropriate outcome variables can be selected based on the individual SMEi intervention logic (see Section 1).

**Limits and risks of estimation bias.** Limits and risks of selected counterfactual methods should be clarified based on consideration of the data available and the specific context of SMEi support.

**Box 8 Limits and risks of estimation bias**

There is a **selection bias** in evaluating the impact of a programme if the mean outcome of units which participated in the programme differs from non-supported units even in the absence of support. This difference could be due to a pre-existing difference in key characteristics of both groups which also determine group performance. Selection bias can substantially affect and distort estimates of programme impact. It may arise when evaluators decide to use programme non-beneficiaries as a control group. Understanding this requires noting that a decision on programme participation can be based on unobserved factors that are correlated with the outcomes. For instance, firms may decide to participate in a programme or not based on preferences, former performance,

[67] See the multi-stage scoring system in De Blasio, G., De Mitri, S., D'Ignazio, A., Finaldi Russo, P., Stoppani, L. (2017), Public guarantees on loans to SMEs: and RDD evaluation, Bank of Italy working papers.

[68] On the impact of credit to productivity see Gatti R., Love I. (2006), Does access to credit improve productivity? Evidence from Bulgarian firms, World Bank. Moreover, see Castillo L. L., Guasch J.L. (2012), Overdraft facility policy and firm performance: an empirical analysis in eastern European Union industrial firms, Policy Research Working Paper 6101.

opportunity costs and expected gains. Furthermore, programmes/measures are not assigned randomly to beneficiaries but: i) are designed to target specific beneficiaries with a certain performance characteristic (e.g., underperforming producers/enterprises/areas, etc.), or ii) include eligibility conditions which only apply to certain types of economic units e.g., the best enterprises. Selection of 'unobservables' (e.g., taking all SMEi non-beneficiaries as a control group) makes it difficult to establish a credible counterfactual. Those not participating in the programme are generally an inadequate comparison for those participating, since it is difficult to tell whether the differences in outcomes of the two groups are due to differences in unobservable characteristics or to programme support. Using unsuccessful applicants as a control group helps to minimise the problem, but this is not always possible or easy.

The evaluation should be designed to reduce / avoid the possible risk of estimation bias related to the **deviations from the conditional independence assumption**, also known as 'unconfoundedness' or 'selection on observables'. This assumption implies the conditional independence of potential outcomes and treatment assignment given observables, and thus means that the selection into treatment can be only attributed to the factors which are observable and observed by the researcher / evaluator. In order to minimise the risk of deviations, the evaluator should review available empirical evidence and literature and conduct appropriate and dedicated analysis[69].

Another possible distortion is the **self-selection bias**. This may appear if firms that anticipated participation in the programme already adjusted their performance prior to the start of the programme e.g., to comply with programme eligibility criteria. In such a situation, even if the control group was very similar to programme participants, comparisons of both groups just before participation could lead to a significant control bias. The important consequence for ex-post evaluation is that this type of bias should be recognised and reduced or eliminated (if possible) before the impact assessment is undertaken.

A homogeneous treatment effect is where the programme effect is assumed to be constant across all individuals / units. The homogeneous treatment effect means outcomes for programme participants and non-programme participants are two parallel curves only differing in level. Although such an effect would greatly facilitate analysis of programme impacts, assuming homogeneous treatment effect is inconsistent with empirical evidence and leads to numerous estimate biases. **Heterogeneous treatment effects** assume that support impact varies across individuals/units (a possible effect of an observable component or as a part of unobservables). Yet, contrary to the homogenous treatment effect, this does not enable extrapolation to all population strata of evaluated units. Furthermore, in such a situation (including selecting unobservables) applying popular econometric OLS estimators (even after controlling for observable

[69] In the case of PSM, the analysis could inspect how the observations are distributed across the propensity score common support and how sensitive the estimates are with respect to the utilisation of observations in the tails of the common support (see for further details Black D. A., Smith J.A. (2004), How robust is the evidence on the effects of college quality? Evidence from matching, Journal of applied econometrics). Another option from the literature is to carry out a sensitivity analysis assessing whether (and to what extent) the estimated average treatment effects are robust to possible deviations from the conditional independence assumption (see Ichino A., Mealli F. and Nannicini T. (2007), From Temporary Help Jobs to Permanent Employment: What Can We Learn from Matching Estimators and their Sensitivity?, Journal of Applied Econometrics). In the case of Regression Discontinuity Design, see the aforementioned paper from De Blasio et alii (2017).

differences in characteristic) would be inconsistent. For instance, with RDD the 'fuzzy approach' is used to check, analyse and consider non-linearity. PSM uses many variables also referring to turnover and employment (expressed as dummies) to reduce the risk of heterogeneous effects.

Source: t33

**Estimated time and budget.** The workload required for an evaluation using quasi-experimental design is estimated to be of approximately 25 to 50 person-days of a statistical/econometric expert. This only includes the time required to decide on the most appropriate techniques, prepare the data for analysis, run calculations testing various model specifications, report on outcomes of the analysis. It excludes data collection including data gathering and any efforts needed to ensure matching between multiple data sources. Required workload depends on a number of factors including the number of SMEi actual recipients and timing of support.

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KN-02-21-509-EN-N

Publications Office
of the European Union

ISBN: 978-92-76-36159-6