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Evaluation support study on the EU rules on State aid for access to finance for SMEs

Final Report

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Competition

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Glossary

Name/acronym	Definition
Small and medium-sized enterprises (or SMEs)	Enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 mln, and/or an annual balance sheet total not exceeding EUR 43 mln[1]
Small enterprise	An enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 mln
Micro-enterprise	An enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 mln
Business angel (or BA)	A private individual who invest in the initial phase of start-ups, in exchange for a participation in capital
Virgin angel	A private investor which is looking to make its first investment
High-growth firm (or HGF, or high-growth company)	An enterprise with average annualized growth greater than twenty percent per annum, over a three-year period, and with ten or more employees at the beginning of the observation period. Growth is thus measured by the number of employees and by turnover[2]
Innovative firm	Firm that report having used financing in the past six months for developing and launching new products or services[3]
Gazelle	An enterprise up to five years old with average annualized growth greater than twenty percent per annum over a three-year period, and with ten or more employees at the beginning of the observation period
Financial intermediary	Any financial institution regardless of its form and ownership, including fund-of-funds, private equity investment funds, public investment funds, banks, micro-finance institutions, and guarantee societies
Beneficiary	An enterprise which has received investment through the national State aid schemes for the access to risk finance measures
Stakeholders	The set of interviewees that have been interviewed for this evaluation support study
Study Team	Lear, DIW Berlin, and Sheppard Mullin
Commission (or EC)	European Commission
Study	Evaluation support study
Risk Finance Guidelines (or RFG)	Guidelines on State aid to promote risk finance investments
GBER	General Block Exemption Regulation
Rules	GBER and RFG, addressed collectively

[1] As per the General Block Exemption Regulation.

[2] Audretsch (2012).

[3] As per the Survey on Access to Finance of Enterprises (SAFE). When discussing the economic literature, the definition of innovative firm changes according to the source used. The definition adopted in the source is reported in the main text or in a footnote.

VC	Venture Capital
PE	Private Equity

EXECUTIVE SUMMARY

The European Commission ("Commission") appointed Lear, DIW Berlin and Sheppard Mullin ("Study Team") to carry out an Evaluation support study ("Study") of the EU rules for State aid facilitating access to finance for SMEs. These rules comprise the Guidelines on State aid to promote risk finance investments ("Risk Finance Guidelines" or "RFG") and the relevant provisions of the General Block Exemption Regulation) ("GBER"; collectively with the RFG, "Rules").

The objective of the Study is to provide answers to a set of guiding questions defined by the Commission. To do so, the Study relies on three main sources of evidence:

- interviews with stakeholders, including financial intermediaries and beneficiaries and associations thereof involved in GBER and RFG schemes (<u>interviews</u>). The interview guidelines generally entailed closed answers, which can be aggregated to provide the prevailing opinions of stakeholders; they also entailed some open answers, which were used to investigate the reasons underlying the answers given. Results should be interpreted keeping in mind that the sample of interviewees is not statistically representative and that opinions given are necessarily subjective;
- a review of the relevant economic literature and of publicly available data sources (<u>literature review and data collection</u>). The literature review focuses both on academic studies addressing the problems of SMEs in accessing external financing, and policy reports, i.e. past works by the European Commission and other relevant institutions. Publicly available data have been used to complement the theoretical background provided by the literature review. The main data sources exploited in the Study are: (i) the Survey on Access to Finance of Enterprises, developed by the European Central Bank and the Commission, (ii) the European Central Bank Data Warehouse, and (iii) Investeurope. While this review as a source of evidence is inherently more objective, it does not directly answer the guiding questions for the Study, but needs to be interpreted in that context;
- five case studies analysing in depth aid schemes implemented by five different Member States (<u>case studies</u>): SA.39243 (Netherlands), SA.39418 (Finland), SA.43581 (Italy), SA.49923 (United Kingdom), and SA.46308 (Germany). The objective of the case studies is to closely look into the functioning and the characteristics of specific State aid schemes, allow a better understanding of the motivations behind stakeholders' dissatisfaction with certain aspects of the Rules and provide direct evidence of the effects of the Rules. The case studies are based on in-depth interviews with the relevant stakeholders (granting authorities and, where possible, fund managers and final beneficiaries), as well as on additional evidence collected through desk research or provided by the granting authorities (e.g. descriptions of the schemes, statistics, evaluation reports). While some of the insights emerging from case studies can be relevant in general, others are instead specific to each scheme and cannot therefore be generalized.

The market failure and the policy context

Small and medium-sized enterprises are the backbone of the European economy, representing 99.8% of non-financial enterprises in the EU. SMEs contribute significantly to European job creation and economic growth: in 2016, they employed around 93 mln people (66.6% of total employment) and generated 56.8% of total added value (EUR 4,030 bln).[4] The strong contribution to job creation and value added make SMEs crucial to ensuring economic growth and social integration in the EU. Moreover, thanks to their higher flexibility and adaptability, SMEs can foster technological innovation and entrepreneurship.

Despite their growth opportunities, SMEs may face difficulties in obtaining access to finance. At the heart of these difficulties lies a problem of asymmetric information: if the firm has better information about its investment returns than potential investors, external financing may be expensive, if available at all, because of adverse selection and moral hazard problems. These problems are magnified for young and innovative firms, which typically lack the operational track records that banks employ to assess creditworthiness and/or may entail a significant degree of risk without being able to provide collaterals. This can lead to a situation where SMEs are inefficiently underfunded and unable to fulfil their growth potential, to the detriment of the European economy.

The market failure described above is the main reason for Member States intervening to support the provision of risk finance to SMEs. The Rules enable such interventions at the level of Member States and are part of a larger policy effort by the Commission aimed at supporting SMEs.

Market failure: evolution and characteristics

The market failure cannot be measured directly and, in order to understand whether the situation has improved or worsened since 2014, the Study relies on proxies for the market failure commonly employed in policy reports and in the economic literature, among which:

- the share of SMEs for which access to finance has been the most pressing problem. Access to finance is the least mentioned among pressing problems as of 2018, and the percentage of SMEs that have identified access to finance as their most pressing problem has decreased not only on average (EU28) but also in each Member State between 2014 and 2018;[5]
- relatedly, the main limiting factors experienced by European SMEs when getting external financing. An increasing share of SMEs has reported that they face no obstacles in accessing finance, confirming the finding that access has become easier. The percentage of SMEs that consider lack of collaterals and high interest rates as their main obstacle has also significantly decreased. Insufficient collaterals, high interest rates and rationing (financing not available) are highly associated with the asymmetric information problem in raising external finance, so this trend suggests that the market failure has become less severe;[6]
- the outcome of European SMEs' external financing applications and the share of firms being rejected by the providers of external funds (bank lending and equity capital). There is an

[4] Eurostat data.

[5] Survey on Access to Finance of Enterprises (SAFE).

[6] SAFE.

improvement in the ability of SMEs to obtain access to finance between 2014 and 2018, largely due to the percentage of respondents that received the entire amount requested, which increased.[7]

While the situation has improved across Europe, some Member States are lagging behind. Greece, Cyprus, Lithuania, Croatia and Italy are the countries with the highest percentage of SMEs for which access to finance represents the most pressing concern in 2018. The percentage of rejected application has increased or remained constant in Croatia, Sweden, Denmark, Portugal, Luxemburg, Estonia, the Czech Republic, and Malta.

While the above indicates that the situation for SMEs as regards access to finance has improved in recent years, market failures still persist in specific areas. SAFE data shows that the types of firms most affected by the market failure are: (i) young businesses with 0-2 years and 2-5 years of activity; (ii) high-growth firms and gazelles; and (iii) firms investing in innovation activities. For all these companies, the high cost of credit and the lack of guarantees have constituted the main factors behind the inability to access funds, which as explained are highly correlated with the market failure.

In terms of instruments, SAFE data show that outstanding loans to non-financial corporations have increased since 2010, and that the availability of equity capital has improved along the period 2014-2018. Despite the improvement in the availability of equity capital, its use by European SMEs decreased between 2014 and 2018 (a reduction partly compensated by the increase in the use of retained earnings), suggesting that SMEs struggle finding sources of equity financing. The high reliance on debt financing for European SMEs, may be explained *inter alia* by the low-interest rate context where they are operating, which makes debt more advantageous than equity. However, the high dependence of SMEs on bank financing may increase concerns related to their vulnerability in the case of a new financial crisis.

The positions expressed by financial intermediaries and beneficiaries interviewed for the Study broadly confirm this picture. 83% of them state that there exists a financing gap that might constrain the supply of external financing for SMEs that have valuable business models and fulfil all standard investment criteria. They also state that this may vary depending on where the SME is located, with peripheral countries suffering the most; and that the main determinant of the financing gap is the development stage of a firm, with younger SMEs facing more severe constraints than older and more established ones. Nevertheless, stakeholders confirm that there has been an improvement compared to the situation in 2014. As to underlying reasons for the market failure, financial intermediaries interviewed for the Study suggest that the quality of SMEs' key management is the most relevant factor explaining the financing gap, along with the related ability of SMEs to prepare sound business plans and followed by the SMEs' unwillingness to share control with outside investors.

While the evidence discussed above shows that the negative effects of the financial crisis may have been alleviated, financial intermediaries and beneficiaries interviewed for the Study

[7] SAFE.

generally believe that the underlying reasons for the market failure are structural, rather than transitional, which would suggest that the financial crisis has only exacerbated them and that their existence (though not necessarily their magnitude) is independent from the financial crisis.

Venture capital, private equity and alternative trading platforms

Although, as discussed above, bank finance is the main form of external financing for European SMEs, equity finance is essential for some types of firms. For technology firms, fast-growing companies and young firms with no immediate revenue streams who need to make upfront investments, equity is often the most suitable form of capital. To meet these equity needs, both the presence of formal venture capital ("VC") investors and business angels ("BAs") and a well-developed capital market are required. Indeed, data collected and analysed for the Study shows that the funds raised and the investments made by private equity ("PE") and VC funds increased markedly between 2014 and 2018, and that the increase has mainly been driven by investments in SMEs. Further, the supply of funds by BAs (to all firms and not only SMEs) has increased steadily since 2014, mostly driven by the growth in the number of investors. However, a comparison with the situation prevailing in the US reveals that Europe is still lagging behind: in 2018, VC investments in the US were much higher than the ones registered in Europe.

Case studies confirm an improvement in the availability of PE and VC funds also in the context of State measures. As regards Italy, for instance, the number of VC funds was very low in 2010 when the program SA.43581 was approved in the Lazio region. This scheme was implemented in the form of a public fund that invested together with private co-investors in SMEs. Then, in 2014, when the number of VC funds was substantially higher, the granting authority decided to invest a larger amount in VC funds, rather than in the co-investment instrument. Similar opinions were expressed in reference to the Finnish scheme (SA.39418).

Alternative trading platforms represent a tool that can facilitate the matching between SMEs in need of equity finance and institutional investors such as venture capitalists and BAs. To enter alternative trading platforms, firms must follow simplified listing processes and satisfy customised information standards that are less stringent than the ones required on the main markets. These segments should both act as screening devices for promising companies that would eventually graduate to the main market, and to provide exit opportunities for venture capitalists and other private investors that wish to divest their shares following the initial start-up and first growth stages of a new company. In the last two years, six new alternative trading platforms have been set up in the EU area: Progress in Slovenia, Start in Czech Republic, Progress Market in Croatia, Roots in Greece, SME Growth Market BEAM in Bulgaria and Direct Market Plus in Austria. In 2017, two particularly successful platforms have been developed: Scale in Germany, which counts 49 SMEs, and Euronext Growth (a pan-European platform), with 232 SMEs listed. The SME segments with the highest capitalization (in absolute values) are the ones located in the UK (AIM), Spain (MAB), and Germany (Scale), along with the international platform Euronext Growth. This is consistent with the year of establishment of these alternative trading platforms and with the level of development of financial markets in these countries. Normalising alternative trading platforms capitalisation using capitalisation of the primary market, however, shows that the most developed platforms are those located in Cyprus, Slovenia, and Romania, i.e. countries where the primary market is not well-developed, compared to the EU average. This signals the effectiveness of alternative trading platforms in reducing the market failure, as they have arguably enabled to overcome the low level of financial development in the country.

Consistently with the above, the overall impression among financial intermediaries and associations of financial intermediaries interviewed for the Study is that the number of alternative trading platforms and the number of SMEs listed on these platforms has increased since 2014. However, beneficiaries do not have a wide knowledge of alternative trading platforms and of their availability in order to pursue additional financing. More broadly, alternative trading platforms are not perceived by stakeholders to play a particularly important role in providing additional capital to SMEs yet. Financial intermediaries argue that it is too early to assess the role of alternative trading platforms, but that they are certainly promising as an avenue for SMEs to obtain financing.

However, the available economic literature suggests that there may also be unwanted, negative effects related to the development of alternative trading platforms. The popularity of some SME segments in terms of high number of listings may be mainly due to the strict listing requirements in the main capital markets, which raises the question of whether alternative trading platforms can actually reach SMEs or simply crowd out main capital markets.

Relevance of the Rules

Both stakeholder interviews and case studies have revealed a general satisfaction with the Rules, which are broadly found as still relevant and well designed to address the identified market failure.

Financial intermediaries and beneficiaries interviewed for the Study, and granting authorities interviewed for case studies generally support the eligibility criteria of the Rules, which are deemed justified, well-defined and flexible enough for granting authorities to design their schemes based on their specific targets. Moreover, data collected and analysed for the purpose of the Study broadly supports the GBER’s focus on young SMEs: as they mature, SMEs might improve their ability to demonstrate their value, and hence they might be able to better signal their quality to potential investors. SMEs that are 10 years old or younger are more likely to face issues when accessing finance compared to more mature SMEs, and the problem intensifies for SMEs that are five years old or younger. Evidence from the INVEST case study confirms, for instance, that the number of beneficiaries decreases as their age increases, suggesting that as the SMEs grow, their need for support decreases.

However, certain features of the eligibility criteria have attracted some criticism, as emerged from interviews with stakeholders and from case studies:

- the rule whereby SMEs are eligible for funding under the GBER only if they have been operating in any market for less than seven years following their first commercial sale, whereas past this threshold the RFG apply. Interviewees point out that it may be hard for the undertakings to trace back the first commercial sale, or clearly identify which of their sales was the first, in light of the fact that sales to test the market should be excluded under the GBER. However, we believe that replacing this criterion with a clearer reference point (such as the legal establishment of the company) needs to be balanced with possible negative effects: the use of the first commercial sale enables to target SMEs in their early years of activity in the market regardless of how long product development may have taken;

- the rule whereby SMEs are eligible for aid if they require an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographical market, is higher than 50 % of their average annual turnover in the preceding years. This is considered unclear as financial intermediaries reported that there are on-going discussions with national associations on how to assess and calculate the ratio between the initial investment needed and the annual turnover. Further, the concepts of "new product market" and "new geographic market" require a judgement to be made, leaving room for arbitrary decisions by granting authorities, and defining relevant markets is a complex exercise that would clearly be beyond the scope of granting authorities' activity and skillset.

Regarding the quantitative restrictions, i.e. the investments' limits and thresholds set by the GBER, some stakeholders interviewed for the Study express the following concerns:

- under the GBER the total amount of risk finance cannot exceed EUR 15 mln. While this restriction is considered justified by the majority of stakeholders interviewed for the Study, some financial intermediaries have argued that the threshold may be insufficient for SMEs operating in specific sectors of economic activities where large-scale investments are needed (e.g. health-care companies). Overall, however, this Study suggests that the EUR 15 mln threshold is suitable for most cases, as the thresholds of the national schemes analysed are often far below the one set by the GBER.[8] While it is conceivable that this amount may be insufficient in some situations, we believe that sector-specific thresholds may be extremely complicated to enforce, leaving space for discretionary (and potentially arbitrary) decisions. Thus, greater funding needs may be better handled through the RFG rather than through a change to the GBER;
- the GBER requires that a private investor always participates in the investment (though with varying thresholds). Some of the stakeholders interviewed for the Study have pointed out that in those regions where financial markets are not strongly developed and for companies in the start-up stage (e.g. Poland, Romania, and Greece), finding a private investor may be particularly challenging. This is concerning because it would mean that the private participation requirements may restrict the provision of risk finance precisely to those SMEs that are most affected by the market failure, as they operate in markets where financial markets are less developed. However, we believe that this criticism should be balanced against the advantage of this provision, namely that it ensures that the investment is evaluated based on market criteria and allows the Rules to play a catalytic role by leveraging private capital.

Finally, stakeholders interviewed for the Study have stated to be satisfied with the set of instruments available under the Rules. The case studies suggest that the range of instruments covered by the GBER seems to be sufficient to address the financial needs of target beneficiaries,

[8] The maximum investment under the Dutch scheme is equal to EUR 3.5 mln, while for the Italian case it is equal to EUR 2.5 mln. The Finnish scheme maintained the GBER threshold.

and that instruments are effectively complementary to other support measures available in each Member State, such as regional programs, subsidised loans or tax measures.

Effects of the Rules

The rules may have a variety of effects, from desired to undesired:

- first, the Rules aim at bridging the finance gap for firms affected by the market failure by directly favouring the supply of finance to these entities;
- second, the Rules aim at encouraging the development of financial markets, thereby indirectly remedying the market failure;
- third, by (directly and indirectly) remedying the market failure, the Rules should help beneficiaries grow;
- fourth, the Rules may have a negative impact, for instance by incentivizing less thorough financing decisions by financial intermediaries, displacing the private provision of finance and distorting competition.

The evidence collected throughout the Study suggests that the Rules may have been effective, and that their possible negative effects are limited.

Compared to 2015, the outstanding guarantees on SME loan portfolios have on average increased in 2017, especially in Bulgaria (+94%), Hungary (+54%), and France (+31%), hence suggesting that credit guarantees may have been effective in addressing the market failure characterizing SMEs' access to finance.[9] Moreover, most of the interviewees for the Study assert that access to finance under the new Rules has become easier, mostly because the number of VC companies and private investors has significantly increased in the last few years.

According to stakeholders interviewed, the positive contribution of the Rules in remedying the market failure has been driven by three characteristics of the Rules as compared to the previous framework:

- they are less strict than the previous ones: for instance, the private participation rates have been lowered;
- they are more flexible, as they encompass many risk finance instruments and generally allow for more and better ways for firms to access finance;
- certain limits have been broadened, and especially the one on the total size of the investments, so investments are now more conspicuous.

The evaluation exercises undertaken for the schemes analysed as part of the case studies show that these schemes were generally effective in stimulating the VC market in the countries in which they were implemented. Moreover, 83% of beneficiaries interviewed for the Study state that they have been successful in attracting private capital in addition to the aid instruments, as applying for a finance measure under the Rules helps them gain new expertise and more awareness of other possible funding opportunities and because the presence of public money is a signal of the

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[9] EIF Small Business Finance Outlook, June 2016-2018.

value of the investee to prospective investors. The evidence collected does not support a finding of a significant crowding-out effect, i.e. public money displacing private provision.

However, data collected and analysed for the Study shows that the European VC market has remained fragmented, and that sizeable differences in the development of the VC markets prevail. Indeed, several markets suffer not only from subcritical size but also from an institutional investor base that is not yet ready to invest in this asset class, suggesting that the positive effects described above have not reached all Member States.

Beneficiaries interviewed for the Study state that funding obtained through the Rules helped them realize their innovations and bring them to the market more quickly than they would have been able to do without the funds. Some beneficiaries point out that funding obtained through the Rules enabled them to survive in the first place. Case studies show that national schemes have allowed beneficiaries to access networks of investors, which made it easier to obtain further public and private investments, thanks to the expertise of the first investor and to the knowledge and skills developed applying for funding through the Rules. There seem to be two channels whereby a scheme has an impact on final beneficiaries:

- it enables them to attract funds that are particularly difficult to find for start-ups;
- it allows to get a professional investor (along with its expertise and its network) onboard.

Based on the interviews undertaken for the purpose of the Study, the negative effects of the Rules appear to be limited. There are several reasons why the Rules might have negative effects. First, aided access to finance may have discouraged financial intermediaries from making appropriate profit-driven financing decisions. Financial intermediaries interviewed on this topic state that this has not been the case, as beneficiaries usually provide them with sound and sufficiently elaborated viable business plans. When this does not happen (e.g. in the case of small SMEs with no experienced or specialized human capital), financial intermediaries often offer their help and cooperate with beneficiaries during the process.

Second, funding supplied thanks to the Rules may have substituted for funding that would have been supplied privately anyway. Clearly, this is an undesirable outcome, as in such cases we would not be in the presence of the market failure that the Rules seek to address. Reassuringly, most of the financial intermediaries interviewed stated that they would have not and that the finance measure was a necessary condition for their involvement.

Third, the Rules may have generated harmful effects on competition, as a company that receives State support inevitably gains an advantage over its competitors that do not, and this will generally distort competition in the relevant market where that company operates. The majority of beneficiaries interviewed for the Study confirm that, as a result of their improved access to finance, they gained a competitive advantage. Indeed, eligible SMEs may compete with other types of firms that are not eligible for aid (for instance, larger firms or older SMEs), thereby enabling them to have access to resources that are not available to their competitors. However, we believe that the existence of this negative effect is unavoidable and must be balanced with the positive effects that the Rules may have, first and foremost addressing the market failure and enabling the development of SMEs that without the Rules would be financially constrained. Their development may in turn generate a positive effect on competition in the long run, for instance by enabling small and innovative firms to compete with established incumbents, though that will depend on the specific market where beneficiaries operate.

Awareness, clarity and burdensomeness of the Rules

The majority of financial intermediaries interviewed for the Study state that they are generally aware of the Rules, though on average we have found that they are much more familiar with the GBER rather than the RFG. In some cases, while expressing limited awareness of the European Rules, financial intermediaries expressed a higher degree of awareness about the specific national schemes they are involved with or applied for. Beneficiaries are generally unaware of the Rules, and the case studies show that they may not know the schemes directly, because they typically approach funds to search for financing and they do not necessarily know that they are supported by a State aid program. Case studies also reveal that the level of awareness may vary depending on the scheme, and that this is higher for older and more established schemes, such as the Finnish (SA.39418) and the British one (SA.49923). Regarding clarity, a number of financial intermediaries interviewed for the Study state that the Rules are not sufficiently clear, despite an improvement in the current framework compared to the previous one. Again, this needs to put into perspective as the Rules are addressed to Member States while beneficiaries and financial intermediaries would only be interested in the national schemes set up under the Rules. The question of clarity of the Rules should therefore be addressed to national authorities rather than final beneficiaries or financial intermediaries.

According to the evidence collected in the case studies, the burden of the Rules is generally not perceived as excessive by the stakeholders. Fund managers generally consider that the amount of reporting that they have to do for these schemes is similar to the one they have to do for their other investments. However, stakeholders' interviews reveal that beneficiaries find the Rules to be more burdensome than financial intermediaries. This may be the result of the lack of experience and of specialized human resources on the side of beneficiaries.

RESUME EXECUTIF

La Commission européenne (“Commission”) a chargé Lear, DIW Berlin et Sheppard Mullin (l’“Équipe”) de réaliser une étude d’évaluation (“Étude”) des règles européennes relatives aux aides d’État facilitant l’accès au financement des Petites et Moyennes Entreprises (“PME”). Ces règles comprennent les lignes directrices relatives aux aides d’État visant à promouvoir les investissements en faveur du financement des risques (“Lignes Directrices sur le Financement des Risques” ou “LDFR”) et les dispositions pertinentes du Règlement Général d’Exemption par Catégorie (“RGEC”; collectivement avec les LDFR, les “Règles”).

L’objectif de l’étude est de fournir des réponses à un ensemble de questions définies par la Commission. Pour ce faire, l’Étude s’appuie sur trois sources principales d’éléments probants:

- des entretiens avec les parties prenantes (stakeholders), y compris les intermédiaires financiers, les bénéficiaires et les associations de ces derniers impliqués dans des projets de financement impliquant le RGEC et les LDFR (entretiens). Les lignes directrices pour les entretiens impliquaient généralement des réponses fermées, qui peuvent être agrégées pour fournir les opinions prédominantes des parties prenantes; elles impliquaient également certaines réponses ouvertes, qui sont utilisées pour examiner les raisons sous-jacentes aux réponses données. Les résultats doivent être interprétés en gardant à l’esprit que l’échantillon des personnes interrogées n’est pas statistiquement représentatif et que les opinions exprimées sont nécessairement subjectives;
- un examen de la documentation économique pertinente et des sources de données accessibles au public (analyse documentaire et collecte de données). L’analyse documentaire porte à la fois sur des études universitaires traitant des problèmes d’accès des PME aux financements extérieurs ainsi que sur des rapports portant sur des politiques, c’est-à-dire les travaux antérieurs de la Commission européenne et d’autres institutions concernées. Les données accessibles au public ont été utilisées pour compléter le contexte théorique fourni par l’analyse documentaire. Les principales sources de données exploitées dans l’Étude sont: (i) l’enquête sur l’accès au financement des entreprises, effectuée par la Banque centrale européenne et la Commission, (ii) l’entrepôt de données de la Banque centrale européenne, et (iii) Investeurope. Bien que cette analyse en tant que source de preuves soit intrinsèquement plus objective, elle ne répond pas directement aux questions posées pour les besoins de l’Étude. L’analyse doit être interprétée dans ce context;
- cinq études de cas analysant en profondeur des régimes d’aides mis en œuvre par cinq États membres différents (études de cas): SA.39243 (Pays-Bas), SA.39418 (Finlande), SA.43581 (Italie), SA.49923 (Royaume-Uni) et SA.46308 (Allemagne). L’objectif de ces études de cas est d’examiner précisément le fonctionnement et les caractéristiques des régimes d’aides d’État spécifiques, de permettre une meilleure compréhension des motivations à l’origine de l’insatisfaction des parties prenantes quant à certains aspects des règles et de fournir des preuves directes quant aux effets des règles. Les études de cas se fondent sur des entretiens approfondis avec les parties prenantes concernées (autorités chargées de la subvention et, si possible, gestionnaires de fonds et bénéficiaires finaux), ainsi que sur des éléments probants supplémentaires recueillis par le biais de recherches documentaires ou fournis par les autorités dispensatrices des aides (par exemple, descriptions des régimes, statistiques,

rapports d'évaluation). Si certains des enseignements tirés des études de cas peuvent être pertinents en général, d'autres sont plutôt spécifiques à chaque système et ne peuvent donc pas être généralisés.

La défaillance du marché et le contexte politique

Les PME constituent l'épine dorsale de l'économie européenne, représentant 99,8% des entreprises non financières de l'UE. Les PME contribuent de manière significative à la création d'emplois et à la croissance économique en Europe : en 2016, elles employaient environ 93 millions de personnes (66,6% de l'emploi total) et représentaient 56,8% de la valeur ajoutée totale (4,030 milliards d'euros).[1] La forte contribution des PME à la création d'emplois et de valeur ajoutée les rend essentielles pour assurer la croissance économique et l'intégration sociale dans l'UE. En outre, grâce à leur plus grande flexibilité et adaptabilité, les PME peuvent favoriser l'innovation technologique et l'esprit d'entreprise.

Malgré leurs possibilités de croissance, les PME peuvent faire face à des difficultés d'accès au financement. Au cœur de ces difficultés se trouve un problème d'asymétrie de l'information: si l'entreprise dispose d'une meilleure information sur le rendement de ses investissements que les investisseurs potentiels, le financement externe peut être coûteux, s'il est envisageable, en raison des problèmes de sélection adverse et de risque moral. Ces problèmes sont amplifiés pour les entreprises jeunes et innovantes, qui n'ont généralement pas les antécédents opérationnels que les banques requièrent pour évaluer la solvabilité et/ou qui peuvent impliquer un degré important de risque sans être en mesure de fournir des garanties. Cela peut conduire à une situation dans laquelle les PME sont inefficacement sous-financées et incapables de réaliser leur potentiel de croissance, au détriment de l'économie européenne.

La défaillance du marché décrite ci-dessus est la principale raison pour laquelle les États membres interviennent pour soutenir l'octroi de financements à risque aux PME. Les Règles permettent de telles interventions au niveau des États membres et s'inscrivent dans le cadre d'un effort politique plus large de la Commission visant à soutenir les PME.

Défaillance du marché: évolution et caractéristiques

La défaillance du marché ne peut être mesurée directement et, pour comprendre si la situation s'est améliorée ou s'est aggravée depuis 2014, l'Étude s'appuie sur des indicateurs de la défaillance du marché couramment utilisés dans les rapports de politique économique et dans la littérature économique, notamment:

- la part des PME pour lesquelles l'accès au financement a été le problème le plus impérieux. L'accès au financement est le moins mentionné parmi les problèmes impérieux à partir de 2018, et le pourcentage de PME ayant identifié l'accès au financement comme leur problème

[1] Données Eurostat.

le plus urgent a diminué non seulement en moyenne (UE28) mais également dans chaque État membre entre 2014 et 2018;[2]

- dans le même ordre d'idée, les principaux facteurs limitatifs auxquels sont confrontées les PME européennes lorsqu'elles obtiennent un financement extérieur. Une proportion croissante de PME ont indiqué qu'elles n'ont pas connu d'obstacles à l'accès au financement, ce qui confirme la conclusion selon laquelle l'accès est devenu plus facile. Le pourcentage de PME qui considèrent le manque de garanties et les taux d'intérêt élevés comme leur principal obstacle a également sensiblement diminué. L'insuffisance des garanties, les taux d'intérêt élevés et le rationnement (financement non disponible) sont étroitement liés au problème d'asymétrie de l'information dans la mobilisation des financements extérieurs, de sorte que cette tendance suggère que la défaillance du marché est devenue moins marquée;[3]
- le résultat des demandes de financement externe des PME européennes et la part des demandes rejetées par les bailleurs de fonds externes (prêts bancaires et fonds propres). La capacité des PME à accéder au financement s'est améliorée entre 2014 et 2018, en grande partie grâce au pourcentage croissant de parties prenantes interrogées ayant reçu la totalité du montant demandé.[4]

Si la situation s'est améliorée dans toute l'Europe, certains États membres restent à la traine. La Grèce, Chypre, la Lituanie, la Croatie et l'Italie sont les pays avec le pourcentage le plus élevé de PME pour lesquels l'accès au financement représente la préoccupation la plus urgente en 2018. Le pourcentage de demandes rejetées a augmenté ou est resté constant en Croatie, en Suède, au Danemark, au Portugal, au Luxembourg, en Estonie, en République tchèque et à Malte.

Si ce qui précède indique que la situation des PME en ce qui concerne l'accès au financement s'est améliorée ces dernières années, les défaillances du marché persistent dans des domaines spécifiques. Les données SAFE montrent que les types d'entreprises les plus touchées par la défaillance du marché sont : (i) les jeunes entreprises de 0 à 2 ans et de 2 à 5 ans d'activité ; (ii) les entreprises à forte croissance et les gazelles ; et (iii) les entreprises investissant dans des activités d'innovation. Pour toutes ces entreprises, le coût élevé du crédit et le manque de garanties ont constitué les principaux facteurs à l'origine de l'impossibilité d'accéder aux fonds, qui, comme expliqué, sont fortement corrélés avec la défaillance du marché.

En termes d'instruments, les données SAFE montrent que l'encours des prêts aux établissements non-financiers a augmenté depuis 2010 et que la disponibilité des capitaux propres s'est améliorée sur la période 2014-2018. Malgré l'amélioration de la disponibilité des fonds propres, leur utilisation par les PME européennes a diminué entre 2014 et 2018 (une réduction partiellement compensée par l'augmentation de l'utilisation des bénéfices non distribués), ce qui suggère que les PME ont des difficultés à trouver des sources de financement en capitaux propres. La forte dépendance des PME européennes à l'égard du financement par l'emprunt peut

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[2] Enquête sur l'accès au financement des entreprises (SAFE).

[3] SAFE.

[4] SAFE.

s'expliquer, entre autres, par le contexte de faibles taux d'intérêt dans lequel elles opèrent, qui rend la dette plus avantageuse que les capitaux propres. Toutefois, la forte dépendance des PME à l'égard du financement bancaire peut accroître les préoccupations liées à leur vulnérabilité en cas de nouvelle crise financière.

Les positions exprimées par les intermédiaires financiers et les bénéficiaires interrogés dans le cadre de l'Étude confirment largement cette tendance. 83 % d'entre eux déclarent qu'il existe un déficit de financement qui pourrait limiter l'offre de financement externe pour les PME qui disposent de modèles d'entreprise valables et qui remplissent tous les critères d'investissement habituels. Ils indiquent également que cela peut varier en fonction du lieu d'implantation de la PME, les pays périphériques étant les plus touchés, et que le principal élément déterminant du déficit de financement est le stade de développement de l'entreprise, les jeunes PME étant confrontées à des contraintes plus graves que les plus anciennes et les mieux établies. Néanmoins, les parties prenantes confirment qu'il y a eu une amélioration par rapport à la situation en 2014. En ce qui concerne les raisons sous-jacentes à la défaillance du marché, les intermédiaires financiers interrogés dans le cadre de l'Étude suggèrent que la qualité de l'équipe de gestion des PME est le facteur le plus pertinent pour expliquer le déficit de financement, ainsi que la capacité des PME à préparer des plans d'entreprise solides, suivie par le refus des PME à partager le contrôle avec des investisseurs extérieurs.

Bien que les éléments dont il a été question ci-dessus montrent que les effets négatifs de la crise financière ont pu être atténués, les intermédiaires financiers et les bénéficiaires interrogés dans le cadre de l'Étude estiment généralement que les raisons sous-jacentes de la défaillance du marché sont structurelles plutôt que transitoires, ce qui suggère que la crise financière ne fait que les exacerber et que leur existence (mais pas nécessairement leur ampleur) est indépendante de celle de la crise financière.

Capital-risque, capital-investissement et plateformes de négociation alternatives

Bien que, comme exprimé ci-avant, le financement bancaire soit la principale forme de financement externe pour les PME européennes, le financement par capitaux propres demeure essentiel pour certains types d'entreprises. Pour les entreprises technologiques, les entreprises à croissance rapide et les jeunes entreprises qui n'ont pas de sources de revenus immédiates et qui doivent faire des investissements initiaux, les capitaux propres sont souvent la forme de capital la plus appropriée. Afin de répondre à ces besoins en capitaux propres, le recours à des fonds de capital-risque ("FCR") et d'investisseurs providentiels ("IP") ainsi qu'un marché financier bien développé sont essentiels. En effet, les données collectées et analysées pour l'Étude montrent que les fonds levés et les investissements réalisés par les fonds de capital-investissement ("FCI") et les FCR ont fortement augmenté entre 2014 et 2018, et que cette augmentation a été principalement due aux investissements dans les PME. De plus, l'offre de fonds par les IP (à toutes les entreprises et pas seulement aux PME) a augmenté régulièrement depuis 2014, principalement en raison de la croissance du nombre d'investisseurs. Toutefois, en comparaison avec la situation qui prévaut aux États-Unis, l'Europe est toujours à la traîne: en 2018, les FCR aux États-Unis étaient beaucoup plus élevés que ceux enregistrés en Europe.

Les études de cas confirment une amélioration de la disponibilité des FCI et FCR, également dans le contexte des mesures étatiques. En ce qui concerne l'Italie, par exemple, le nombre de FCR était très faible en 2010 lorsque le programme SA.43581 a été approuvé dans la région du Latium. Ce régime a été mis en œuvre sous la forme d'un fonds public qui a investi avec des co-investisseurs privés dans des PME. Puis, en 2014, lorsque le nombre de FCR était nettement plus élevé, l'autorité qui octroyait le financement a décidé d'investir un montant plus important dans les FCR, plutôt que dans l'instrument de co-investissement. Des avis similaires ont été exprimés au sujet du régime finlandais (SA.39418).

Les plateformes de négociation alternatives sont également un outil qui peut faciliter la rencontre des PME qui ont besoin de financement par capitaux propres avec les investisseurs institutionnels tels que les sociétés de capital-risque et les IP. Pour accéder aux plateformes de négociation alternatives, les entreprises doivent suivre des processus de cotation simplifiés et satisfaire à des normes d'information sur mesure moins strictes que celles exigées sur les principaux marchés. Ces segments devraient à la fois servir d'outils de sélection pour les sociétés prometteuses qui finiront par passer sur le marché principal et offrir des possibilités de sortie aux investisseurs en capital-risque et autres investisseurs privés qui souhaiteraient vendre leurs actions après le démarrage initial et les premières étapes de croissance d'une nouvelle société. Au cours des deux dernières années, six nouvelles plateformes commerciales alternatives ont été mises en place dans l'UE : Progress en Slovénie, Start en République tchèque, Progress Market en Croatie, Roots en Grèce, SME Growth Market BEAM en Bulgarie et Direct Market Plus en Autriche. En 2017, deux plateformes particulièrement performantes ont été développées: Scale en Allemagne, qui compte 49 PME, et Euronext Growth (une plateforme paneuropéenne), avec 232 PME cotées. Les segments de PME les plus capitalisés (en valeur absolue) sont ceux situés au Royaume-Uni (AIM), en Espagne (MAB) et en Allemagne (Scale), ainsi que la plateforme internationale Euronext Growth. Ceci est cohérent avec l'année de mise en place de ces plateformes de négociation alternatives et avec le niveau de développement des marchés financiers dans ces pays. La normalisation de la capitalisation des plateformes de négociation alternatives en utilisant la capitalisation du marché primaire montre cependant que les plateformes les plus développées sont celles situées à Chypre, en Slovénie et en Roumanie, c'est-à-dire dans les pays où le marché primaire n'est pas bien développé, par rapport à la moyenne communautaire. Cela témoigne de l'efficacité des plateformes de négociation alternatives pour réduire les défaillances du marché, car elles ont sans doute permis de surmonter le faible niveau de développement financier du pays.

Market Plus en Autriche. En 2017, deux plateformes particulièrement performantes ont été développées : Scale en Allemagne, qui compte 49 PME, et Euronext Growth (une plateforme paneuropéenne), avec 232 PME cotées. Les segments de PME les plus capitalisés (en valeur absolue) sont ceux situés au Royaume-Uni (AIM), en Espagne (MAB) et en Allemagne (Scale), ainsi que la plateforme internationale Euronext Growth. Ceci est cohérent avec l'année de mise en place de ces plateformes de négociation alternatives et avec le niveau de développement des marchés financiers dans ces pays. La normalisation de la capitalisation des plateformes de négociation alternatives en utilisant la capitalisation du marché primaire montre cependant que les plateformes les plus développées sont celles situées à Chypre, en Slovénie et en Roumanie, c'est-à-dire dans les pays où le marché primaire n'est pas bien développé, par rapport à la

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Conformément à ce qui précède, l'impression générale des intermédiaires financiers et des associations d'intermédiaires financiers interrogés dans le cadre de l'Étude est que le nombre de plateformes de négociation alternatives et le nombre de PME inscrites sur ces plateformes ont augmenté depuis 2014. Toutefois, les bénéficiaires n'ont pas une grande connaissance des plateformes de négociation alternatives et de leur disponibilité afin de rechercher des financements supplémentaires. De manière plus générale, les parties prenantes ne considèrent pas encore que les plateformes de négociation alternatives jouent un rôle particulièrement important dans l'apport de capitaux supplémentaires aux PME. Les intermédiaires financiers affirment qu'il est trop tôt pour évaluer le rôle des plateformes de négociation alternatives, mais qu'elles sont certainement prometteuses comme moyen pour les PME d'obtenir du financement.

Toutefois, la littérature économique disponible suggère qu'il peut également y avoir des effets négatifs non désirés liés au développement de plateformes de négociation alternatives. La popularité de certains segments de PME en termes de nombre élevé de cotations peut s'expliquer principalement par les exigences strictes de cotation sur les principaux marchés de capitaux, ce qui soulève la question de savoir si les plateformes de négociation alternatives peuvent réellement atteindre les PME ou simplement évincer les principaux marchés de capitaux.

Pertinence des règles

Les entretiens avec les parties prenantes et les études de cas ont révélé une satisfaction générale à l'égard des règles, qui sont généralement considérées comme toujours pertinentes et bien conçues pour remédier à la défaillance du marché identifiée.

Les intermédiaires financiers et les bénéficiaires interrogés dans le cadre de l'étude, ainsi que les autorités chargées de l'octroi des subventions interrogées pour les études de cas, soutiennent généralement les critères d'éligibilité des règles, qui sont jugés suffisamment justifiés, bien définis et souples pour permettre aux autorités chargées de l'octroi de concevoir leurs régimes en fonction de leurs objectifs spécifiques. En outre, les données collectées et analysées aux fins de l'Étude confirment largement l'accent mis par le RGEC sur les jeunes PME: à mesure qu'elles arrivent à maturité, les PME pourraient améliorer leur capacité à démontrer leur valeur et, partant, mieux faire connaître leurs qualités aux investisseurs potentiels. Les PME de 10 ans ou moins sont plus susceptibles d'être confrontées à des problèmes lors de l'accès au financement que les PME plus matures, et le problème s'aggrave pour les PME de cinq ans ou moins. L'étude de cas INVEST confirme, par exemple, que le nombre de bénéficiaires diminue à mesure que leur âge augmente, ce qui amène à penser qu'à mesure que les PME se développent, leur besoin de soutien diminue.

Toutefois, certaines caractéristiques des critères d'admissibilité ont suscité certaines critiques, comme en témoignent les entrevues avec les intervenants et les études de cas:

- la règle selon laquelle les PME ne peuvent bénéficier d'un financement au titre du RGEC que si elles sont présentes sur un marché depuis moins de sept ans après leur première vente commerciale, alors qu'au-delà de ce seuil, les LDFR sont applicables. Les personnes interrogées soulignent qu'il peut être difficile pour les entreprises de retracer la première vente commerciale ou d'identifier clairement laquelle de leurs ventes était la première, compte tenu du fait que les ventes destinées à tester le marché devraient être exclues du RGEC. Toutefois, nous pensons que le remplacement de ce critère par un point de référence plus clair (tel que la création juridique de l'entreprise) doit être contrebalancé par d'éventuels effets négatifs: l'utilisation de la première vente commerciale permet de cibler les PME dans leurs premières années d'activité sur le marché quel que soit le temps nécessaire au développement du produit;

- la règle selon laquelle les PME peuvent bénéficier d'une aide si elles ont besoin d'un investissement initial de financement de risque qui, sur la base d'un plan d'entreprise établi en vue de l'entrée sur un nouveau marché de produits ou un nouveau marché géographique, est supérieur à 50 % de leur chiffre d'affaires annuel moyen au cours des années précédentes. Cette règle mériterait d'être éclaircie selon les parties prenantes. Les intermédiaires financiers ont d'ailleurs indiqué que des discussions étaient en cours avec les associations nationales sur la manière d'évaluer et de calculer le rapport entre l'investissement initial nécessaire et le chiffre d'affaires annuel. En outre, les concepts de "nouveau marché de produits" et de "nouveau marché géographique" exigent qu'un jugement soit porté, laissant place à des décisions arbitraires de la part des autorités compétentes et définissant les marchés pertinents est un exercice complexe qui dépasserait clairement le champ d'activité et les compétences des autorités en question.

En ce qui concerne les restrictions quantitatives, c'est-à-dire les limites et les seuils d'investissement fixés par le RGEC, certaines parties prenantes interrogées dans le cadre de l'étude expriment les préoccupations suivantes:

- au titre du RGEC, le montant total du financement à risque ne peut dépasser 15 millions d'euros. Bien que cette restriction soit considérée comme justifiée par la majorité des parties prenantes interrogées dans le cadre de l'étude, certains intermédiaires financiers ont fait valoir que le seuil pourrait être insuffisant pour les PME opérant dans des secteurs spécifiques d'activités économiques où des investissements importants sont nécessaires (par exemple, les sociétés de soins de santé). Globalement, toutefois, cette Étude suggère que le seuil de 15 millions d'euros est approprié dans la plupart des cas, car les seuils des régimes nationaux analysés sont souvent très inférieurs à celui fixé par le RGEC.[5] Bien qu'il soit concevable que ce montant soit insuffisant dans certaines situations, nous croyons que les seuils sectoriels peuvent être extrêmement compliqués à appliquer, ce qui laisse place à des décisions discrétionnaires (et potentiellement arbitraires). Par conséquent, il serait peut-être préférable de répondre à des besoins de financement plus importants par le biais des LDFR plutôt que par une modification du RGEC;
- le RGEC exige qu'un investisseur privé participe toujours à l'investissement (mais avec des seuils variables). Certaines des parties prenantes interrogées dans le cadre de l'étude ont

[5] L'investissement maximal dans le cadre du régime néerlandais s'élève à 3,5 millions d'euros, contre 2,5 millions d'euros dans le cas de l'Italie. Le régime finlandais a maintenu le seuil du RGEC.

souligné que dans les régions où les marchés financiers ne sont pas très développés et pour les entreprises en phase de démarrage (Pologne, Roumanie et Grèce, par exemple), trouver un investisseur privé peut se révéler particulièrement difficile. Ce point est préoccupant, car cela signifierait que les exigences en matière de participation du secteur privé pourraient limiter l'offre de financement à risque aux PME qui sont les plus touchées par la défaillance du marché, car elles opèrent sur des marchés où les marchés financiers sont moins développés. Toutefois, nous pensons que cette critique doit être mise en balance avec l'avantage de cette disposition, à savoir qu'elle garantit que l'investissement est évalué sur la base de critères de marché et permet aux règles de jouer un rôle de catalyseur en mobilisant des capitaux privés.

Enfin, les intervenants interrogés dans le cadre de l'Étude se sont dits satisfaits de l'ensemble des instruments disponibles en vertu des règles. Les études de cas suggèrent que la gamme d'instruments couverts par le RGEC semble suffisante pour répondre aux besoins financiers des bénéficiaires cibles et que les instruments sont effectivement complémentaires d'autres mesures de soutien disponibles dans chaque État membre, comme les programmes régionaux, les prêts bonifiés ou les mesures fiscales.

Effets des règles

Les règles peuvent avoir plusieurs effets, certains souhaités et d'autres non:

- premièrement, les règles visent à combler le déficit de financement des entreprises touchées par la défaillance du marché en favorisant directement l'offre de financement à ces entités;
- deuxièmement, les règles visent à encourager le développement des marchés financiers, remédiant ainsi indirectement à la défaillance du marché;
- troisièmement, en remédiant (directement et indirectement) à la défaillance du marché, les règles devraient aider les bénéficiaires à se développer;
- quatrièmement, les règles peuvent avoir un impact négatif, par exemple en incitant les intermédiaires financiers à prendre des décisions de financement moins rigoureuses, en remplaçant l'apport privé de financement et en faussant la concurrence.

Les données recueillies tout au long de l'Étude donnent à penser que les règles ont pu être efficaces et que leurs effets négatifs potentiels sont limités.

Par rapport à 2015, l'encours des garanties sur les portefeuilles de prêts aux PME a en moyenne augmenté en 2017, en particulier en Bulgarie (+94 %), en Hongrie (+54 %) et en France (+31 %), ce qui suggère que les garanties de crédit ont peut-être été efficaces pour remédier à la défaillance du marché qui caractérise l'accès des PME au financement.[6] En outre, la plupart des personnes interrogées dans le cadre de l'étude affirment que l'accès au financement en vertu des nouvelles règles est devenu plus facile, principalement parce que le nombre de sociétés de capital-risque et d'investisseurs privés a considérablement augmenté au cours des dernières années.

[6] EIF Small Business Finance Outlook, Juin 2016-2018.

Selon les parties prenantes interrogées, la contribution positive des règles pour remédier à la défaillance du marché est due à trois caractéristiques des règles par rapport au cadre précédent:

- les règles sont moins strictes que les précédentes : par exemple, les taux de participation privée ont été abaissés;
- les règles sont plus souples, car elles englobent de nombreux instruments de financement du risque et permettent généralement aux entreprises d'avoir accès à des moyens plus nombreux et plus efficaces d'accéder au financement;
- certaines limites ont été élargies, et notamment celle sur la taille totale des investissements, de sorte que les investissements sont maintenant plus visibles.

Les exercices d'évaluation entrepris pour les régimes analysés dans le cadre des études de cas montrent que ces régimes ont généralement été efficaces pour stimuler le marché du capital-risque dans les pays où ils ont été mis en œuvre. En outre, 83 % des bénéficiaires interrogés dans le cadre de l'Étude déclarent avoir réussi à attirer des capitaux privés en plus des instruments d'aide. Ceci est dû au fait que la demande d'une mesure de financement au titre des règles les aide à acquérir de nouvelles compétences et à mieux connaître d'autres possibilités de financement. De plus, la présence de fonds publics est un signal de la valeur des bénéficiaires de l'investissement aux investisseurs potentiels. Les éléments de preuve recueillis ne permettent pas de conclure à l'existence d'un important effet d'éviction, c'est-à-dire que les fonds public supplanteraient l'offre privée.

Toutefois, les données collectées et analysées dans le cadre de l'Étude montrent que le marché européen du capital-risque est resté fragmenté et que des différences notables existent dans l'évolution des marchés du capital-risque. En effet, plusieurs marchés souffrent non seulement d'une taille sous-critique, mais aussi d'une base d'investisseurs institutionnels qui ne sont pas encore prêts à investir dans cette classe d'actifs, ce qui suggère que les effets positifs décrits ci-dessus n'ont pas atteint tous les États membres.

Les bénéficiaires interrogés dans le cadre de l'Étude affirment que le financement obtenu grâce aux règles les a aidés à réaliser leurs innovations et à les mettre sur le marché plus rapidement qu'ils n'auraient pu le faire sans les fonds. Certains bénéficiaires soulignent que le financement obtenu grâce aux Règles leur a permis de survivre en premier lieu. Les études de cas montrent que les régimes nationaux ont permis aux bénéficiaires d'accéder à des réseaux d'investisseurs, ce qui a facilité l'obtention de nouveaux investissements publics et privés, grâce à l'expertise du premier investisseur et aux connaissances et compétences acquises lors de la demande de financement au titre des Règles. Il semble qu'il existe deux canaux par lesquels un régime a un impact sur les bénéficiaires finals:

- il leur permet d'attirer des fonds particulièrement difficiles à trouver pour les start-ups;
- il permet d'embarquer un investisseur professionnel (ainsi que son expertise et son réseau).

D'après les entretiens réalisés aux fins de l'Étude, les effets négatifs des règles semblent limités. Il y a plusieurs raisons pour lesquelles les règles pourraient avoir des effets négatifs.

Premièrement, l'accès facilité au financement peut avoir découragé les intermédiaires financiers de prendre des décisions de financement appropriées axées sur le profit. Les intermédiaires financiers interrogés à ce sujet affirment que tel n'a pas été le cas, car les bénéficiaires leur fournissent généralement des plans d'entreprise viables, solides et suffisamment élaborés. Lorsque ce n'est pas le cas (par exemple dans le cas des petites PME sans capital humain expérimenté ou spécialisé), les intermédiaires financiers offrent souvent leur aide et coopèrent avec les bénéficiaires durant le processus.

Deuxièmement, le financement fourni grâce aux Règles peut avoir remplacé un financement qui aurait de toute façon été fourni par le secteur privé. De toute évidence, il s'agit là d'un résultat indésirable, car dans de tels cas, nous ne serions pas en présence de la défaillance du marché que les règles visent à corriger. Il est rassurant de constater que la plupart des intermédiaires financiers interrogés ont déclaré qu'ils ne l'auraient pas fait et que la mesure financière était une condition nécessaire à leur participation.

Troisièmement, les règles peuvent avoir eu des effets préjudiciables sur la concurrence, étant donné qu'une entreprise qui bénéficie d'une aide d'État obtient inévitablement un avantage sur ses concurrents qui n'en bénéficient pas, ce qui fausse généralement la concurrence sur le marché en cause où elle opère. La majorité des bénéficiaires interrogés dans le cadre de l'étude confirment que, grâce à l'amélioration de leur accès au financement, ils ont acquis un avantage concurrentiel. En effet, les PME éligibles peuvent concurrencer d'autres types d'entreprises qui ne sont pas éligibles à l'aide (par exemple, les grandes entreprises ou les PME plus âgées), ce qui leur permet d'avoir accès à des ressources qui ne sont pas disponibles pour leurs concurrents. Toutefois, nous pensons que l'existence de cet effet négatif est inévitable et que ce dernier doit être relativisé avec les effets positifs que les règles peuvent avoir, en s'attaquant avant tout à la défaillance du marché et en permettant le développement des PME qui, sans ces règles, seraient financièrement limitées. Leur développement peut à son tour avoir un effet positif sur la concurrence à long terme, par exemple en permettant aux petites entreprises innovantes de concurrencer les opérateurs historiques établis, bien que cela dépende du marché spécifique sur lequel les bénéficiaires opèrent.

Connaissance, clarté et lourdeur des Règles

La majorité des intermédiaires financiers interrogés dans le cadre de l'étude déclarent qu'ils connaissent généralement les règles, bien qu'en moyenne, nous ayons constaté qu'ils connaissent beaucoup mieux le RGEC que les LDFR. Dans certains cas, tout en faisant part d'une connaissance limitée des règles européennes, les intermédiaires financiers ont exprimé un degré plus élevé de connaissance des régimes nationaux spécifiques auxquels ils sont associés ou pour lesquels ils sont sollicités. Les bénéficiaires ne connaissent généralement pas les Règles et les études de cas montrent qu'ils ne connaissent peut-être pas directement les régimes, car ils s'adressent généralement aux fonds pour rechercher un financement et ils ne savent pas nécessairement qu'ils sont soutenus par un programme d'aide d'État. Les études de cas révèlent également que le niveau de connaissance peut varier en fonction du régime, et qu'il est plus élevé pour les résimes plus anciens et mieux établis, tels que les régimes finlandais (SA.39418) et britannique (SA.49923). En ce qui concerne la clarté, un certain nombre d'intermédiaires financiers interrogés dans le cadre de l'Étude indiquent que les Règles ne sont pas suffisamment claires, malgré une amélioration du cadre actuel par rapport au précédent. Là encore, il convient de relativiser ce point car les Règles s'adressent aux États membres, alors que les bénéficiaires et les intermédiaires financiers ne s'intéresseraient qu'aux régimes nationaux mis en place dans le cadre des Règles. La question de la clarté des Règles devrait donc être adressée aux autorités nationales plutôt qu'aux bénéficiaires finaux ou aux intermédiaires financiers.

D'après les données recueillies dans les études de cas, la charge administrative imposée par les Règles n'est généralement pas perçue comme excessive par les parties prenantes. Les gestionnaires de fonds considèrent généralement que la quantité de déclarations qu'ils doivent effectuer pour ces régimes est similaire à celle qu'ils doivent faire pour leurs autres investissements. Toutefois, les entretiens avec les parties prenantes révèlent que les bénéficiaires trouvent les règles plus lourdes que les intermédiaires financiers. Cela peut être dû au manque d'expérience et de ressources humaines spécialisées du côté des bénéficiaires.

ZUSAMMENFASSUNG

Die Europäische Kommission („Kommission“) hat Lear, DIW Berlin und Sheppard Mullin („Studienteam“) mit der Durchführung einer Evaluierungsstudie („Studie“) über die EU-Beihilfevorschriften zur Erleichterung der Erschließung von KMU-Finanzierungen beauftragt. Diese Regeln umfassen die Leitlinien für staatliche Beihilfen zur Förderung von Risikofinanzierungen („Risikofinanzierungsleitlinien“ oder „RFL“) und die einschlägigen Bestimmungen der Allgemeinen Gruppenfreistellungsverordnung („AGVO“; zusammen mit den RFL „Vorschriften“).

Ziel der Studie ist es, eine Reihe von der Kommission vorgegebenen Leitfragen zu beantworten. Die Studie stützt sich dabei auf drei Hauptinformationsquellen:

- interviews mit Interessengruppen, einschließlich Finanzintermediären und Begünstigten sowie deren Verbänden, die an Beihilferegelungen im Hinblick auf die AGVO und RFL beteiligt sind (Interviews). Die Interviews zielten in der Regel auf geschlossene Antworten ab, mit denen die Haupttrends der Interessengruppen zusammengefasst werden konnten; teilweise enthielten sie auch offene Fragen, mit denen weitergehende Hintergründe untersucht werden sollten. Bei den Ergebnissen der Interviews ist zu berücksichtigen, dass die Umfrage nicht repräsentativ ist und dass die Antworten notwendigerweise subjektiv sind;
- analyse der einschlägigen Wirtschaftsliteratur und der öffentlich zugänglichen Datenquellen (Literaturanalyse und Datenerhebung). Der Literaturanalyse konzentriert sich sowohl auf akademische Studien, die sich mit den Problemen von KMU beim Zugang zu externer Finanzierung befassen, als auch auf Strategieberichte, d.h. Veröffentlichungen der Kommission und anderer relevanter Institutionen. Die öffentlich zugängliche Daten wurden verwendet, um den theoretischen Hintergrund der Literaturrecherche zu ergänzen. Die wichtigsten Datenquellen, die in der Studie verwendet werden, sind: (i) die von der Europäischen Zentralbank und der Europäischen Kommission erhobenen Umfrage über den Zugang von Unternehmen zur Finanzmitteln, (ii) die Datenbank der Europäischen Zentralbank und (iii) Investeurope. Obwohl die Literaturrecherche als Informationsquelle von Natur aus objektiver ist, gibt sie keine direkten Antworten auf die Leitfragen, sondern muss entsprechend interpretiert werden;
- fünf Fallstudien, in denen die von fünf verschiedenen Mitgliedstaaten durchgeführten Beihilferegelungen eingehend analysiert werden (Fallstudien): SA.39243 (Niederlande), SA.39418 (Finnland), SA.43581 (Italien), SA.49923 (Vereinigtes Königreich) und SA.46308 (Deutschland). Ziel der Fallstudien ist es, das Funktionieren und die Merkmale der Beihilferegelungen genau zu untersuchen, ein besseres Verständnis für die Unzufriedenheit der Beteiligten hinsichtlich bestimmter Aspekten der Vorschriften zu bekommen und direkte Erkenntnisse im Hinblick auf die Effekte der Vorschriften zu erlangen. Die Fallstudien basieren auf ausführlichen Interviews mit den entsprechenden Interessengruppen (Bewilligungsbehörden und, sofern möglich, Fondsmanager und Begünstigte) sowie auf Informationen, die im Rahmen einer Recherche gesammelt oder von den Bewilligungsbehörden zur Verfügung gestellt wurden (z.B. Beschreibungen der Regelungen, Statistiken, Evaluierungsberichte). Manche Erkenntnisse aus den Fallstudien sind von allgemeiner Relevanz, wohingegen andere sich konkret auf eine Regelung beziehen und daher nicht verallgemeinert werden können.

Das Marktversagen und der politische Kontext

Kleine und mittlere Unternehmen bilden das Rückgrat der europäischen Wirtschaft und machen 99,8% der Unternehmen in der EU aus, die außerhalb des Finanzsektors tätig sind. KMU tragen wesentlich zur Schaffung von Arbeitsplätzen und zum Wirtschaftswachstum in Europa bei: Im Jahr 2016 beschäftigten sie rund 93 Mio. Menschen (66,6% der Gesamtbeschäftigung) und erwirtschafteten 56,8% der gesamten Wertschöpfung (4.030 Mrd. EUR).[1] Aufgrund dieses signifikanten Beitrags zur Schaffung von Arbeitsplätzen und zur Wertschöpfung spielen KMU eine entscheidende Rolle für die Sicherstellung von Wirtschaftswachstum und sozialer Integration in der EU. Darüber hinaus können KMU dank ihrer größeren Flexibilität und Anpassungsfähigkeit technologische Innovationen und unternehmerisches Handeln befördern.

Trotz ihrer Wachstumsmöglichkeiten können KMU beim Zugang zu Finanzmitteln auf Schwierigkeiten stoßen. Das Ursache dieser Schwierigkeiten ist das Problem der asymmetrischen Information: Wenn das Unternehmen über seine Anlagerenditen besser informiert ist als potenzielle Investoren, kann die externe Finanzierung, falls sie überhaupt möglich ist, aufgrund der adversen Selektion und des Moral-Hazard-Problems kostspielig werden. Diese Probleme werden für junge und innovative Unternehmen noch verschärft, da sie typischerweise noch keine Erfolgsbilanz haben, die Banken zur Beurteilung der Bonität verwenden bzw. ein erhebliches Risiko bei der Bereitstellung von Sicherheiten mit sich bringen kann. Dies kann dazu führen, dass KMU unterfinanziert sind und ihr Wachstumspotenzial nicht ausschöpfen können, was sich nachteilig auf die europäische Wirtschaft auswirkt.

Das vorstehend beschriebene Marktversagen ist die Hauptursache des Einschreitens der Mitgliedstaaten bei der Bereitstellung von Risikofinanzierungen für KMU. Die Vorschriften ermöglichen solche Maßnahmen auf der Ebene der Mitgliedstaaten und sind Teil einer umfangreicheren Strategie der Kommission zur Unterstützung von KMU.

Marktversagen: Entwicklung und Merkmale

Da das Marktversagen nicht direkt gemessen werden kann, und um zu verstehen, ob sich die Marktsituation seit 2014 verbessert oder verschlechtert hat, stützt sich die Studie auf Faktoren, die hierzu in Strategieberichten und in der Wirtschaftsliteratur verwendet werden. Zu diesen Faktoren gehören unter anderem:

- der Anteil der KMU, für den der Zugang zu Finanzmitteln das dringendste Problem war. Der Zugang zu Finanzmitteln wird seit 2018 am wenigsten unter den drängendsten Problemen erwähnt, und der Prozentsatz der KMU, die den Zugang zu Finanzmitteln als ihr dringlichstes Problem identifiziert haben, ist nicht nur im Durchschnitt (EU28), sondern auch in jedem Mitgliedstaat zwischen 2014 und 2018 gesunken;[2]
- die wichtigsten limitierenden Faktoren, denen europäische KMU bei der Beschaffung von Fremdkapital ausgesetzt waren. Ein größer werdender KMU-Anteil hat berichtet, dass er beim

[1] Eurostat-Daten.

[2] Umfrage über den Zugang von Unternehmen zu Finanzmitteln (SAFE).

Zugang zu Finanzmitteln keine Hindernisse hatte, was die Feststellung bestätigt, dass der Zugang einfacher geworden ist. Auch der Prozentsatz an KMU, die fehlende Sicherheiten und hohe Zinssätze als Hauptthindernis betrachten, ist deutlich gesunken. Zudem sind unzureichende Sicherheiten, hohe Zinssätze und Rationierungen (Finanzierung nicht verfügbar) in hohem Maße mit dem Problem der asymmetrischen Information bei der Beschaffung von Fremdkapital verknüpft, so dass dieser Trend darauf hindeutet, dass das Marktversagen weniger schwerwiegend geworden ist;[3]

- das Ergebnis der Anträge europäischer KMU auf Fremdfinanzierung und der Anteil der Unternehmen, die von den Anbietern externen Kapitals (Bankkredite und Private Equity) abgelehnt werden. KMU konnten zwischen 2014 und 2018 vermehrt Zugang zu Finanzierungsmitteln erhalten, was vor allem darauf zurückzuführen ist, dass der Prozentsatz der Antragsteller, die den gesamten beantragten Betrag erhalten haben, gestiegen ist.[4]

Während sich die Situation in ganz Europa verbessert hat, bleiben bei dieser Entwicklung einige Mitgliedstaaten zurück. Die Länder mit dem höchsten Prozentsatz an KMU, für die der Zugang zu Finanzmitteln im Jahr 2018 die drängendste Frage darstellte, sind Griechenland, Zypern, Litauen, Kroatien und Italien. Der Prozentsatz der abgelehnten Anträge hat sich in Kroatien, Schweden, Dänemark, Portugal, Luxemburg, Estland, der Tschechischen Republik und Malta erhöht oder blieb konstant.

Dies zeigt, dass sich zwar die Situation für KMU beim Zugang zu Finanzmitteln in den letzten Jahren verbessert hat, aber in bestimmten Bereichen weiterhin Marktversagen besteht. Nach den SAFE-Daten sind folgende Unternehmenstypen die am stärksten von dem Marktversagen betroffenen: (i) junge Unternehmen von 0-2 Jahren und 2-5 Jahren; (ii) wachstumsstarke Unternehmen und Gazellen; und (iii) Unternehmen, die in Innovationen investieren. Die Hauptfaktoren der unterbliebenen Fremdfinanzierungsmittel für diese Unternehmen waren die hohen Kreditkosten und das Fehlen von Garantien. Diese Faktoren korrelieren, wie bereits erläutert, stark mit dem Marktversagen.

Was die Finanzinstrumente betrifft, so zeigen die SAFE-Daten, dass die ausstehenden Kredite an Unternehmen, die außerhalb des Finanzsektors stehen, seit 2010 zugenommen haben, und dass sich die Verfügbarkeit von Eigenkapital im Zeitraum von 2014 bis 2018 verbessert hat. Trotz der verbesserten Verfügbarkeit von Eigenkapital ging die Nutzung durch europäische KMU zwischen 2014 und 2018 zurück (eine Verringerung, die teilweise durch die Zunahme der Verwendung von Gewinnrücklagen ausgeglichen wurde), was darauf hindeutet, dass KMU Schwierigkeiten haben, Eigenkapitalquellen zu finden. Die hohe Abhängigkeit der europäischen KMU von der Fremdfinanzierung lässt sich unter anderem mit den niedrigen Zinsen erklären, die die Fremdfinanzierung gegenüber dem Eigenkapital bevorteilen. Die hohe Abhängigkeit der KMU von Bankfinanzierungen steigert jedoch die Bedenken im Hinblick auf ihre Vulnerabilität im Falle einer erneuten Finanzkrise.

[3] SAFE.

[4] SAFE.

Die von den befragten Finanzintermediären und Begünstigten vertretenen Positionen bestätigen dieses Bild weitgehend. 83% von ihnen geben an, dass eine Finanzierungslücke besteht, die das Angebot an Fremdfinanzierung für KMU, die über wertvolle Geschäftsmodelle verfügen und alle gängigen Investitionskriterien erfüllen, einschränken könnte. Des Weiteren erläutern sie, dass dies je nach Standort der KMU variieren kann, wobei die Peripheriestaaten am meisten davon betroffen sind. Der wichtigste Bestimmungsfaktor für die Finanzierungslücke ist die Entwicklungsphase eines Unternehmens, wobei jüngere KMU mit schwerwiegenderen Einschränkungen konfrontiert sind als ältere und etabliertere. Dennoch bestätigen die Beteiligten, dass sich die Situation im Vergleich zu 2014 verbessert hat. Was die Gründe für das Marktversagen betrifft, so weisen die befragten Finanzintermediäre darauf hin, dass die Qualität des Managements der KMU der wichtigste Faktor für die Finanzierungslücke ist, zusammen mit der damit verbundenen Fähigkeit der KMU, solide Geschäftspläne zu erstellen, gefolgt von der mangelnden Bereitschaft der KMU, die Kontrolle über das Unternehmen mit externen Investoren zu teilen.

Während die dargestellten Erkenntnisse zeigen, dass die negativen Auswirkungen der Finanzkrise gemildert wurden, sind die befragten Finanzintermediäre und Begünstigten im Grundsatz der Ansicht, dass die zugrundeliegenden Gründe für das Marktversagen struktureller und nicht nur vorübergehender Natur sind, was darauf hindeutet, dass die Finanzkrise diese Faktoren lediglich verschärft hat, und dass ihre Existenz (wenn auch nicht unbedingt ihr Ausmaß) unabhängig von der Finanzkrise ist.

Risikokapital, Eigenkapital und alternative Handelsplattformen

Die Bankfinanzierung ist, wie bereits erwähnt, die wichtigste Form der externen Finanzierung für europäische KMU, dennoch ist die Eigenkapitalfinanzierung für einige Unternehmenstypen unerlässlich. Für Technologieunternehmen, schnell wachsende Unternehmen und junge Unternehmen ohne unmittelbare Einnahmequellen, die Anfangsinvestitionen tätigen müssen, ist Eigenkapital oft die am besten geeignete Kapitalform. Um diesen Eigenkapitalbedarf zu decken, sind sowohl formelle Risikokapitalinvestoren sowie Business Angels („BAs“) und ein gut entwickelter Kapitalmarkt unerlässlich. Tatsächlich zeigen die für die Studie erhobenen und analysierten Daten, dass die Mittel und die Investitionen von privaten Beteiligungs- und Risikokapitalfonds zwischen 2014 und 2018 deutlich zugenommen haben, und dass der Anstieg hauptsächlich auf Investitionen in KMU zurückzuführen ist. Darüber hinaus ist das Finanzierungsangebot der BAs (für sämtliche Unternehmen und nicht nur für KMU) seit 2014 stetig gestiegen, was vor allem auf die größere Anzahl an Investoren zurückzuführen ist. Ein Vergleich mit der Situation in den USA zeigt jedoch, dass Europa weiterhin zurückliegt: 2018 waren die Risikokapitalinvestitionen in den USA deutlich höher als in Europa.

Die Fallstudien bestätigen eine Verbesserung der Verfügbarkeit von privaten Beteiligungs- und Risikokapitalmitteln auch im Rahmen staatlicher Maßnahmen. In Italien zum Beispiel war die Zahl der Risikokapitalfonds im Jahr 2010 sehr gering, als das Programm SA.43581 in der Region Latium genehmigt wurde. Diese Regelung wurde in Form eines öffentlichen Fonds umgesetzt, der zusammen mit privaten Ko-Investoren in KMU investiert. Im Jahr 2014, als die Anzahl der Risikokapitalfonds deutlich höher war, beschloss die Bewilligungsbehörde, einen größeren Betrag in Risikokapitalfonds und nicht in das Ko-Investmentinstrument zu investieren. Ähnliche Äußerungen gab es in Bezug auf die finnische Regelung (SA.39418).

Alternative Handelsplattformen stellen ein Instrument dar, das die Abstimmung zwischen KMU, die Eigenkapitalfinanzierungen benötigen, und institutionellen Investoren wie Risikokapitalgebern und BAs erleichtern kann. Um in alternative Handelsplattformen einzutreten, müssen Unternehmen vereinfachte Kotierungsprozesse befolgen und individuelle Informationsstandards erfüllen, die weniger streng sind als für die Haupthandelsplätze. Diese Erfordernisse sollten sowohl als Auslesefilter für vielversprechende Unternehmen dienen, die schließlich in den Haupthandelsplatz aufsteigen würden, als auch als Ausstiegsmöglichkeiten für Risikokapitalgeber und andere private Investoren, die ihre Anteile nach der ersten Gründungs- und Wachstumsphase eines neuen Unternehmens veräußern wollen. In den letzten zwei Jahren wurden sechs neue alternative Handelsplattformen in der EU eingerichtet: Progress in Slowenien, Start in der Tschechischen Republik, Progress Market in Kroatien, Roots in Griechenland, SME Growth Market BEAM in Bulgarien und Direct Market Plus in Österreich. Im Jahr 2017 entstanden zwei besonders erfolgreiche Plattformen: Scale in Deutschland mit 49 gelisteten KMU und Euronext Growth (eine paneuropäische Plattform) mit 232 gelisteten KMU. Die KMU-Segmente mit der höchsten Kapitalisierung (in absoluten Werten) sind die in Großbritannien (AIM), Spanien (MAB) und Deutschland (Scale) sowie die internationale Plattform Euronext Growth. Dies steht im Einklang mit dem Gründungsjahr dieser alternativen Handelsplattformen sowie dem Entwicklungsstand der Finanzmärkte in diesen Ländern. Im Hinblick auf die Normalisierung von alternativen Handelsplattformen durch die Kapitalisierung des Primärmarktes zeigt sich jedoch, dass die am weitesten entwickelten Plattformen diejenigen in Zypern, Slowenien und Rumänien sind, d.h. Länder, in denen der Primärmarkt im Vergleich zum EU-Durchschnitt nicht gut entwickelt ist. Dadurch wird die Effektivität alternativer Handelsplattformen bei geringerem Marktversagen deutlich, da sie es zweifellos ermöglicht haben, das niedrige Niveau der finanziellen Entwicklung des Landes zu überwinden.

Im Einklang mit dem oben Gesagten ist der Gesamteindruck bei den befragten Finanzintermediären und Verbänden von Finanzintermediären, dass die Zahl der alternativen Handelsplattformen und die Zahl der auf diesen Plattformen gelisteten KMU seit 2014 gestiegen ist. Die befragten Begünstigten verfügen jedoch nicht über umfassende Kenntnisse über alternative Handelsplattformen und deren Verfügbarkeit, um zusätzliche Finanzierungsmöglichkeiten zu erschließen. Generell werden alternative Handelsplattformen von den Interessengruppen noch nicht als besonders wichtig für die Bereitstellung von zusätzlichem Kapital für KMU angesehen. Die Finanzintermediäre argumentieren, dass es zu früh sei, die Rolle alternativer Handelsplattformen zu bewerten. Sie sind aber der Ansicht, dass sie vielversprechend sind, um KMU die Möglichkeit einer zusätzlichen Finanzierung zu geben.

Die verfügbare Wirtschaftsliteratur deutet darauf hin, dass es auch unerwünschte, negative Auswirkungen im Zusammenhang mit der Entwicklung alternativer Handelsplattformen geben kann. Die Beliebtheit alternativer Handelsplattformen für einige KMU-Sektoren, die sich durch die hohe Anzahl von Notierungen auszeichnet, könnte hauptsächlich auf die strengen Kotierungsanforderungen auf den Haupthandelsmärkten zurückzuführen sein, was die Frage aufwirft, ob alternative Handelsplattformen tatsächlich KMU erreichen oder einfach nur die wichtigsten Kapitalmärkte verdrängen können.

Relevanz der Regeln

Die geführten Interviews sowie die Fallstudien haben gezeigt, dass die Interessengruppen mit den Vorschriften im Allgemeinen zufrieden sind. Die Vorschriften gelten grundsätzlich als relevant und gut konzipiert, um das festgestellte Marktversagen zu beheben.

Die befragten Finanzintermediäre und Begünstigten sowie die für die Fallstudien befragten Bewilligungsbehörden gaben sich im Allgemeinen mit den Förderfähigkeitskriterien der Vorschriften zufrieden und erachten diese als gerechtfertigt, klar definiert und flexibel, so dass die Bewilligungsbehörden ihre Vorhaben auf der Grundlage ihrer spezifischen Ziele gestalten können. Darüber hinaus bekräftigen die für die Zwecke der Studie gesammelten und analysierten Daten den Schwerpunkt in der AGVO bzgl. junger KMU: Mit zunehmender Reife sind KMU grundsätzlich besser in der Lage, ihren Wert unter Beweis zu stellen, so dass sie ihre Qualität potenziellen Investoren besser vermitteln können. KMU, die zehn Jahre oder jünger sind, werden beim Zugang zu Finanzmitteln eher mit Problemen konfrontiert sein als reifere KMU, wobei sich das Problem für KMU, die fünf Jahre oder jünger sind, noch verschärft. Die Ergebnisse der Fallstudie des INVEST-Programms bestätigen beispielsweise, dass die Zahl der Begünstigten mit zunehmendem Alter abnimmt, was darauf hindeutet, dass mit dem Wachstum der KMU auch ihr Förderbedarf abnimmt.

Bestimmte Merkmale der Förderkriterien sind jedoch auf Kritik gestoßen, wie sie sich aus Interviews mit Interessengruppen und in den Fallstudien ergeben haben:

- die Regelung, nach der KMU nur dann für eine Finanzierung im Rahmen des AGVO in Betracht kommen, wenn sie seit ihrem ersten kommerziellen Verkauf noch keine sieben Jahre gewerblich tätig sind, während bei einer gewerblichen Tätigkeit ab sieben Jahren die RFL Anwendung finden. Die Befragten weisen darauf hin, dass es für die Unternehmen schwierig sein kann, den ersten kommerziellen Verkauf zurückzuverfolgen oder eindeutig festzustellen, welcher ihrer Verkäufe der erste war, da Testverkäufe nach der AGVO nicht berücksichtigt werden sollen. Eine Änderung dieses Kriteriums durch einen klareren Bezugspunkt (z.B. die Gründung des Unternehmens) muss mit möglichen negativen Auswirkungen abgewogen werden: Die Verwendung des Kriteriums des ersten kommerziellen Verkaufs ermöglicht es, dass KMU unabhängig von der Dauer der Produktentwicklung in den Anwendungsbereich der AGVO fallen;
- die Regelung, nach der KMU beihilfefähig sind, wenn sie eine erste Risikofinanzierung benötigen, die ausgehend von einem mit Blick auf den Eintritt in einen neuen sachlich oder räumlich relevanten Markt erstellten Geschäftsplan mehr als 50% ihres durchschnittlichen Jahresumsatzes in den vorangegangenen fünf Jahren beträgt. Im Hinblick auf diese Regelung berichteten Finanzintermediäre, dass Unklarheiten bestehen und mit den nationalen Verbänden derzeit Gespräche darüber geführt werden, wie das Verhältnis zwischen der erforderlichen Anfangsinvestition und dem Jahresumsatz berechnet und bewertet werden kann. Darüber hinaus erfordern die Konzepte des „neuen sachlich relevanter Markt“ und des „neuen räumlich relevanten Marktes“ eine Beurteilung, die Raum für willkürliche Entscheidungen durch die Bewilligungsbehörden lässt, da die Definition relevanter Märkte eine komplexe Analyse erfordert, die sowohl den Prüfumfang sowie die Kompetenzen der Bewilligungsbehörden überschreitet.

Was die mengenmäßigen Beschränkungen angeht, d.h. die von der AGVO festgelegten Grenzen und Schwellenwerte für Investitionen, so äußern einige für die Studie befragte Interessengruppen folgende Bedenken:

- nach der AGVO darf der Gesamtbetrag der Risikofinanzierungsmaßnahme 15 Mio. EUR nicht überschreiten. Während diese Einschränkung von der Mehrheit der befragten Interessengruppen als gerechtfertigt angesehen wird, haben einige Finanzintermediäre argumentiert, dass die Schwelle für KMU, die in bestimmten Wirtschaftszweigen tätig sind, in denen große Investitionen erforderlich sind (z.B. Gesundheitsunternehmen), unzureichend sein könnte. Insgesamt ergibt sich aus der Studie jedoch, dass die 15 Mio. EUR-Schwelle für die meisten Fälle geeignet ist, da die Schwellenwerte der untersuchten nationalen Regelungen oftmals weit unter denen der AGVO liegen.[5] Es ist zwar denkbar, dass der Betrag in einigen Situationen unzureichend ist, wir gehen aber davon aus, dass sektorspezifische Schwellenwerte äußerst kompliziert durchzusetzen sein dürften und Raum für Ermessensentscheidungen (und möglicherweise willkürliche Entscheidungen) lassen. Ein höherer, die 15-Mio.-Schwelle überschreitender Finanzbedarf kann daher besser über die RFL und nicht über eine Änderung der AGVO adressiert werden;
- nach der AGVO ist es erforderlich, dass sich ein privater Investor an der Investition beteiligt (allerdings mit unterschiedlichen Schwellenwerten). Einige Interessenvertreter haben in Interviews darauf hingewiesen, dass in Regionen, in denen die Finanzmärkte noch nicht sonderlich entwickelt sind, und für Unternehmen in der Gründungsphase (z.B. Polen, Rumänien und Griechenland), die Suche nach einem privaten Investor besonders schwierig sein kann. Dies ist insofern bedenklich, als das Erfordernis der privaten Beteiligung bedeuten würden, dass die Bereitstellung von Risikofinanzierungen diejenigen KMU ausschließen könnte, die am stärksten von dem Marktversagen betroffen sind, da sie auf weniger entwickelten Finanzmärkten tätig sind. Trotz dieser Kritik muss jedoch berücksichtigt werden, dass diese Vorschrift auch sicherstellt, dass die Investition nach Marktkriterien bewertet wird und dass die Vorschriften durch die Nutzung von Privatkapital eine Katalysatorrolle spielen können.

Schließlich haben sich die befragten Interessengruppen mit den in den Vorschriften verfügbaren Instrumenten zufrieden gezeigt. Die Fallstudien deuten darauf hin, dass das Spektrum der von der AGVO abgedeckten Instrumente ausreicht, um den Finanzbedarf der Begünstigten zu decken, und dass die Instrumente andere in jedem Mitgliedstaat verfügbare Unterstützungsmaßnahmen wie Regionalprogramme, subventionierte Darlehen oder Steuermaßnahmen wirksam ergänzen.

Auswirkungen der Vorschriften

Die Vorschriften können eine Vielzahl von erwünschten und unerwünschten Auswirkungen haben:

[5] Die Höchstinvestitionen nach der niederländischen Regelung belaufen sich auf 3,5 Mio. EUR, während sie im Falle Italiens 2,5 Mio. EUR betragen. Die finnische Regelung hat die AGVO-Schwelle beibehalten.

- erstens zielen die Vorschriften darauf ab, die Finanzierungslücke für von dem Marktversagen betroffene Unternehmen zu schließen, indem sie die Bereitstellung von Finanzmitteln für diese Unternehmen direkt fördern;
- zweitens zielen die Vorschriften darauf ab, die Entwicklung der Finanzmärkte zu fördern und damit indirekt das Marktversagen zu beheben;
- drittens sollen die Vorschriften durch (direkte und indirekte) Behebung des Marktversagens den Begünstigten zu Wachstum verhelfen;
- viertens können die Vorschriften negative Auswirkungen haben, indem sie z.B. Anreize für Finanzintermediäre zu einer weniger gründlichen Finanzierungsentscheidung schaffen, das private Finanzierungsangebote verdrängen oder den Wettbewerb verzerren.

Die in der Studie gesammelten Erkenntnisse deuten darauf hin, dass die Vorschriften effektiv waren und dass ihre möglichen negativen Auswirkungen begrenzt sind. Im Vergleich zu 2015 sind die ausstehenden Garantien für KMU-Kreditportfolios im Durchschnitt im Jahr 2017 gestiegen, insbesondere in Bulgarien (+94%), Ungarn (+54%) und Frankreich (+31%), was darauf hindeutet, dass Kreditgarantien effektiv das Marktversagen behoben haben, das den Zugang von KMU zu Finanzmitteln kennzeichnet.[6] Darüber hinaus gaben die meisten Befragten der Studie an, dass der Zugang zu Finanzmitteln nach den neuen Vorschriften einfacher geworden ist, vor allem weil die Zahl der Risikokapital-Unternehmen und privaten Investoren in den letzten Jahren deutlich zugenommen hat.

Den befragten Interessengruppen zufolge tragen die neuen Vorschriften zur Behebung des Marktversagens durch drei Merkmale im Vergleich zu den Vorgängerregeln bei:

- sie sind weniger streng als die Vorgängerregelungen: So wurden beispielsweise die privaten Beteiligungsquoten gesenkt;
- sie sind flexibler, da sie viele Risikofinanzierungsinstrumente umfassen und grundsätzlich mehr und bessere Möglichkeiten für Unternehmen bieten, Zugang zu Finanzmitteln zu erhalten;
- bestimmte Grenzen wurden erweitert, insbesondere die für die Gesamthöhe der Investitionen, so dass die Investitionen jetzt deutlicher sichtbar sind.

Die Untersuchungen im Rahmen der Fallstudien zeigen, dass diese Regelungen effektiv waren, um den Risikokapitalmarkt in den Ländern, in denen sie umgesetzt wurden, zu stimulieren. Darüber hinaus geben 83% der befragten Begünstigten an, dass es ihnen gelungen ist, neben den Beihilfeinstrumenten auch privates Kapital anzuziehen, da sie durch die Erlangung von Finanzierungsmaßnahme nach den Vorschriften neues Fachwissen erworben und mehr Bewusstsein für andere mögliche Finanzierungsmöglichkeiten hinzugewonnen haben. Zudem impliziert das Vorhandensein öffentlicher Gelder für potenzielle Investoren einen gewissen Wert des investierten Unternehmens. Nach den gesammelten Erkenntnisse konnte dagegen kein signifikanter Verdrängungseffekt festgestellt werden, wonach öffentliche Gelder die privaten Investitionen ersetzen.

[6] EIF Small Business Finance Ausblick, Juni 2016-2018.

Die für die Studie erhobenen und analysierten Daten zeigen jedoch, dass der europäische Risikokapitalmarkt fragmentiert geblieben ist und dass erhebliche Unterschiede in der Entwicklung der Risikokapitalmärkte bestehen. Tatsächlich leiden mehrere Märkte nicht nur unter einer unterkritischen Größe, sondern auch unter einer institutionellen Investorenbasis, die noch nicht bereit ist, in diese Anlageklasse zu investieren, was darauf hindeutet, dass die oben beschriebenen positiven Effekte sich nicht auf alle Mitgliedstaaten erstrecken.

Die befragten Begünstigten geben an, dass die im Rahmen der Vorschriften erhaltenen Finanzmittel ihnen geholfen haben, ihre Innovationen zu realisieren und schneller auf den Markt zu bringen, als sie es ohne die Mittel hätten tun können. Einige Begünstigte weisen darauf hin, dass die im Rahmen der Vorschriften erhaltenen Finanzmittel es ihnen erst ermöglichten, überhaupt auf dem Markt zu bestehen. Die Fallstudien legen dar, dass die nationalen Regelungen den Begünstigten den Zugang zu den Investoren ermöglicht haben, was es dank des Fachwissens des ersten Investors und der entwickelten Expertise und Fähigkeiten, die bei der Beantragung der Finanzierung über die Vorschriften erworben wurden, einfacher machte, weitere öffentliche und private Investitionen zu erhalten. Es scheint zwei Wege zu geben, auf denen sich eine Regelung auf die Begünstigten auswirkt:

- es ermöglicht ihnen, Mittel anzuziehen, die für Start-ups besonders schwer zu finden sind;
- es ermöglicht, einen professionellen Investor (zusammen mit seiner Expertise und seinem Netzwerk) für sich zu gewinnen.

Ausgehend von den durchgeführten Interviews scheinen die negativen Auswirkungen der Vorschriften begrenzt zu sein. Es gibt mehrere Gründe, warum die Vorschriften negative Auswirkungen haben können. Erstens kann der erleichterte Zugang zu Finanzmitteln die Finanzintermediäre davon abgehalten haben, angemessene, gewinnorientierte Finanzierungsentscheidungen zu treffen. Die zu diesem Thema befragten Finanzintermediäre erklären, dass dies nicht der Fall ist, da die Begünstigten ihnen in der Regel solide und ausreichend ausgearbeitete tragfähige Geschäftspläne vorlegen. Wenn dies nicht der Fall ist (z.B. bei kleinen KMU ohne erfahrene oder spezialisierte Mitarbeiter), bieten die Finanzintermediäre oft ihre Hilfe an und arbeiten während des Prozesses mit den Begünstigten zusammen.

Zweitens kann die aufgrund der Vorschriften bereitgestellte Finanzierung die Finanzierung ersetzt haben, die ohnehin privat erfolgt wäre. Dieses Ergebnis ist unerwünscht, da in diesen Fällen kein Marktversagen besteht, das mit den Vorschriften adressiert werden soll. Die meisten der befragten Finanzintermediäre erklärten jedoch, dass derartige Verhaltensweisen nicht stattfanden und dass die durch die Vorschriften bereitgesellte Finanzierungsmaßnahme eine notwendige Voraussetzung für ihre Beteiligung sei.

Drittens können die Vorschriften nachteilige Auswirkungen auf den Wettbewerb gehabt haben, da ein Unternehmen, das staatliche Unterstützung erhält, unweigerlich einen Vorteil gegenüber seinen Wettbewerbern erlangt, die dies nicht tun. Dies wird im Allgemeinen den Wettbewerb auf dem relevanten Markt, auf dem dieses Unternehmen tätig ist, verzerren. Die Mehrheit der für die Studie befragten Begünstigten bestätigt, dass sie durch den verbesserten Zugang zu Finanzmitteln einen Wettbewerbsvorteil erlangt hat. Tatsächlich können förderfähige KMU mit anderen Arten von Unternehmen konkurrieren, die nicht förderfähig sind (z.B. größere Unternehmen oder ältere KMU), was ihnen den Zugang zu Ressourcen ermöglicht, die ihren Wettbewerbern nicht zur

Verfügung stehen. Wir sind jedoch der Ansicht, dass das Vorhandensein dieses negativen Effekts unvermeidlich ist und mit den positiven Effekten, die die Vorschriften haben können, in erster Linie hinsichtlich des Marktversagens und der Entwicklung von KMU, die ohne die Vorschriften finanziell eingeschränkt wären, ausgeglichen wird. Dies kann sich wiederum langfristig positiv auf den Wettbewerb auswirken, indem beispielsweise kleinen und innovativen Unternehmen ermöglicht wird, mit etablierten Unternehmen zu konkurrieren. Dies hängt jedoch von dem spezifischen Markt ab, auf dem die Begünstigten tätig sind.

Bewusstsein, Klarheit und Aufwand aufgrund der Vorschriften

Die Mehrheit der befragten Finanzintermediäre gibt an, dass sie die Vorschriften grundsätzlich kennt, wobei wir auch festgestellt haben, dass Finanzintermediäre mit den AGVO deutlich besser vertraut sind als mit den RFL. In einigen Fällen haben die Finanzintermediäre zwar wenig Kenntnisse hinsichtlich der europäischen Vorschriften, dagegen sind ihnen die spezifischen nationalen Regeln bekannt, an denen sie beteiligt sind oder für die sie sich bewerben. Die Begünstigten kennen die Vorschriften in der Regel nicht. Die Fallstudien zeigen, dass das daran liegen kann, dass sie sich für die Finanzierungsmöglichkeiten typischerweise an Fonds wenden, und nicht unbedingt wissen, dass diese von einem staatlichen Beihilfeprogramm unterstützt werden.

Die Fallstudien zeigen auch, dass der Bewusstseinsgrad je nach Regelung variieren kann und dass dieser bei älteren und etablierteren Regelungen, wie der finnischen (SA.39418) und der britischen (SA.49923) Regelung, höher ist. Im Hinblick auf die Klarheit der Vorschriften stellen eine Reihe von befragten Finanzintermediären fest, dass die aktuellen Vorschriften trotz einer Verbesserung im Vergleich zu den Vorgängerregeln nicht klar genug sind. Auch dies muss relativiert werden, da die Vorschriften an die Mitgliedstaaten gerichtet sind, während die Begünstigten und Finanzintermediäre nur an Regeln hinsichtlich der nationalen Regelungen interessiert sind. Die Frage der Klarheit der Regeln sollte daher eher an die nationalen Behörden als an Begünstigte oder Finanzintermediäre gerichtet werden.

Nach den in den Fallstudien gesammelten Erkenntnissen wird der Aufwand durch die Vorschriften von den Beteiligten im Allgemeinen nicht als übermäßig groß empfunden. Die Fondsmanager sind grundsätzlich der Ansicht, dass der Umfang der Berichterstattung, den sie für diese Regelungen zu leisten haben, demjenigen für andere Investitionen entspricht. Die Interviews der Beteiligten zeigen jedoch, dass die Begünstigten die Vorschriften für belastender halten als die Finanzintermediäre. Dies kann möglicherweise auch auf die mangelnde Erfahrung und die fehlenden spezialisierten Mitarbeiter auf Seiten der Begünstigten zurückzuführen sein.

1 Introduction

The European Commission (*infra* "Commission") appointed Lear, DIW Berlin and Sheppard Mullin ("Study Team") to carry out an Evaluation support study ("Study") on the EU rules of the State aid for access to finance for SMEs framework applicable in 2014-2020 (Communication of the Commission – Guidelines on State aid to promote risk finance investments, "Risk Finance Guidelines" or "RFG") and to the provisions applicable to aid for access to finance for SMEs of the Commission Regulation (EU) 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (General Block Exemption Regulation, "GBER"; collectively with the RFG, "Rules"). The Study is developed within the Framework contract COMP/2017/01 for the provision of support studies for evaluations and impact assessments in the area of State aid policy signed between the Commission and the consortium on 24 May 2018. The objective is to provide answers to a set of guiding questions defined by the Commission. This document represents the Final Report for the Study.

1.1 Methodology and sources of evidence

As per the technical specifications, the Study relies on three main sources of evidence:

- interviews with stakeholders, including financial intermediaries and beneficiaries involved in GBER and RFG schemes, as well as associations of financial intermediaries and SMEs (interviews);
- a review of the relevant economic literature and of publicly available data sources (literature review and data collection);
- five case studies analysing in depth five aid schemes implemented by five different Member States (case studies).

We have carried out telephone interviews with financial intermediaries and beneficiaries involved in schemes designed under the Rules, as well as associations of SMEs and financial intermediaries. Interviews were based on the interview guidelines reported in Annex E (for financial intermediaries) and Annex F (for beneficiaries). The interview guidelines were structured so that, for most questions, interviewees would provide:

- a closed answer, typically in the form of a Yes/No answer, or a rate from 1 to 5, or in a choice between pre-set options;
- an open answer where the interviewee could elaborate on the answer given, explaining the underlying reasons for the same.

In discussing results from the interviews, we typically report the closed answers as percentages or average rate given, aggregating all relevant responses; aggregated responses to the questionnaires are shown in Annex D. Further, we analyse the open answers to provide insights on the reasons for the answers given. Since the set of interviewees is not statistically representative, aggregated responses should be interpreted only as the prevailing opinion among stakeholders consulted. Another drawback of this source of evidence is that the opinions expressed and gathered are necessarily subjective.

Further evidence has been provided by the review of the relevant economic literature and the analysis of publicly available data sources. The literature review has focused on both academic studies addressing the problems of SMEs in accessing external financing, and reports, i.e. past works by the Commission and other relevant institutions. The academic literature (see Annex A) has provided a helpful theoretical background with respect to the existence of a market failure in relation to SMEs' access to finance; reports have been helpful in the definition of the types of analyses to perform and sources to exploit. Both sources have been crucial in understanding the problems faced by European SMEs in the finance market, the evolution of the European VC market, and the emerging role of alternative trading platforms for SMEs.

Publicly available data have been used to complement the theoretical background provided by the literature review. In order to analyse the extent and evolution of the market failure, we mainly exploited the following sources of data:

- the Survey on Access to Finance of Enterprises, developed by the European Central Bank and the Commission, which provides insightful information about SMEs' perception of financing difficulties in Europe;
- the European Central Bank Data Warehouse, which provides information about outstanding loans to non-financial corporations;
- Investeurope data about the European VC Market.

The study of the current literature and the analysis of publicly available data have the advantage of being highly reliable. The data sources we relied on are based on large representative samples of European SMEs. The academic studies used to build the theoretical background followed a peer-review process ensuring the high quality of their findings. The main drawback of these sources, however, is that they do not directly answer the guiding questions for the Study, but need to be interpreted in that context.

The third source of evidence is based on the analysis of five national or regional schemes set up by Member States, listed below:

- SA.39243 – SEED Capital regeling (Netherlands) (Annex B.1);
- SA.39418 – Tekes Pääomasijoitus Oy:n riskirahoitusohjelma (Finland) (Annex B.2);
- SA.43581 – Fondo Capitale di Rischio POR FESR Lazio (Italy) (Annex B.3);
- SA.49923 – Enterprise Investment Scheme and Venture Capital Trust (United Kingdom) (Annex B.4);
- SA.46308 – INVEST (Germany) (Annex B.5).

These schemes were selected according to several criteria. First of all, two of them are notified schemes (SA.49923 and SA.46308), whereas the remainder fall under the GBER. They should therefore allow us to draw implications on the full set of Rules.

Secondly, they entail different financial instruments: tax incentives for the British scheme, grants for the German scheme, loans for the Dutch scheme, and investments in funds for the Italian and the Finnish scheme. This diversity reflects the plurality of instruments encompassed by Rules and is useful to make comparisons on the functioning and effectiveness of different financial instruments.

Four schemes are amendments to previously existing schemes, while one of them (the Finnish scheme) was entirely designed under the new Rules. The analysis of the amendments that took place after 2014 allows us to understand how the design of the different schemes was shaped to respond to the changes in the Rules.

The objectives of case studies are threefold. First, they should allow to take a deeper look into the functioning and the characteristics of specific State aid schemes, which can be informative of some more general features of the Rules. Secondly, case studies allow a better understanding of the reasons behind stakeholders' dissatisfaction with certain provisions of the Rules, which emerged from interviews. Finally, case studies should provide direct evidence of the improved ability of beneficiaries to get access to large-scale funds and to attract private capital, and more generally to develop their products or services in the market.

From a methodological viewpoint, case studies are based on interviews with the relevant granting authorities and, where possible, with other stakeholders, such as fund managers and final beneficiaries. Moreover, additional evidence was collected through desk research or provided by the granting authorities (e.g. descriptions of the programs, statistics, evaluation reports).

Case studies have the advantage of analysing in detail the features of specific schemes and of providing a deep understanding of their features and functioning. They allow therefore to make a thorough assessment of the main issues that stakeholders raise about each scheme and of the underlying Rules, as well as of their impact on financial intermediaries and beneficiaries. However, while some of the insights emerging from case studies can be relevant in general, others are instead specific to each scheme and cannot therefore be generalised.

As set out above, each of the three methodologies has its own strengths and drawbacks. For this reason, where possible, our conclusions are informed by a triangulation of the evidence collected through each methodology.

1.2 Breakdown of interviewees

The Study Team carried out a total of 85 interviews[7], broken down as follows:

- 38 financial intermediaries;
- 8 associations of financial intermediaries;
- 9 associations of beneficiaries;
- 30 beneficiaries;
- 7 among granting authorities and ministries.

The set of interviewees excluding granting authorities and ministries covers most of the Member States, as shown in Table 1.1.

[7] These figures include four questionnaires which the European Banking Federation received from four of its members (three financial intermediaries and one association of financial intermediaries) that were not directly interviewed by the Study Team, but rather provided their answers in writing.

Table 1.1: Number of interviewees by Member State

Member state	Number of interviewees
Austria	5
Belgium	10
Bulgaria	2
Croatia	2
Denmark	2
Estonia	1
Finland	8
France	2
Germany	16
Greece	5
Ireland	3
Italy	5
Latvia	1
Lithuania	2
Luxemburg	1
Malta	1
Netherlands	9
Portugal	1
Romania	1
Slovenia	2
Sweden	1
United Kingdom	5
Total	**85**

Source: Study Team

The number of interviewees may vary depending on the question, as some of them were only asked to beneficiaries or to financial intermediaries. Moreover, some interviewees did not respond to certain sections of the questionnaire as they were not familiar with the topic addressed therein. Therefore, for each question, we report the number of respondents.

1.3 Structure of the report

The remainder of this report is organised as follows:

- section 2 describes the market failure that may prevent SMEs from accessing finance as well as the policies devised by the Commission to address it;
- section 3 outlines how the market failure has evolved over time and what its main characteristics are today;
- section 4 assesses the situation regarding VC, PE and alternative trading platforms;
- section 5 addresses the question of the relevance of the existing Rules;
- section 6 discusses the effects of the existing Rules;
- section 7 discusses the awareness and clarity of the existing Rules;
- section 8 includes replies to the guiding questions for the Study, with cross-references to the relevant sections of the report where more details can be found.

2 THE MARKET FAILURE AND THE POLICY CONTEXT

In this section, we discuss the role played by SMEs in Europe and their financing needs (section 2.1), and we report the evidence provided by the economic literature about the existence of a market failure regarding the ability of SMEs to access finance (section 2.2).

2.1 The role of SMEs in Europe and their financing needs

According to the Commission Recommendation of 6 May 2003, “the category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million” (§ 1). Within the SME category, “a small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million” (§ 2), whereas “a microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/o annual balance sheet total does not exceed EUR 2 million” (§ 3).

SMEs are the backbone of the European economy, representing 99.8% of non-financial enterprises in the European Union (“EU”) (Table 2.1). SMEs contribute significantly to European job creation and economic growth: in 2016, they employed around 93 mln people (66.6% of total employment) and generated 56.8% of total added value (EUR 4,030 bln). Among SMEs, micro enterprises are by far the largest category, accounting for 93% of all non-financial enterprises, one-third of persons employed and 20.9% of added value.

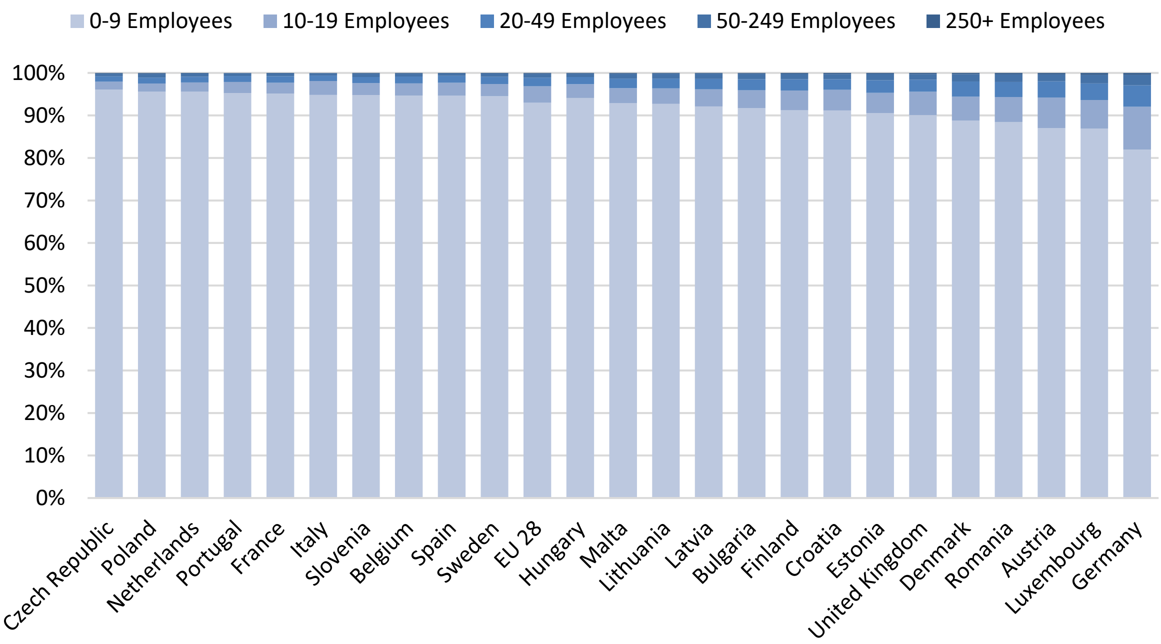
Table 2.1: Number, employment and value added of European SMEs (2016)

Metric	Micro	Small	Medium	SMEs
Number of enterprises (thousands)	22,232	1,392	225	23,849
Number of enterprises (% of non-financial business sector)	93.0%	5.8%	0.9%	99.8%
Number of persons employed (thousands)	41,669	27,982	23,398	93,049
Number of persons employed (% of non-financial business sector)	29.8%	20.0%	16.7%	66.6%
Value added (trillions EUR)	1,482	1,260	1,288	4,030
Value added (% of non-financial business sector)	20.9%	17.8%	18.2%	56.8%

Source: Study Team based on Eurostat. Notes: EU28

As shown in Figure 2.1, according to Eurostat data, SMEs are particularly widespread in Italy, Portugal and Spain, where large firms represent less than 0.01% of the non-financial business sector. Micro-enterprises (0-9 employees) are more common in Czech Republic, Poland and Netherlands, where they account for more than 95.5%. The contribution of SMEs to job creation and value added partially reflects these data. SMEs account for more than three quarters of total employment and more than two thirds of total value added in Bulgaria, Cyprus, Estonia, Greece, Italy, Latvia, Lithuania, Malta, and Portugal.[8] Figure C.1and Figure C.2 in Annex C show, respectively, the relevance of SMEs in the EU in terms of turnover and value added.

Figure 2.1: Relevance of SMEs in the EU (SMEs as % of the number of non-financial enterprises, 2016)



Source: Study Team based on Eurostat. Notes: EU28

The strong contribution to job creation and value added make SMEs crucial to ensuring economic growth and social integration in the EU. Moreover, thanks to their higher flexibility and adaptability, SMEs can foster technological innovation and entrepreneurship (Acs and Audretsch, 1988; Hall et al., 2009). These elements are at the basis of the productivity growth of many successful sectors, where more efficient and technologically advanced companies grow at the expense of less efficient ones (Klette and Kortum, 2004; Parisi et al., 2006; Hall et al., 2008).

Among SMEs, important contributors to job and value creation are high-growth enterprises. According to the EU definition, these firms are defined as enterprises with at least 10 employees in the beginning of their growth and having average annualised growth in number of employees greater than 10% per annum over a three-year period. A subsample of high-growth firms is represented by gazelles, high-growth enterprises that are up to five years old with average annualized growth greater than twenty percent per annum over a three-year period, and with ten or more employees at the beginning of the observation period. High-growth firms and gazelles may be found in all economic sectors, but the share of these firms is particularly high for innovation-intensive industries.

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[8] Eurostat Structural Business Statistics (SBS) database.

In order to fulfil their potential, SMEs, and in particular high-growth firms, need the necessary funding. Traditionally, SMEs are financed by internal sources, either from the business owner(s) or through retained earnings. However, most SMEs also need external resources both for investment purposes, at all development stages, and for working capital to maintain their growth potential.[9] Among the sources of external financing, bank loans are still the most important for European SMEs, whereas risk capital finances only a small fraction of businesses (European Investment Fund, 2018). The weakness of the EU financial markets may be particularly relevant for those SMEs which lack strong track records and leverageable collateral. Fast growing firms, young and innovative businesses, are difficult for banks to evaluate, and may be better financed by risk capital providers.

In this report we will refer to three main development and funding stages:

- the seed stage, where funding is provided before the investee company has started mass production or distribution with the aim to complete research, product definition, or product design;
- the start-up stage, where funding is provided to companies once the product or service is fully developed, to start mass production or distribution and to cover initial marketing. Companies at this stage may be in the process of being set up or may have been in business for a short time, but they have not sold their product commercially yet. In this phase, funds are mostly used to cover capital expenditures and initial working capital;
- the early expansion and growth stage, where external financing is provided to relatively mature companies that are looking for capital to expand and improve operations or enter new markets to accelerate the growth of the business.

The stakeholders interviewed for the study were asked what SMEs' financing needs are in their seed, start-up, early expansion and growth stages, and whether financing is sought mainly for investment purposes or working capital or both. Financial intermediaries generally report that working capital is more needed than investment throughout the life cycle of the SMEs, whereas beneficiaries, on the contrary, assert that investments are more important than working capital during the early stages of the life cycle (seed capital and start-up phase), while during the growth stage working capital and investments have roughly the same importance (Figure D.14 in Annex D).[10] However, these needs depend on the business and the sector of the SME: for instance, beneficiaries belonging to the IT sector need less initial investments than companies in the manufacturing sector, which on the contrary require investments from the very beginning in order to start the production.

[9] Investments in working capital are short-term investments aimed at covering unexpected and planned expenses, short-term duties and obligations.

[10] Being 100 the overall importance, financial intermediaries divided it as follow: 56% working capital/44% investments for seed capital, 53%/47% during the start-up phase, and 57%/43% during the growth stage. Beneficiaries divided it as follows: 44%/56% for seed capital, 46%/54% for start-up, 51%/49% for growth stage.

2.2 The market failure and the need for public intervention

Despite their growth opportunities, SMEs may face difficulties in obtaining access to finance. At the heart of these difficulties lies a problem of asymmetric information. If the firm has better information about its investment returns than potential investors, external finance may be expensive, if available at all, because of adverse selection and moral hazard problems (Jaffee and Russel, 1976; Stiglitz and Weiss, 1981; Carpenter and Petersen, 2002; Crawford et al., 2018). These problems are magnified for young and innovative firms. Young companies lack the operational track record that banks usually employ to assess their creditworthiness (Hyytinen and Pajarinen, 2007; Kirschenmann, 2016); innovative firms, on their side, are not able to provide collateral guarantees to cover their high-risk borrowing, because their asset-side is usually made of intangible assets not easy to quantify by financial intermediaries (Guiso, 1998; Mancusi and Vezzulli, 2014).

In both cases, the screening activity to be undertaken by investors may not be worth the investment, because the screening costs are too high compared to the investment value. Hence, information asymmetries act as a deterrent for external investors and weaken SMEs' ability to gain access to finance.

The market failure described above is the main reason for Member States intervening to support the provision of risk finance to SMEs. If properly targeted, State aid can be an effective means to alleviate asymmetric information problems and to leverage private capital. The existence of a financing gap for European SMEs is the main motivation for the adoption of the Rules.

More specifically, with the GBER the Commission has identified conditions under which certain aid measures granted by Member States are compatible with the internal market, and therefore not subject to prior notification to and approval by the Commission. For those types of aid that are not covered by the GBER, the Commission has issued the RFG to provide guidance to Member States on how it will carry out a substantive compatibility assessment under Article 107(3) TFEU and how to design risk finance measures in such a way that the measures do not constitute State aid under Article 107(1) TFEU. The current State aid control framework has been designed to target the market failure and thereby to complement, not replace, private spending, and in such way to limit distortions to competition and keep the internal market competitive and open.

These two policies are part of a larger policy effort aimed at sustaining SMEs competitiveness in EU markets. Two other policies that address similar needs are the COSME 2014-2020 (Competitiveness of Enterprises and Small and Medium-Sized Enterprises) programme and the SMEs' instruments included in Horizon 2020. COSME 2014-2020 makes it easier for SMEs to access financial instruments (guarantees, loans, and equity capitals) during all phases of their life cycle (creation, expansion, or business transfer). It supports the internationalisation of SMEs and their access to markets, favouring competitiveness and supporting entrepreneurs by strengthening their entrepreneurship education through mentoring and guidance. The SMEs' instrument of the Horizon 2020 Framework Programme for Research and Innovation, on the other hand, encourages SMEs to put forward their innovative ideas with an EU dimension that cannot find financing on the market due to the high risk they entail.

The enduring effects of the 2009 economic and financial crisis may have had a non-negligible impact on the effects of the EU policy intervention. SMEs have suffered greatly from the crisis, because of their over-reliance on debt and with bank loans accounting for an important part of their financing sources. The contraction of funding available from banks has increased the difficulty for SMEs to access financing, whereas the VC industry has arguably not been able to substitute the traditional bank debt.

3 MARKET FAILURE: EVOLUTION AND CHARACTERISTICS

The provision of risk finance to SMEs through public support schemes should be contingent upon the existence of the market failure described in section 2.2. Empirical research has widely suggested that it is more difficult for SMEs to access finance, especially when they are young and/or innovative (Freel, 2007; Schneider and Veugelers, 2010; Mina et al., 2013; Lee et al., 2015).[11] Innovative firms tend to have riskier business models, which are important to create new products and markets but are also more difficult for banks to evaluate. Like all young businesses, they are also strongly reliant on intangible assets, rather than physical collateral. Intangibles are difficult to be evaluated by external investors, as they are context specific and thus rarely represent leverageable collateral in bank lending. Several studies have found evidence of a structural problem in the supply of finance to innovative European firms. Canepa and Stoneman (2007) for the UK, and Czarnitzki (2006) for Germany indicate that finance is likely to be a factor hampering innovation for SMEs and firms operating in high technology sectors.[12] Freel (2007) shows that small firms investing in R&D expenditure applying for finance find it harder to successfully obtain loans than others, based on a sample of British SMEs. Mina et al. (2013) and Revest and Sapio (2012) suggest that European companies investing in new technologies are less likely to obtain finance than other firms.[13] Finally, Lee et al. (2015), who examine access to finance of innovative firms (defined as firms introducing a new product) during and after the financial crisis in the UK, find that they are more likely to be turned down for finance than other firms, and this worsened significantly during the crisis.

Starting from the evidence discussed above, in this section we analyse whether and to what extent the market failure identified in the 2014 Impact assessment[14] has improved or worsened, whether the negative effects in terms of SMEs' access to finance brought about by the financial crisis have been overcome, what the main characteristics of the market failure are and the underlying reasons behind its existence.

It is almost impossible to measure the market failure directly, based on hard data. Thus, in what follows, we will rely on some proxies of market failure generally employed by the economic literature, built on data taken from the Survey on Access to Finance of Enterprises (SAFE) developed by the European Central Bank and the Commission. First, we analyse the share of SMEs for which access to finance has been the most pressing problem until 2018. Although this

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[11] In the Survey on Access to Finance of Enterprises (SAFE), innovative firms are defined as "firms that report having used financing in the past six months for developing and launching new products or services".

[12] Canepa and Stoneman (2007) consider a wide class of innovation investments, including product innovation and process innovation. Czarnitzki (2006) defines as innovative firms those investing in R&D.

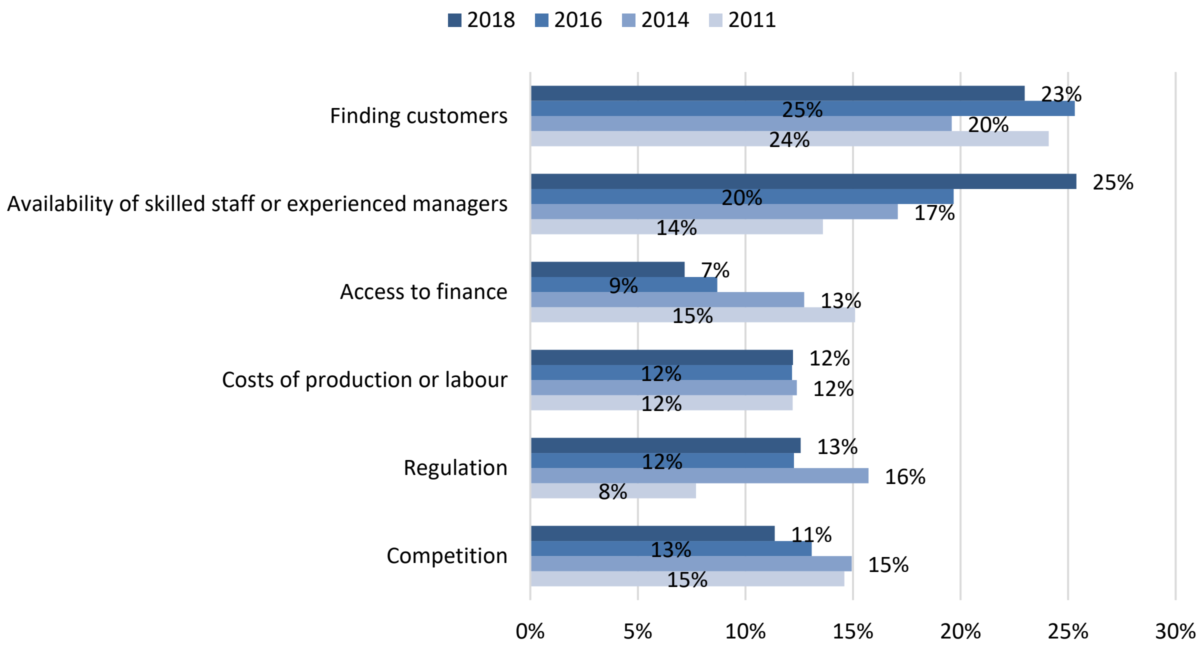
[13] Mina et al. (2013) define the innovation activity as: expenditure in R&D, product innovation, process innovation and organisational innovation. Revest and Sapio (2012) define as innovative those small businesses whose products or services largely depend on the application of scientific and technological knowledge.

[14] European Commission (2014). "Impact Assessment accompanying the *Communication from the Commission on State aid to promote risk finance investments*", Commission Staff Working Document.

measure is based on firms' perceptions, several reports relate it to the actual gap in the finance market (see, e.g. EIF, 2018). To better quantify the extent of the finance gap, we then examine the outcome of European SMEs' external financing applications and the share of firms being rejected by the providers of external funds, as done in some economic studies (see for instance Ferri and Murro, 2015; Bolton et al., 2016; Ferri et al., 2019). We then focus on two main sources of external financing: bank lending and equity capital. In particular, using data from the European Central Bank Data Warehouse, we first present the evolution of outstanding loans to non-financial corporation from 2010 to 2018. Then, we present how the financial structure of European SMEs has changed, by looking at the availability and use of equity capital. Finally, to understand the main causes of the market failure, we examine the main limiting factors proposed by European SMEs in obtaining external financing. In order to better interpret our measures of market failure, we analyse them for different types of SMEs. As young and innovative firms are more likely to be subject to the market failure, we expect our proxies to be exacerbated when we look at these types of companies.

Figure 3.1 represents the views expressed by a sample of European SMEs involved in the SAFE as to the most pressing problem they faced between 2011 and 2018. As of 2018, access to finance is the least mentioned among pressing problems, with SMEs significantly more concerned about finding customers and experienced staff. Further, the trend is remarkably decreasing: access to finance was the most pressing problems for 15% of SMEs in 2011 (ranking second together with competition), but this percentage has consistently decreased over time to reach 7% in 2018. The more pronounced decrease took place between 2014 and 2016 (from 13% to 9%). Regulation and the availability of skilled staff and experienced managers are increasingly perceived as pressing problems by SMEs across Europe.

Figure 3.1: European SMEs' most pressing problems

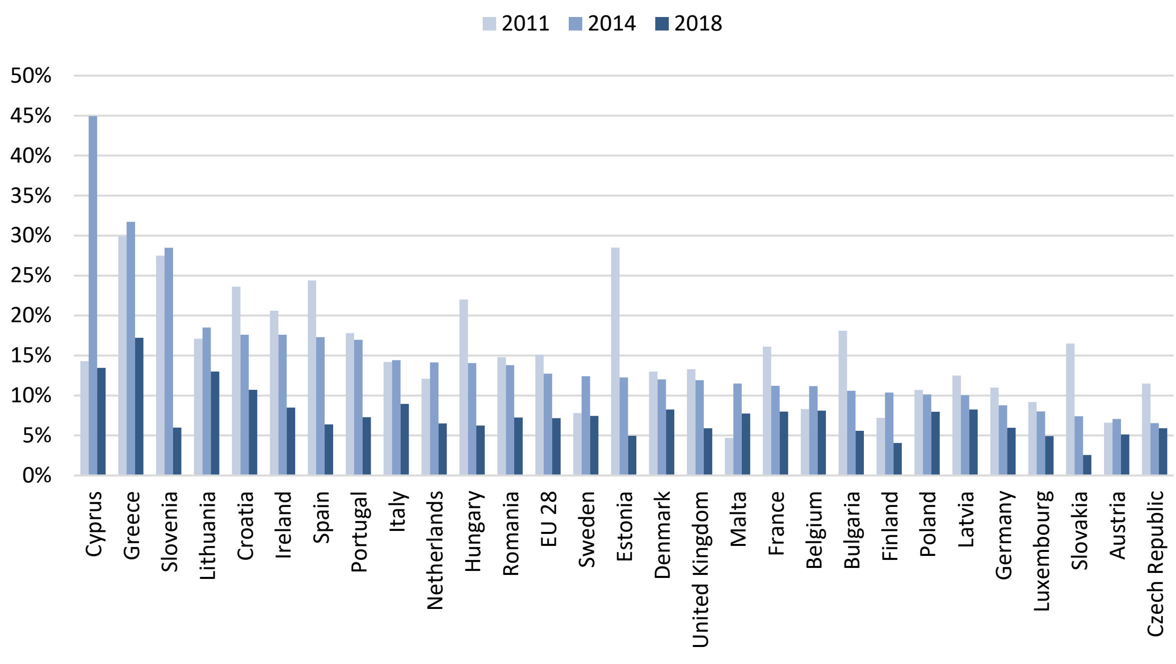


Source: Study Team based on Commission/ECB SAFE. Notes: EU28

Figure 3.2, by relying on the same SAFE data, shows the percentage of European SMEs for which access to finance is the most pressing problem, broken down by Member State, between 2011 and 2018. The percentage of SMEs that have identified access to finance as their most pressing problem has decreased not only on average (EU28) but also in all Member States between 2014 and 2018. In absolute terms, the Member States with the highest percentage of SMEs for which access to finance represents the most significant concern in 2018 are Greece (17%), Cyprus (13%), Lithuania (13%), Croatia (11%), and Italy (9%).

Further, the percentage of SMEs that have identified access to finance as their most pressing problem is significantly lower in 2018 in the countries where access to finance was a very pressing problem in 2011 and in 2014, suggesting that there has been a greater improvement exactly where it was more needed. This is the case, for instance, of Cyprus, where in 2014 almost 45% of the SMEs faced problems in access to finance, but in 2018 this percentage decreased to 13%. Similarly, in Greece this problem affected around 30% of SMEs in 2011 and 32% of SMEs in 2014: in 2018, the percentage has dropped to 17%. Romania represents another positive example of how access to finance has improved along the years: if in 2011 and 2014 27.5% and 28.4% respectively of the SMEs faced problems in accessing finance, only 6% faced the same problem in 2018. These are only a few examples of the positive trend that has benefited all Member States over the past few years.

Figure 3.2: Percentage of SMEs for which access to finance is the most pressing problem by country



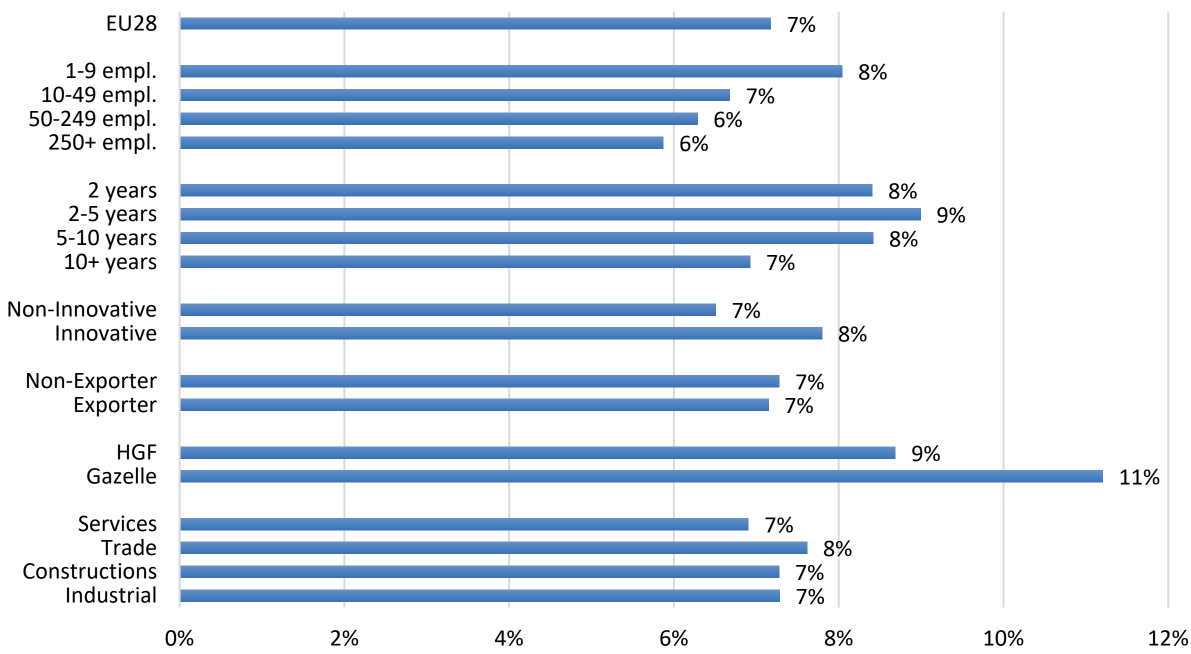
Source: Study Team based on Commission/ECB SAFE. Notes: EU28

Figure 3.3 shows the percentage of SMEs for which access to finance is the most pressing problem, broken down by firm type (again based on SAFE data). There are few and relatively minor differences across types of firms in the extent to which they perceive access to credit as their most pressing problem:

- smaller and younger SMEs seem to have more trouble getting access to finance than larger and older ones;
- accessing finance may be more difficult for gazelles.

The sector of economic activity does not appear to drive significant differences in the ability of SMEs to obtain access to finance.

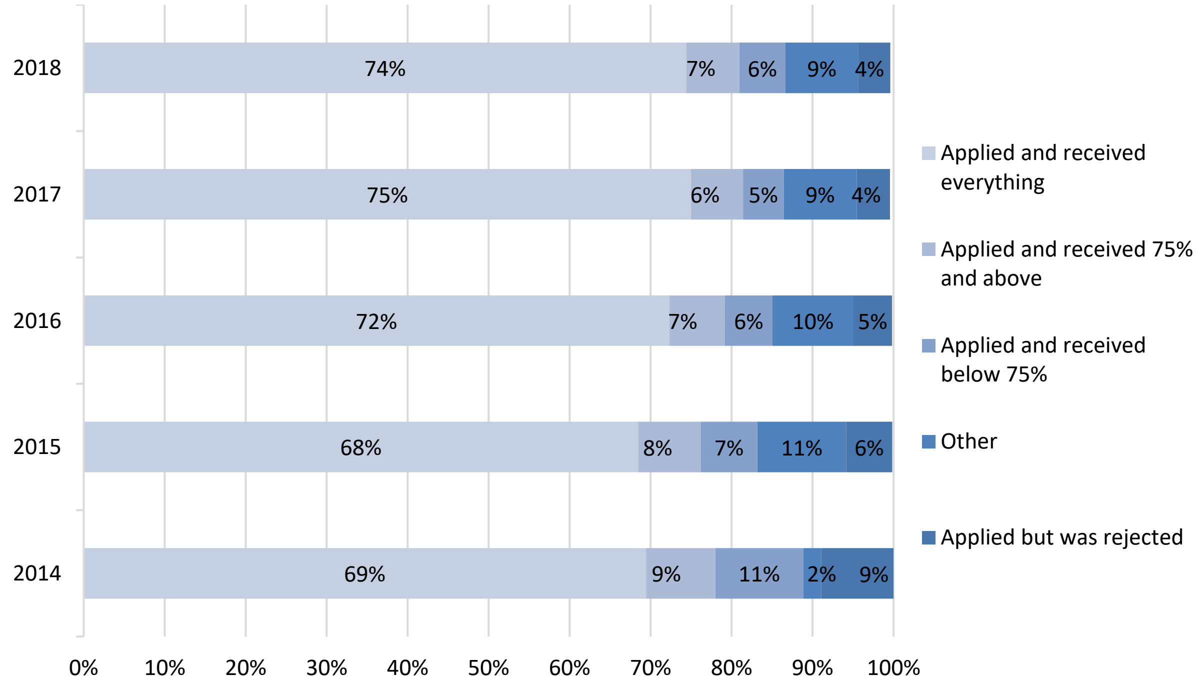
Figure 3.3: Percentage of SMEs for which access to finance is the most pressing problem by firm type (2018)



Source: Study Team based on Commission ECB/SAFE. Notes: EU28.

Figure 3.4 shows the outcome of European SMEs' external financing application over the period 2014-2018. In 2018, 81% of the respondents of the SAFE questionnaire indicated that their application was successful as they obtained at least 75% of the funding requested, up from 78% in 2014: this confirms the existence of an improvement in the ability of SMEs to obtain access to finance. The improvement is largely due to the percentage of respondents that applied and received the entire amount requested, which increased from 69% to 74%. There is also a reduction in the share of rejected applications for external finance (from 9% to 4%).

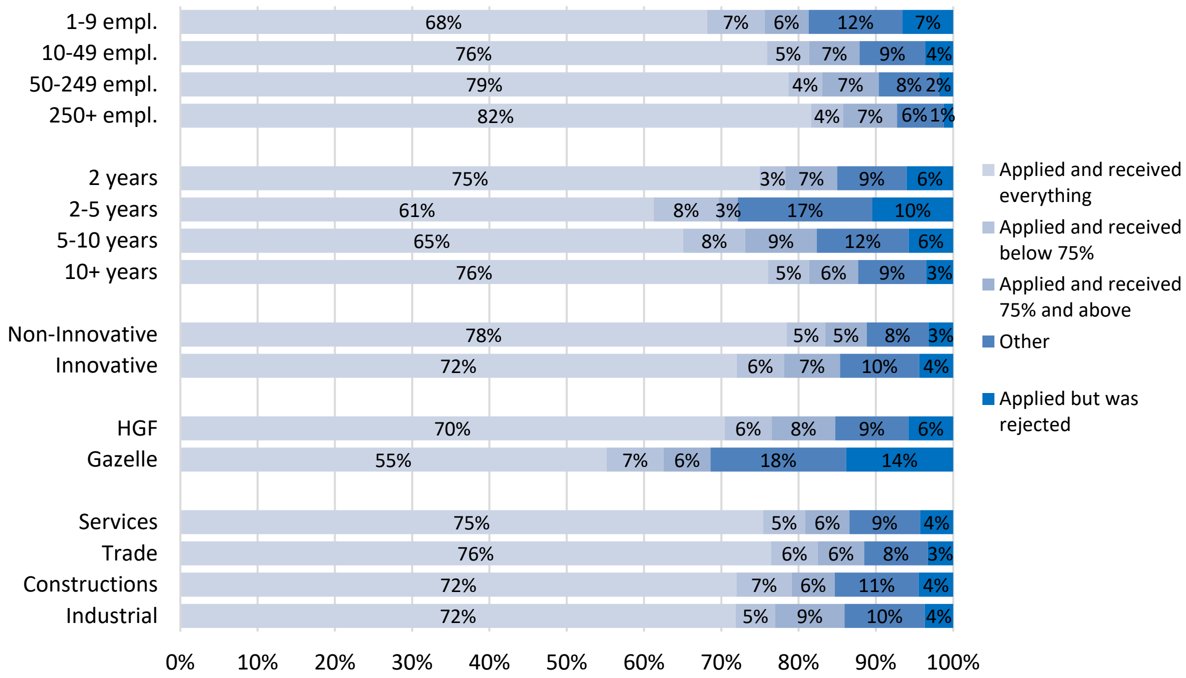
Figure 3.4: Outcome of European SMEs' external financing application



Source: Study Team based on Commission/ECB SAFE. Notes: Averages of Bank loans, Trade credit, Other financing, Credit line or bank overdrafts. EU28

Figure 3.5 reports the outcome of European SMEs' external financing applications with a breakdown by firm type for the year 2018. Interestingly, the percentage of firms obtaining all the funds they requested is lower than the EU average (74%) for micro-enterprises (68%), for firms with 2-5 (61%) and 5-10 (65%) years of activity, for innovative companies (72%), and, especially, for gazelles (55%). Accordingly, also the rejection rate is particularly high for these types of firms. While micro-enterprises' financing applications were rejected in 7% of cases, this percentage is much higher for gazelles, which experienced a rejection rate of 14% in 2018.

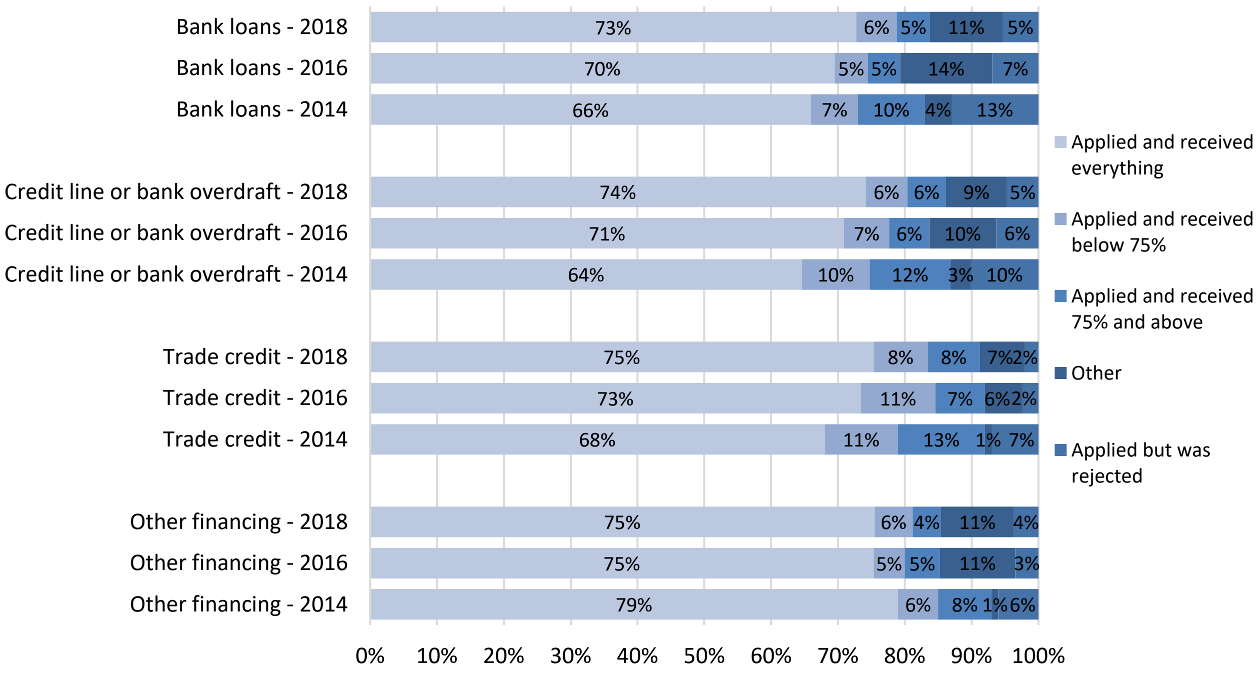
Figure 3.5: Outcome of European SMEs' external financing application: breakdown by firm type (2018)



Source: Study Team based on Commission/ECB SAFE. Notes: Averages of Bank loans, Trade credit, Other financing, Credit line or bank overdrafts. EU28

Figure 3.6 shows whether the outcome of external financing applications by European SMEs differs also by type of financing. The percentage of firms obtaining all the funds they requested increased from 2014 to 2018 for the three main types of financing source: bank loans (from 66% in 2014 to 73% in 2018), credit line or bank overdrafts (from 64% in 2014 to 74% in 2018) and trade credit (from 68% in 2014 to 75% in 2018). This positive trend in firms' access to external financing is not confirmed when we consider the "other financing option", which includes loans from a related company, shareholders, or family and friends, leasing, factoring, grants, subordinated debt instruments, participating loans, peer-to-peer lending, crowdfunding, and issuance of equity and debt securities. In this case, the percentage of firms obtaining all the funds they applied for decreased from 79% in 2014 to 75% in 2018. However, the percentage of rejected SMEs decreased from 6% to 4%, in line with the evolution of the other sources of financing.

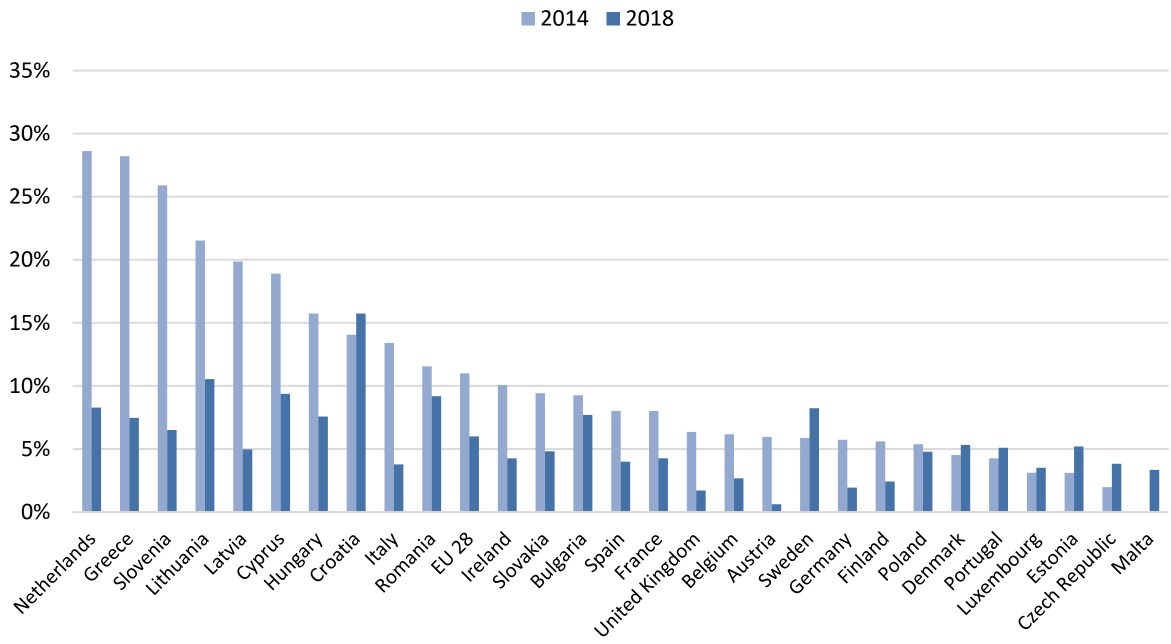
Figure 3.6: Outcome of European SMEs' external financing application: breakdown by source of external financing



Source: Study Team based on Commission/ECB SAFE. Notes: EU28.

Figure 3.7, based on data from the SAFE, shows the percentage of rejected external financing applications by Member State, and how this has evolved between 2014 and 2018. This has also decreased at European level from 11% in 2014 to 6% in 2018. While many countries show the same decreasing trend as for the EU average, for several others the trend is reversed. These are Croatia, Sweden, Denmark, Portugal, Luxemburg, Estonia, Czech Republic, and Malta, where the percentage of rejected application has increased or remained constant. Again, the improvement appears to be larger in countries were the problem of rejected applications was more pressing: for almost all countries in the left-hand side of the figure (except Croatia), the percentage of rejected financing was between 10% and almost 30% in 2014, and fell to between 5% and 10% in 2018.

Figure 3.7: Percentage of rejected applications by Member State: 2014 vs. 2018

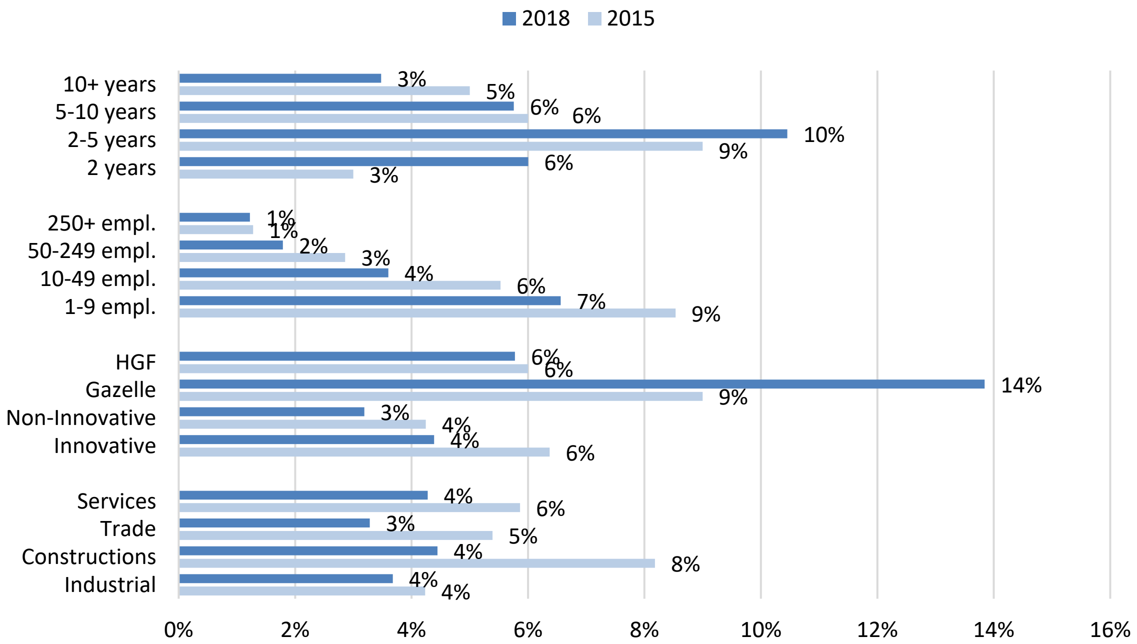


Source: Study Team based on Commission/ECB SAFE. Notes: Averages of Bank loans, Trade credit, Other financing, Credit line or bank overdrafts. EU28.

Figure 3.8 reports the percentage of rejected external financing applications with a breakdown by firm type for the period 2015-2018.[15] The percentage of rejected applications declined for all types of companies except: (i) firms with less than 2 years of activity, which experienced an increase in the rejection rate from 3% in 2015 to 6% in 2018; (ii) firms with 2-5 years of activity, whose rejection rate increased from 9% in 2015 to 10% in 2018; (iii) gazelles, which were rejected in 9% of cases in 2015 and in 14% of applications in 2018. As shown in figures Figure C.3, Figure C.4 and Figure C.5 (all in Annex A), the main problems for these types of companies were mainly related to bank loans and credit lines and bank overdrafts. In 2018, the rejection rate of bank loans for firms with 2-5 years of activity and gazelles was, respectively, 15% and 17%. For credit lines and bank overdrafts, the percentage of rejected firms was even higher: 17% for firms with 2-5 years and 22% for gazelles.

[15] We consider 2015 as reference year because the breakdown by firm age and growth was not available before.

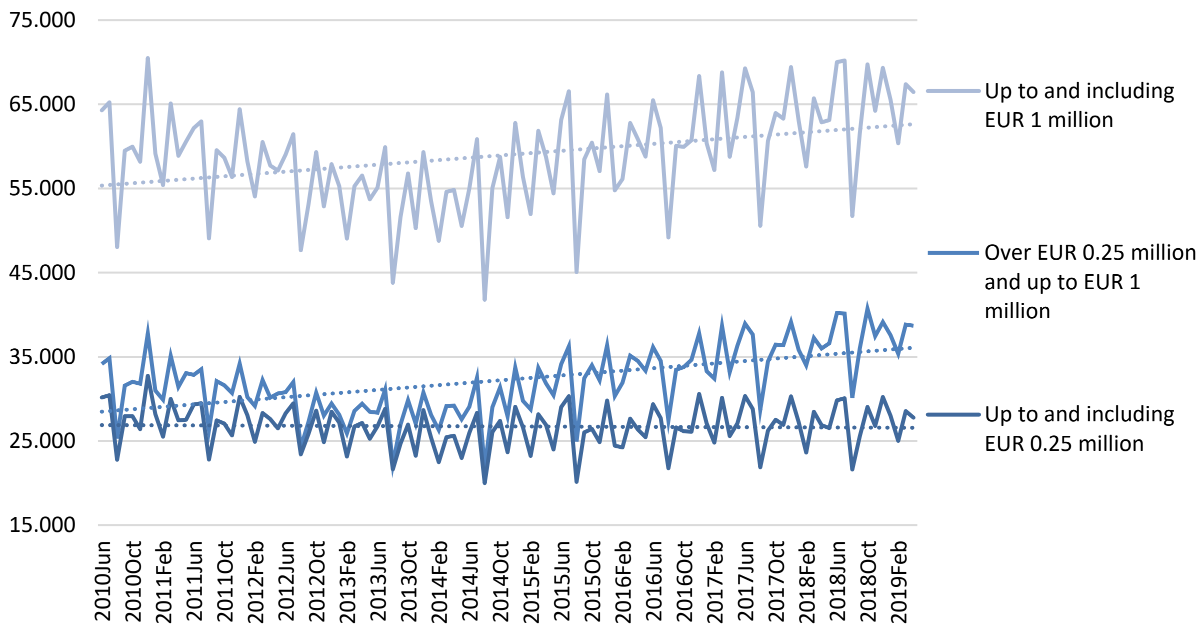
Figure 3.8: Percentage of rejected applications: breakdown by firm type (2015 vs. 2018)



Source: Study Team based on Commission/ECB SAFE. Notes: Averages of Bank loans, Trade credit, Other financing, Credit line or bank overdrafts. EU28.

In order to analyse the evolution of SME lending specifically, Figure 3.9 shows data on outstanding loans to non-financial corporations up to EUR 1 mln, drawn from the European Central Bank Data Warehouse. We distinguish between loans up to EUR 0.25 mln and loans over 0.25 and up to EUR 1 mln, which, following economic reports (see for instance EIF, 2018) can be considered proxies for lending to SMEs based on the assumption that larger firms would ask for loans that are larger than EUR 1 mln. As the figure indicates, new business volumes up to EUR 1 mln decreased between June 2010 and mid-2014, as a result of the financial and economic crisis, but then recovered, reaching more than EUR 70 bln at the end of 2018. While during the contraction both small (up to EUR 0.25 mln) and medium (over 0.25 and up to EUR 1 mln) loans declined, after 2014 the recovery was faster for medium loans than for small ones.

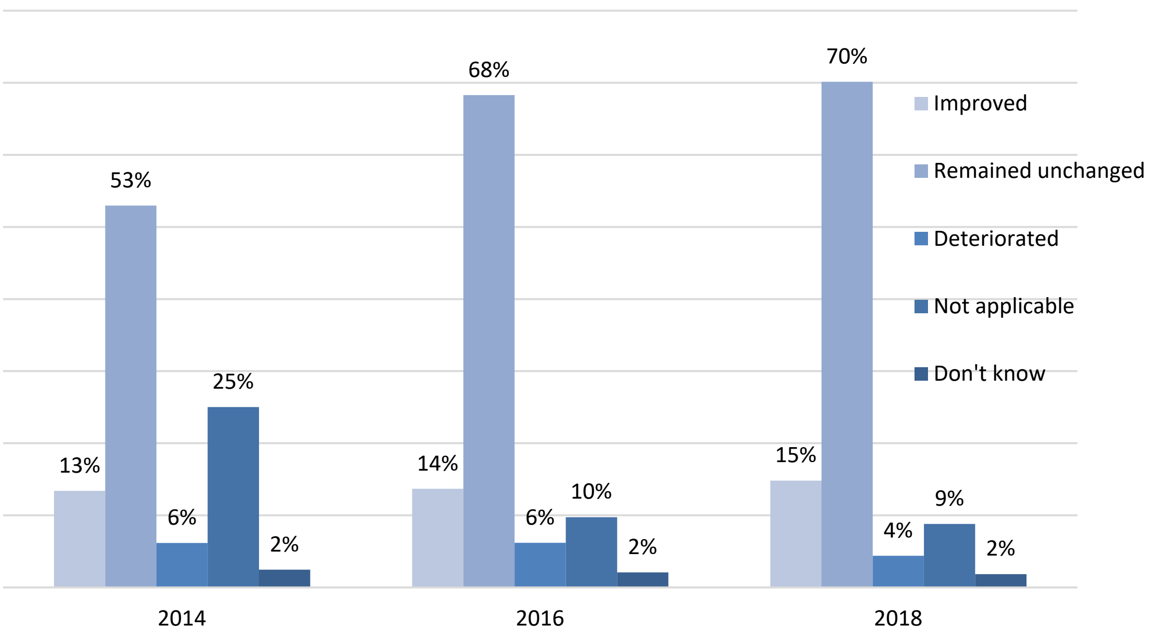
Figure 3.9: Outstanding loans to non-financial corporations (new business volume, mln EUR)



Source: Study Team based on ECB Data Warehouse. Notes: Euroarea.

As regards equity capital, data drawn from the SAFE and reported in Figure 3.10 shows that between 2014 and 2018 SMEs have consistently reported an improvement in the supply conditions. Indeed, the percentage of firms that have stated that availability of equity capital had improved in the past six months has always been greater than the percentage of firms that have stated that it has deteriorated. This, coupled with the rising percentage of firms that have reported no change, suggests that availability of equity capital has improved over the period.

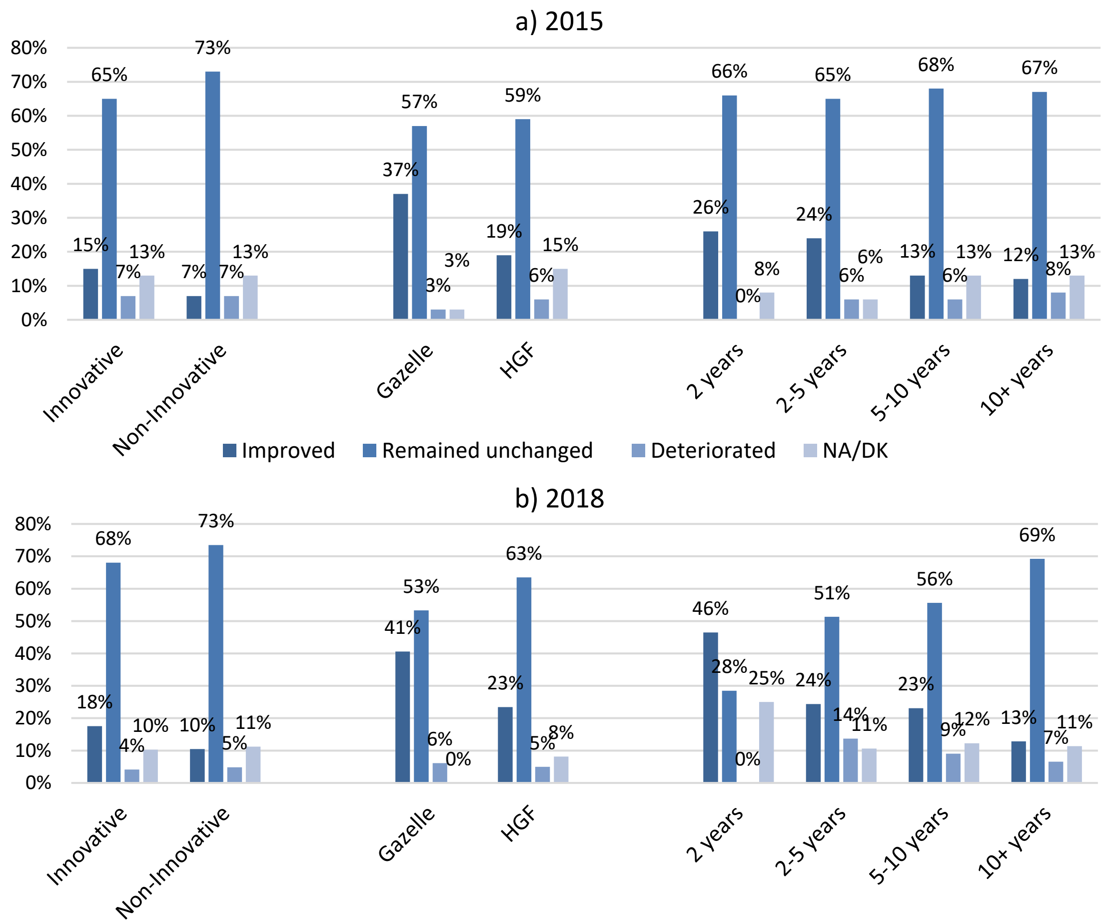
Figure 3.10: Availability of equity capital for European SMEs, change in the last six months



Source: Study Team based on Commission ECB/SAFE. Notes: EU28.

Figure 3.11 shows the availability of equity capital for European SMEs with a breakdown by age, innovation activity and growth rate for the years 2015-2018. The percentage of firms stating that the availability of equity capital “Improved” increased for all types of companies, and especially for firms with less than 2 years of activity. In this case, the percentage increased from 26% in 2015 to 46% in 2018. Accordingly, the percentage of firms stating that the availability of equity capital “Deteriorated” decreased for almost all types of SMEs, except for gazelles and firms with 2-10 years of activity.

Figure 3.11: Availability of equity capital for European SMEs, change in the last six months: breakdown by firm age, innovation and growth (2015 vs. 2018)

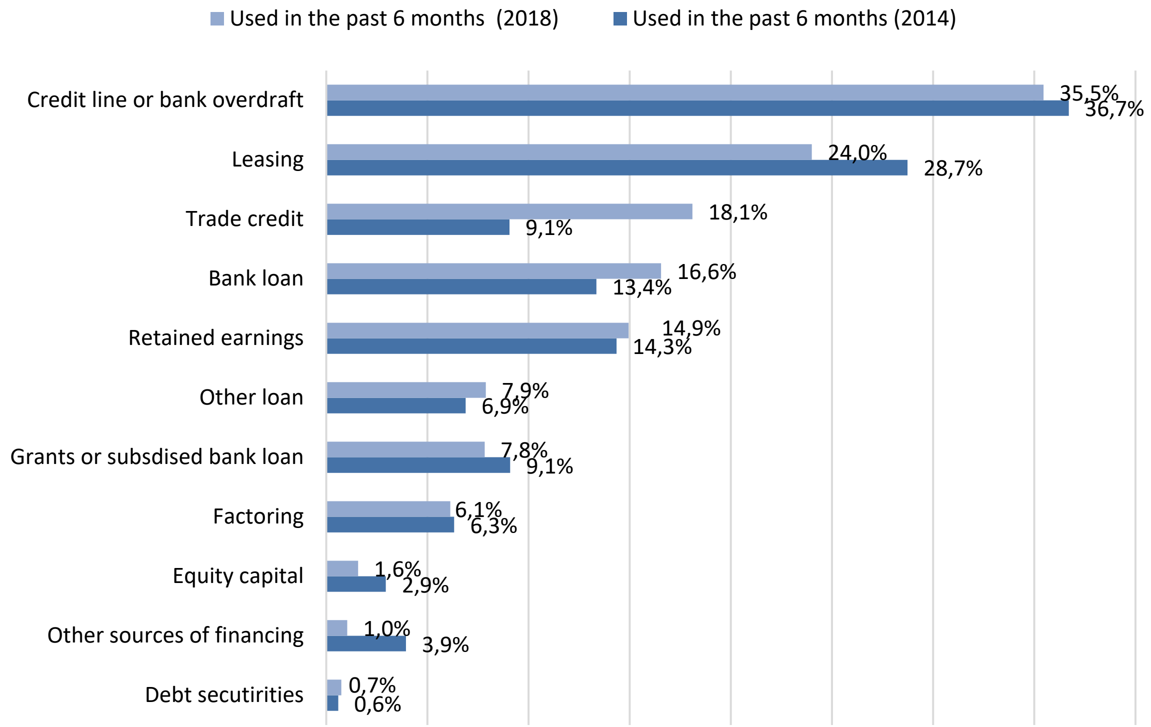


Source: Study Team based on Commission ECB/SAFE. Notes: EU28.

Despite the increase in its availability, the use of equity capital by European SMEs has decreased between 2014 and 2018. As shown in Figure 3.12, based on data drawn from the SAFE, the percentage of firms issuing new equity has decreased from 2.9% in 2014 to 1.6% in 2018. This reduction has been partly compensated by the increase in the use of retained earnings which is tantamount to equity. Although credit lines and bank overdrafts remain the main sources of external financing for European SMEs, it is interesting to note that a growing percentage of firms have been financed through trade credit and bank loans. While credit guarantees have certainly played a role in improving bank lending availability, the increase in the use of trade credit and retained earnings may be due to the improved economic outlook.[16]

[16] Better growth prospects have restored the trust between suppliers and clients and their willingness to extend credit to their commercial counterparts, and the ability of firms to gain profits, which translated in higher cash-flows and internal capital.

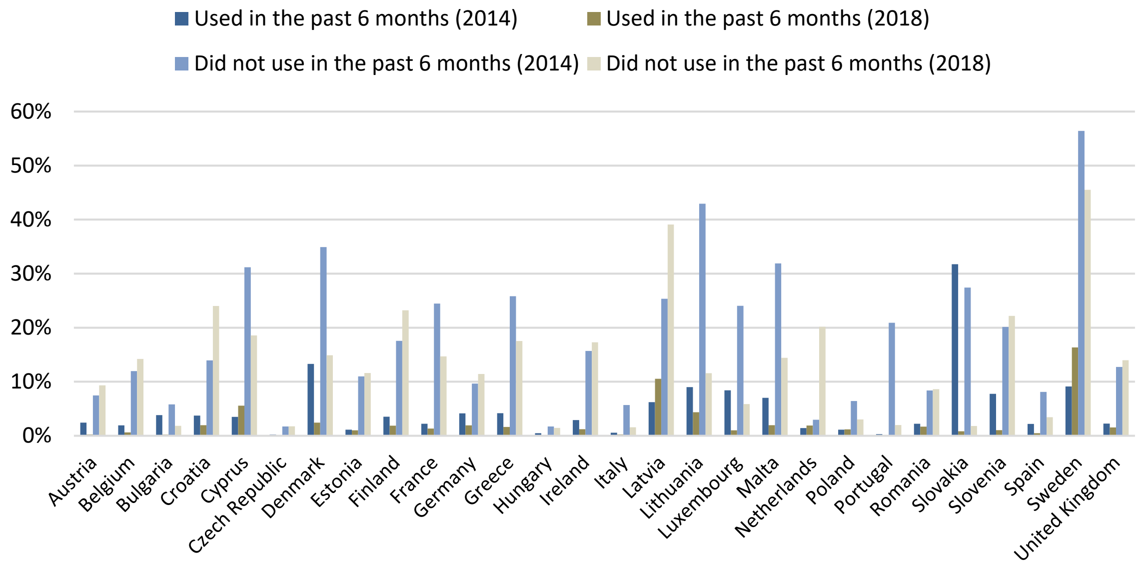
Figure 3.12: Sources of external financing for SMEs, 2018



Source: Study Team based on Commission ECB/SAFE. Notes: EU28.

The low reliance on equity capital by European SMEs and the negative trend in its use characterise almost all the Member States, as Figure 3.13 shows. The percentage of firms issuing equity in 2014 has been higher than the one registered in 2018 in all the Member States, except for Cyprus, Latvia, Netherlands, and Sweden. Thus, overall, the share of European SMEs that does not rely on equity has increased between 2014 and 2018.

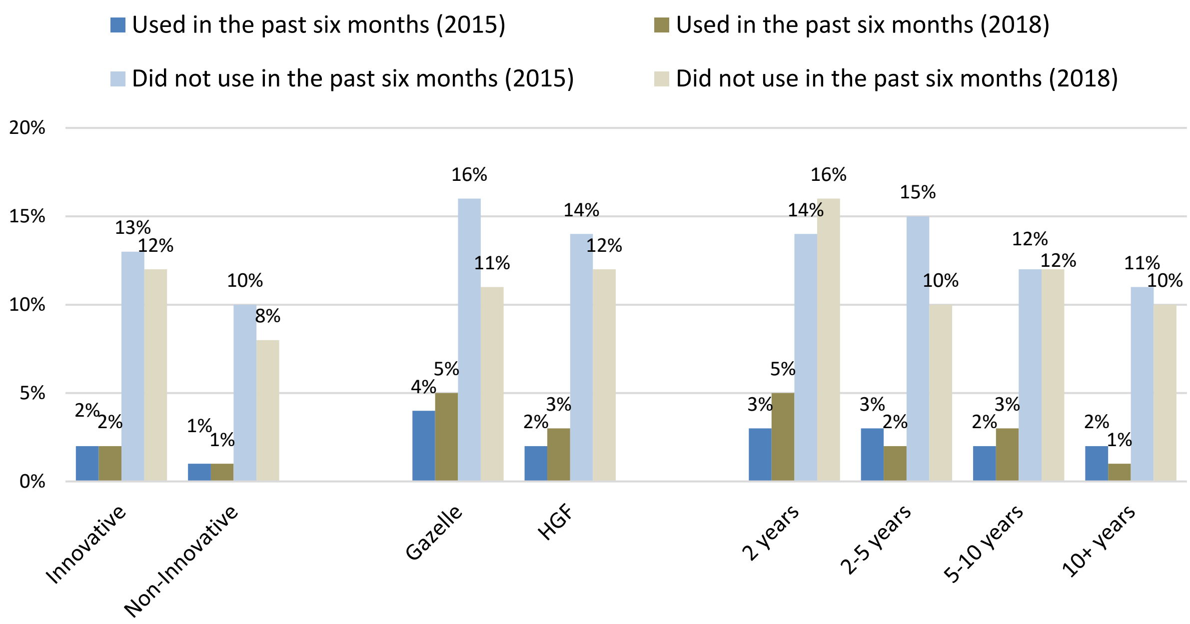
Figure 3.13: Use of equity capital by SMEs, 2014 v. 2018



Source: Study Team based on Commission ECB/SAFE. Notes: EU28.

Figure 3.14 reports the percentage of firms using and not using equity capital in 2015 and 2018 with a breakdown by firm age, innovation activity, and growth. The figure indicates that the percentage of firms using equity remained stable or slightly decreased from 2015 to 2018 for almost all types of companies, with the exception of gazelles, high-growth firms, SMEs with less than 2 years of activity, and firms with 5-10 years of activity. All these types of companies experienced a slightly increase in the use of equity capital. It is interesting to note that those types of companies using most equity capital in 2018 were gazelles and firms with less than 2 years of activity. These firms are usually the most affected by asymmetric information problems in credit market, so that their access to debt financing is often limited because banks are not able to assess their creditworthiness. Hence, the finding that they improved their reliance on equity between 2015 and 2018 may be interpreted as a reduction in the existence of the market failure for these firms, as they have been able to substitute the lack of debt financing with an increasing adoption of equity capital. However, the high reliance on debt financing for the other types of European SMEs, may be explained *inter alia* by the low-interest rate context in which they are operating, which makes debt more advantageous than equity. Moreover, SMEs' owners are usually less willing to issue new equity because they do not want to reduce their control over the companies, especially when they are family owned. The high dependence of SMEs on bank financing that results from this descriptive evidence may increase the concerns related to their vulnerability in the case of a new financial crisis, which, by impairing banks' balance sheets may force them to cut credit availability, with adverse consequences on SMEs' ability to develop.

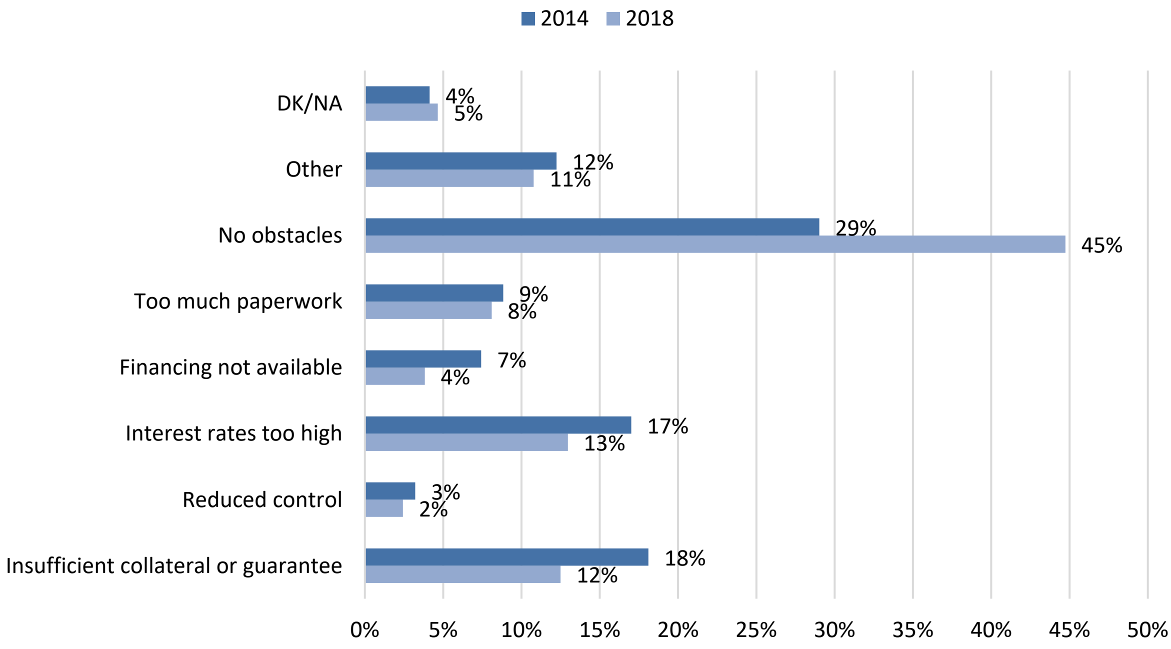
Figure 3.14: Use of equity capital by SMEs: breakdown by firm age, innovation and growth (2015 vs. 2018)



Source: Study Team based on Commission/ECB SAFE. Notes: EU28.

Figure 3.15, based on data from the SAFE, describes the reasons why, according to SMEs' own perceptions, they may have faced problems in obtaining external financing, and how this has varied between 2014 and 2018. Indeed, confirming the finding that access to finance has become easier, 45% of SMEs in 2018 stated that they faced no obstacle, compared to 29% in 2014. Insufficient collateral, which was the main problem in 2014, has now considerably improved, and the percentage of SMEs that considers high interest rates as their main obstacle has also significantly decreased. Insufficient collateral, high interest rates, and rationing (financing not available) are highly associated with the asymmetric information problem in raising external finance (Stiglitz and Weiss, 1981). The fact that the share of SMEs perceiving each of these factors as the most challenging has decreased may be evidence that the market failure has become less severe, especially because the decline is explained by the striking improvement in the "no obstacles" group.

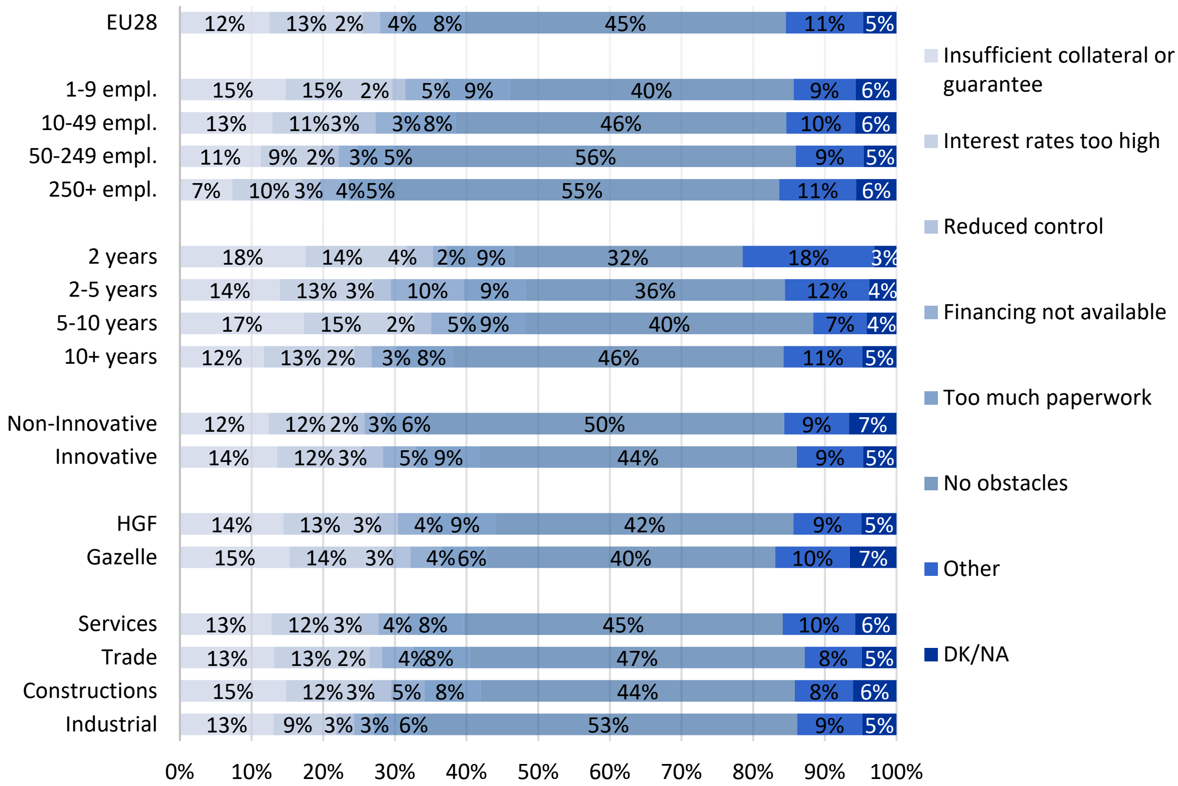
Figure 3.15: Most important limiting factors to get external financing: 2014 vs. 2018



Source: Study Team based on Commission/ECB SAFE. Notes: EU28

Figure 3.16 describes the influence of the above limiting factors with a breakdown by firm type. The percentage of respondents facing no obstacles to get external financing is increasing in both size and age of firms. Regarding individual obstacles to get external finance, there is a smaller variation across different types of SMEs. For both smaller and younger enterprises insufficient collateral or guarantees appear a more limiting factor than for larger and more mature firms; likewise, high interest rates are a greater reason for concern for smaller firms. In terms of industry sector, the percentage of firms stating that there are no obstacles to obtain external financing is higher for industrial firms and lower for companies operating in the construction industry.

Figure 3.16: Most important limiting factors to get external financing: breakdown by firm type (2018)



Source: Study Team based on Commission/ECB SAFE. Notes: EU28.

The evidence shown above indicate that access to finance in Europe has improved since 2014. In 2018, it represents a less relevant concern for European SMEs, and the percentage of firms that received the funds they applied for has significantly increased during the last years. In terms of financial instruments, this has been particularly true for bank loans and trade credit, whereas the use of equity capital has not improved for SMEs. The main reasons behind the remaining difficulties in the access to finance are the lack of collateral guarantees and the too high cost of financing, suggesting that asymmetric information problems still play a role in affecting firms' financing conditions.

By relying on our proxies for the market failure, and on the positions expressed by stakeholders interviewed for the Study, it appears that the market failure identified in 2014 has improved, though not to the extent that it has disappeared. Indeed, 83% of the stakeholders (specifically, 77% of the beneficiaries and 85% of the financial intermediaries) interviewed for the Study confirm that there exists a financing gap that might constrain the supply of external financing for SMEs that have valuable business models and fulfil all standard investment criteria (Figure D.15 in Annex D).

The persistence of the market failure has been also confirmed by case studies. Despite the introduction of schemes supporting SMEs' access to finance, some of the stakeholders interviewed believe that there are still young and innovative firms that are not able to raise the funds they needed. As described in Annex B.3, the Italian scheme made investments in 27 companies (EUR 16.6 mln in total) in 2011-2015, and in 6 beneficiaries (EUR 3.8 mln in total) in 2016. However, the number of applications received was much higher, and the vast majority of companies that applied for the support scheme did not receive it: the number of firms applying for the scheme was 148 in 2011 and 58 in 2016, for a total of EUR 260 mln (EUR 205 mln in 2011 and EUR 55 mln in 2016). More than 87% of applications belonged to companies in their seed/start-up phase. While all the companies that applied were eligible for the scheme, funds were not sufficient for all of them, and the Italian granting authority had to make a selection.

The extent to which SMEs may be subject to a market failure would seem to depend on the regions/countries where they are located. Stakeholders state that it may be easier to raise investments in certain regions/countries where financial markets are fully developed. For instance, one interviewee stated that more possibilities exist to access funding in Amsterdam and the region nearby rather than in the rest of the Netherlands. London, Berlin, and Paris are considered relevant financial hubs where it is easier to raise money compared to the rest of Europe. Consistently, high rejection rates to funding applications have been registered in peripherical countries such as Croatia, Romania, Lithuania, and Cyprus. These countries are also the ones with the highest percentage of SMEs not using equity capital.

The existence of the market failure is also heterogeneous among types of firms. Data show that the types of firms most affected are: (i) young businesses with 0-2 years and 2-5 years of activity; (ii) firms with high growth rates, i.e. high growth firms and gazelles; and (iii) firms investing in innovation activities. For all these companies, the high cost of credit and the lack of guarantees have represented the main factors behind the inability to access funds, which, as explained, are highly correlated with the market failure: high loan rates and the requirement of pledgeable collateral guarantees are the first way by which banks can reduce their exposure to credit risk when information asymmetries are important. As these factors play a crucial role in limiting firms' ability to get external financing, we can argue that asymmetric information is still a relevant problem in the finance markets.

In terms of sectors of economic activity, stakeholders interviewed for the Study state that the majority of risk finance goes into sectors where there could be high potential returns, most notably software companies. These companies tend to have lower capital expenditure requirements and high potential, whereas sectors that are capital intensive and where the business requires more time to develop (e.g. chemical industries, or clean tech energy industries) experience a wider financing gap.

Regarding the instruments, most of the stakeholders interviewed for the Study argue that the problem mainly regards equity. As it has been explained by the interviewees, the potential reasons are mainly the lack of investors and funds, and the unwillingness of certain SME to leave shares of their companies in the hand of external investors; moreover, the use of equity capital by European SMEs has not increased since 2014. Yet, SMEs have perceived an increase in the availability of equity, which is confirmed by the evidence shown in section 4 for VC markets.

Overall, however, financial intermediaries interviewed for the Study state that, on a scale from 1 (not relevant at all) to 5 (extremely relevant) the main driver of the financing gap is the development stage of a firm (4.5 on average), followed by its size (3.7), its age (3.4), and the sector of economic activity (3.2), as presented in Figure D.16 in Annex D. Moreover, some financial intermediaries state that it is also important whether the objective of the company is to expand within the national borders or to look for an international growth, as the latter option may be riskier.

On the supply side, on a scale from 1 (not relevant at all) to 5 (extremely relevant), the main reason underlying the existence of the financing gap is, according to stakeholders interviewed, the need for investors to plan and execute an exit strategy (3.7 overall). This is followed by the lack of interest of the private investors (3.5) and the need for investors to closely monitor that the business strategy is being well implemented (3.5); and by the cost necessary for investors to carefully analyse business plans (3.4), as shown in Figure D.17 in Annex D. The answers of beneficiaries and financial intermediaries are generally aligned, however beneficiaries tend to emphasize more the need for investors to carefully analyse the investment and to monitor it as a potential reason underlying the existence of the funding gap (3.6 for beneficiaries, 3.3 for financial intermediaries). Besides those reported in Figure D.17 in Annex D, another factor raised is the lack of support from the investor to the investee. In addition, some beneficiaries report that sometimes it is difficult to understand the business strategy of the investor, who may not want to disclose such information. Around 73% of the interviewees (in particular 69% of the beneficiaries and 77% of the financial intermediaries) report that these supply-side constraints reflect structural factors, i.e. their existence (though not necessarily their magnitude) is independent of the financial crisis (Figure D.19 in Annex D). Indeed, financial intermediaries typically assert that they have been investing long enough to realize that certain constraints are deeply eradicated, and the financial crisis has only exacerbated them.

When asked whether there has been any improvement in these factors in the last few years, 15% of interviewees state that the improvement has been considerable and 35% state that the improvement has been moderate (Figure D.20 in Annex D). Interviewees commented that recently more investors are willing to invest in early-stage companies within certain sectors (e.g. IT), also because of the improved economic situation and availability of European funds. Overall, only 21% of the interviewees report that these factors have not improved, stating that the riskiness of the investments have remained almost the same. Others have commented that the improvement has only regarded the equity financing side, whereas the debt financing side has remained unchanged. However, interviewees answered quite differently depending on their category. 61% of financial intermediaries tend to agree that there has been an improvement: 24% think that there has been a considerable improvement, whereas 37% report that the improvement has been moderate. Among beneficiaries, only 6% assert that there has been a considerable improvement, while 32% state that there has been a moderate improvement (and 35% was unable to provide an opinion).

Being supply-side constraints, it might be the case that financial intermediaries have a broader and clearer perception on how these constraints have developed over time, whereas beneficiaries may hold a narrower view that is more closely related to their own situation. This implies that financial intermediaries' views on this matter should carry more weight and might also explain the high share of beneficiaries unable to respond.

On the demand side (Figure D.18 in Annex D), on a scale from 1 (not relevant at all) to 5 (extremely relevant), financial intermediaries state that the quality of SMEs' key management is the most relevant factor explaining the financing gap (4.3)[17], along with the related ability of the SME to prepare sound business plans (4.1) and followed by the SMEs' unwillingness to share control with outside investors (4.0). Financial intermediaries generally state that it is important to make a good assessment of the management team and find information about the reliability of their personal business history. Some financial intermediaries added that most SMEs are not skilled enough to prepare sound business plans and hence sell themselves to investors, even if the situation has slightly improved over the last years.

The SME's unwillingness to share control with outside investors also seems to play a relevant role: sometimes companies do not fully understand what equity financing is, and they end up preferring debt financing even if it is more difficult to access. Other important factors, raised by the financial intermediaries, regard the lack of instruments and ability to promote their business by the SMEs, who are also sometimes unable to correctly and precisely define their financing needs and their preferred instruments among the available ones. This issue may also reflect a lack of ambition of the undertakings, and according to one financial intermediary this is the largest difference between European and American investees. Moreover, sometimes SMEs lack the ability to understand the financing strategy of the investors: this issue, together with the symmetric problem faced by the beneficiaries, sheds light on the need to have more transparency between investors and investees. According to 78% of financial intermediaries interviewed, these constraints have a structural, rather than transitional, nature (Figure D.21 in Annex D), as the impact of the financial crisis is almost over now (other factors have had an important impact, such as the transition to a more western economy for eastern European countries).

As with supply-side constraints, the majority of the intermediaries and association of intermediaries declare that the aforementioned factors have improved since 2014, either considerably (according to 19% of them) or moderately (40.5%), as reported in Figure D.22 in Annex D. In fact, most of them report an increase in the quantity of capital in the market, as many SMEs with good business models, which previously could not fit into the market, have accessed financing thanks to new capital and also State aid measures. Among other reasons, some mention the new GBER and RFG as possible sources of this improvement.

Thus, overall, the negative effects of the financial crisis would appear to have been overcome. The restored trust in the supplier-customer relationships has increased the availability of trade credit, that has come back to the pre-crisis level. Outstanding loans to non-financial corporations have also recovered, indicating that the banking system has successfully got through the crisis.

[17] Even though the lack of managerial skills could be a rational justification for a private investor not to invest in a specific SME, it is possible that the business model of that SME would be deserving: in this case, a possibly profitable idea of product or service would not get financing despite the fact that its development might be potentially beneficial for the economy. Moreover, business angels who invest through equity measures would have the ability to influence the quality of the management.

4 VENTURE CAPITAL, PRIVATE EQUITY AND ALTERNATIVE TRADING PLATFORMS

Although financing through banks is the main form of external financing for European SMEs, financing through equity is essential for some types of firms. For technology firms, fast growing companies, and young firms with no immediate revenue streams and the need to make upfront investments, equity is often the most suitable form of capital. To cover these equity needs, both the presence of formal venture capital ("VC") investors and business angels[18] ("BAs"), and a well-developed capital market are required. In this way, the structural barriers which may prevent SMEs from having effective access to risk finance may be overcome, with significant effects on economic growth.

The crucial role played by VCs in fostering entrepreneurship and firm growth has been documented by numerous studies (Colombo and Grilli 2010; Chemmanur et al. 2011; Puri and Zarutskie 2012; Croce et al. 2013). VCs provide portfolio companies with a set of value-added activities, including direct coaching and indirect benefits, such as a certification effect to third parties about the good prospects of the business (Gompers and Lerner 2001). Chemmanur et al. (2011) show that the overall efficiency of VC-backed firms, in terms of total factor productivity, is higher than that of non-backed firms at every point in time. This result has been further confirmed by Croce et al. (2013), who find that productivity growth is not significantly different between VC and non-VC-backed firms before the first round of VC financing, whereas significant differences are found in the first year after the investment event.

Figure 4.1, based on data from Investeurope, shows the funds raised and the investments made by private equity ("PE") and VC funds between 2014 and 2018.[19] Both have markedly increased over the period: VC more than doubled funds raised and investments, while PE's funds raised and

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[18] Investor angels, or business angels, are people who invest their money in the initial phase of startups, in exchange for a participation in capital. They also usually carry out the role of a mentor and offer their consent and experience to new entrepreneurs.

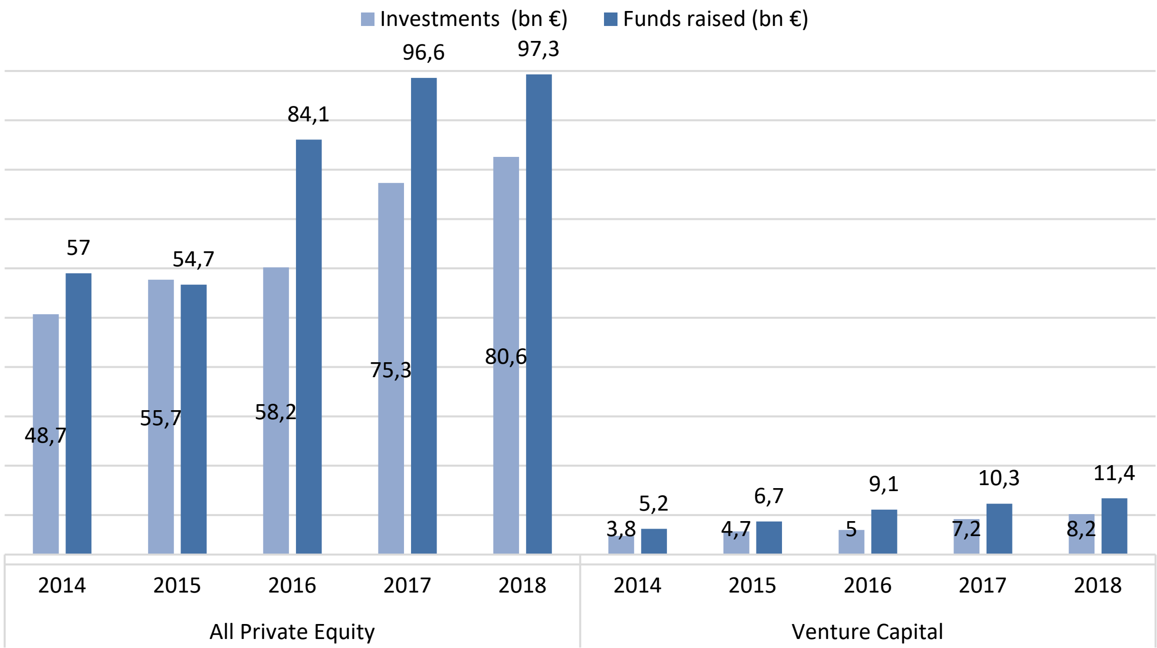
[19] Investeurope data include the following types of private equity funds:

- buyout funds: funds acquiring companies by purchasing majority or controlling stakes, financing the transaction through a mix of equity and debt;
- generalist funds: funds investing in all stages of private equity;
- growth funds: funds that make private equity investments (often minority investments) in relatively mature companies that are looking for primary capital to expand and improve operations or enter new markets to accelerate the growth of the business;
- mezzanine funds: funds using a hybrid of debt and equity financing, comprising equity-based options (such as warrants) and lower-priority (subordinated) debt;
- venture capital funds: early-stage funds (focused on investing in companies in the early-stages of their lives), later-stage funds (providing capital for an operating company which may or may not be profitable, typically in C or D rounds) and venture funds (all stages).

Business angels investments are excluded.

investments in 2018 are about 1.7 times their values in 2014. The strong global PE fundraising activity was to a large extent driven by the positive net distributions that fund investors have received over the last years (Preqin, 2018). The increase in funds raised has not been associated with a sufficient increase in investments made. As shown in Figure 4.1, VC funds in Europe have a total amount of almost EUR 17 bln excess cash that is currently not invested. This may suggest that the main source of the remaining market failure in the equity market is not on the supply side. Those European SMEs that would need equity may not satisfy the standards required by VC investors or may not be willing to leave the control of their firms to professional investors.

Figure 4.1: Funds raised and investments: all private equity and VC

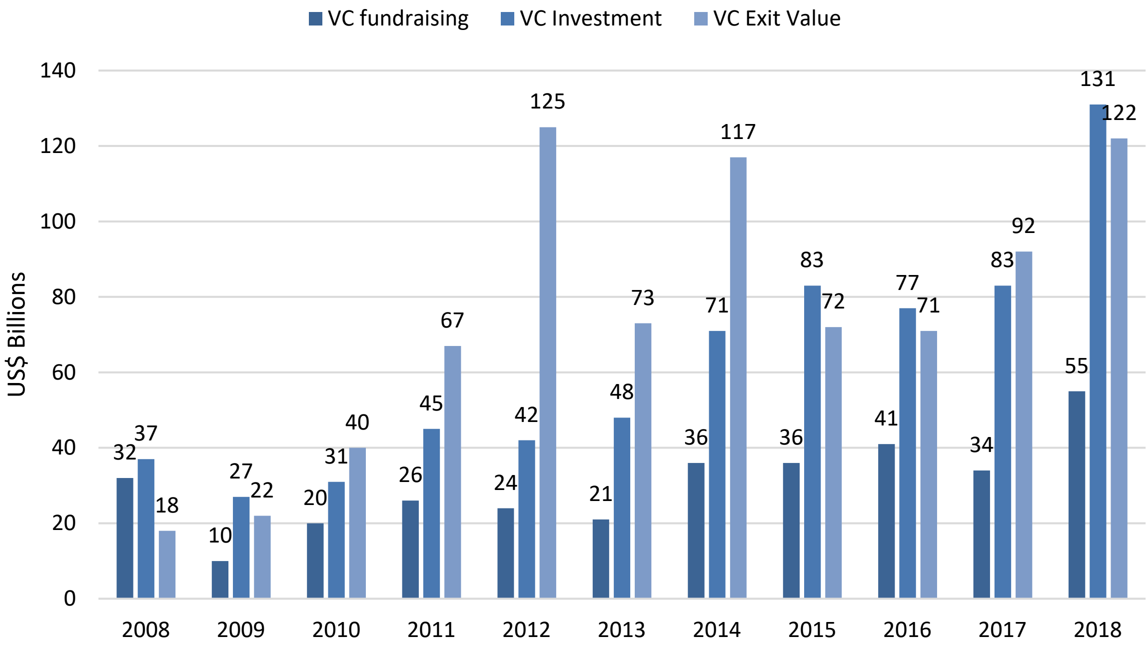


Source: Study Team based on Investeurope, European Private Equity Activity, 2018. The figure reports amounts raised and invested in a given year.

The growth potential of European PE and VC markets emerges also when we look at the amount raised and invested in the US in the same segment. In 2018, VC funds raised and investments were about USD 55 bln and 130 bln, amounts much higher than the ones registered in Europe (Figure 4.2).[20] Moreover, it seems that the excess supply (or low demand) of funds characterizing the European market does not affect VC and PE activity in the U.S., where funds raised are much lower than investments made. This suggests that the U.S. equity markets works in a more efficient way in comparison to the European one, where the progress made have not cancelled the market failure yet.

[20] Pitchbook, 18 charts to illustrate US VC in 2018, 19 January 2019.

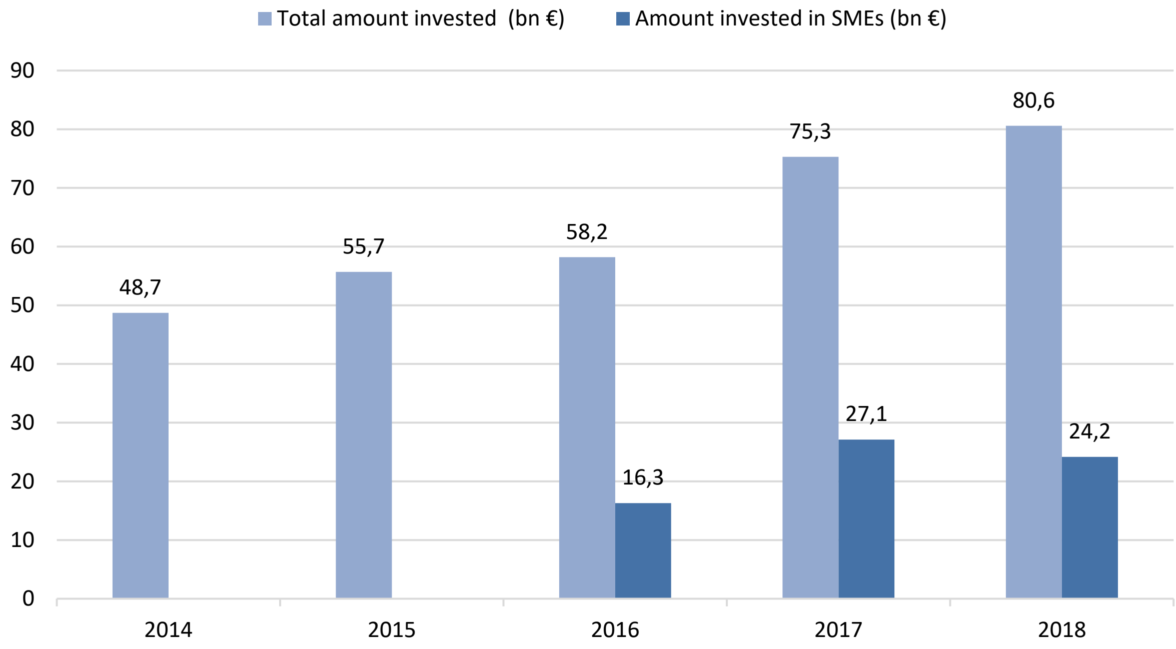
Figure 4.2: Funds raised and investments: US venture capital



Source: Study Team based on Pitchbook, 2019

As shown in Figure 4.3, where total investment amounts in SMEs are reported, the sharp increase in investments by PE firms from 2016 to 2017 is mainly driven by investments in SMEs: whereas overall investments have increased by EUR 17.1 bn (+29.4%), the amount invested in SMEs has raised by EUR 10.8 bn (+66.3%). This trend has not been confirmed in 2018, when the total investment continued to increase, even if at slower pace (+7%), while investments in SMEs decreased (-10.7%). However, PE investments in SMEs in 2018 still remained 48.5% above its level in 2016.

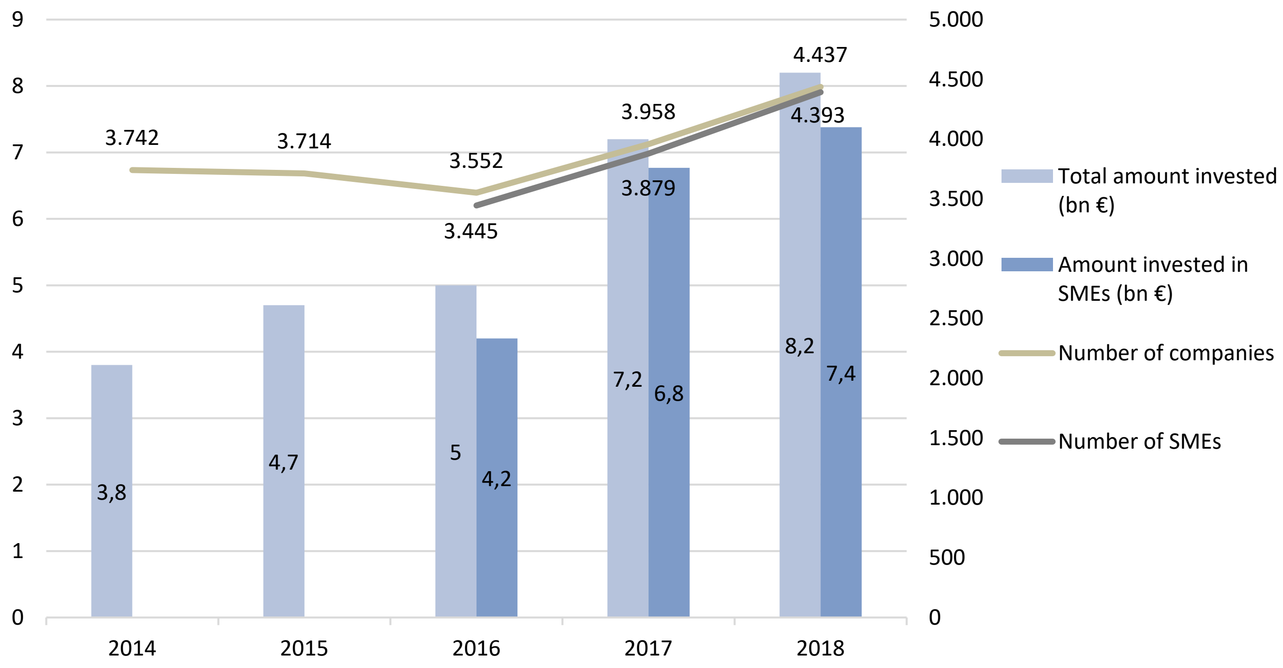
Figure 4.3: Private equity investments in European SMEs



Source: Study Team based on Investeurope, European Private Equity activity, 2014-2018.

The same holds true for venture capitalists, as shown in Figure 4.4. The increase in investments is entirely driven by investments in SMEs (as indeed investments to non-SMEs decreased), with the share of investments into SMEs reaching 90.2% in 2018 (+6.2 percentage points since 2016). The number of SMEs funded by venture capitalists has grown steadily between 2016 and 2018 (+13% on average by year), and the average size of investment per SMEs (EUR 1.7 mln) is 38% higher in 2018 than in 2016.

Figure 4.4: Venture capital investments in European SMEs



Source: Study Team based on Investeurope, European Private Equity activity, 2014-2018.

Evidence from case studies would appear to bear this out. The changes that occurred in the last decade in the VC landscape have significantly impacted the characteristics of the schemes financed under the GBER and RFGs, and on the choice of the adopted financial instruments. For instance, as the number of VC funds operating in Italy was very low, the Italian program "Fondo Capitale di Rischio POR FESR Lazio", initially approved in 2010, was implemented in the form of a public fund that invested together with private co-investors in SMEs (see Annex B.3 for more details). Then, in 2014, when the number of VC funds was substantially higher, the granting authority decided to invest a larger amount in VC funds, rather than in the co-investment instrument. One beneficiary interviewed for the case study on SA.39418 (see Annex B.2 for more details) confirms that the VC market has significantly improved in Finland over the life of their firm (15 years): the number of VC funds (as well as private investors and BAs) has increased, and the supply is not only focused on the technological sector as it was 15 years ago.

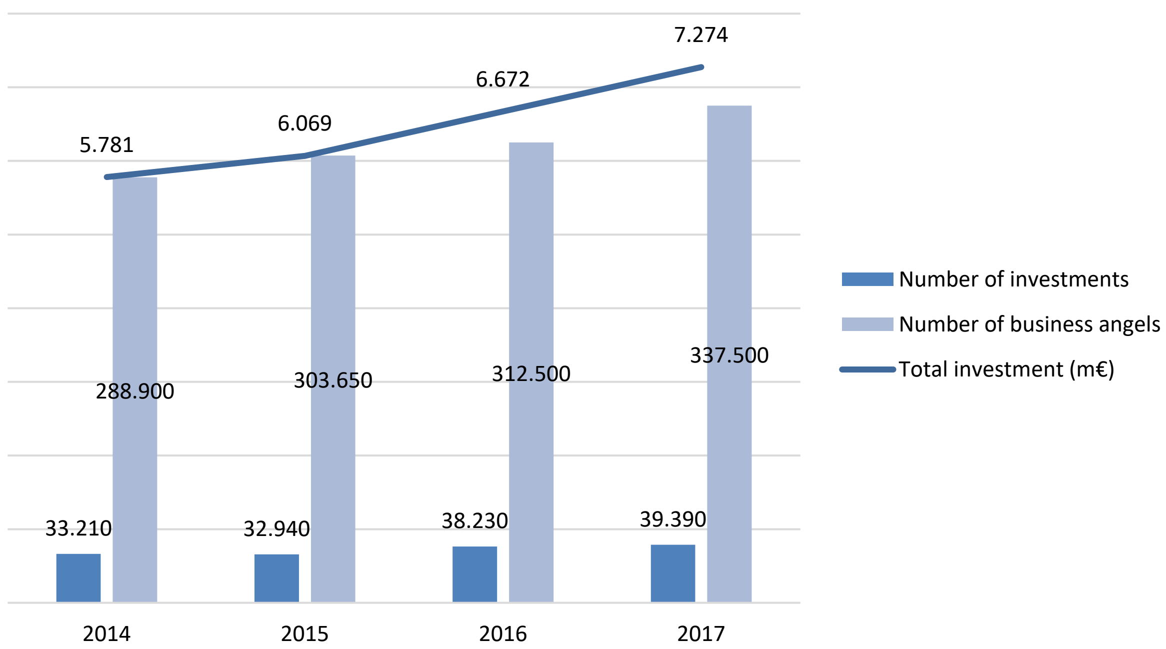
Figure 4.5 shows the number of active BAs in Europe and the investments they have made over the period 2014-2017, based on data from the European Business Angel Network (EBAN).[21] The supply of funds by BAs (to all firms and not only SMEs) has increased steadily since 2014 (26%), mostly driven by the growth in the number of investors (17%). The number of investments made is much lower than the number of BAs. This finding is explained by the growing role played by BA

[21] There are difficulties in measuring the size of the business angel community, the main ones being identification and definition. BAs often stay anonymous and the details on their investments are rarely disclosed. Currently, there is no robust and consistent data available on the Business Angel market in Europe; published data can only be used as indication or very rough estimate.

networks. An increasing majority on BAs co-invest with other early-stage investors (such as other BAs or VC funds) in order to diversify risks and/or improve their skillset and experience. Sourcing channels like crowdfunding platforms are used more often by BAs, in particular by younger and less experienced ones, as tools to find investment opportunities in a wider geographical area (Capizzi, 2015). As introduced above, this trend is confirmed by the evolution in the number of BA networks in Europe, which increased by 17% from 2003 to 2017. Nowadays, according to EBAN data, Europe counts 475 BA networks.[22]

The amount of investments made by BAs and VC seems to be very similar in the last years. However, one must consider the difficulties in measuring the size of the BA community and the related investments. BAs not operating in networks often stay anonymous and the details on their investments are rarely disclosed. Some studies estimate that the invisible part of the market is up to seven times greater the visible part, while others even estimate a multiplier of around ten (EBAN, 2017). Such difficulties must be taken into account when describing the market.

Figure 4.5: Number of active business angels in Europe and investment amounts



Source: Study Team based on EBAN, Statistical Compendium, 2017

As discussed in the previous sections, SMEs with lack of track records and collateral are subject to great asymmetric information problems and difficulties in obtaining credit and equity capital. In order to overcome this gap and reduce the SMEs' dependence on the banking system, Member States have promoted the creation of capital market segments dedicated to small and innovative firms. These alternative trading platforms are aimed at reducing the market failure by promoting the matching between SMEs in need of equity finance and institutional investors such as venture

[22] EBAN Activity Report, 2017.

capitalists and BAs. To enter these dedicated market segments, firms must follow simplified listing processes and satisfy customised information standards that are less stringent than the ones required on the main markets. These segments should both act as screening devices for promising companies that would eventually graduate to the main market, and to provide exit opportunities for venture capitalists and other private investors that would divest from risky and innovative projects (Doukas and Hoque, 2016; Eberhart and Eesley, 2018).

The Commission has recognised the relevance of alternative trading platforms in SMEs financing and through the GBER has aimed at facilitating their activity, either through fiscal incentives targeted at natural persons investing in companies listed on these platforms, or by allowing for start-up aid to the platform operator. Existing platforms, as well, have benefited from the GBER, to the extent that a persistent shortage of listings and liquidity had characterized their activity.

Table 4.1 reports the list of alternative trading platforms for SMEs in Europe, the Member States where they operate, the year of introduction, the number of SMEs listed on these dedicated segments and the type of traded financial instruments (debt and/or equity), according to the information provided by national stock exchanges' websites. Although some trading platforms already existed, such as AIM in the UK, Newconnect in Poland, MAB in Spain, and Emerging Companies Market in Cyprus, several new segments dedicated to SMEs have been created since 2014. In the last two years, six new platforms have been established: Progress in Slovenia, Start in Czech Republic, Progress Market in Croatia, Roots in Greece, SME Growth Market BEAM in Bulgaria (although no SMEs is listed on these last two platforms yet), and the newest one, Direct Market Plus in Austria. Among the most recent ones, two particularly successful platforms have been developed: Scale in Germany, which counts 49 SMEs, and Euronext Growth – Enternext, with 232 listings. Similarly to the associated main stock exchange (Euronext), Euronext Growth has been set up in several Member States (Belgium, France, Ireland, Netherlands, and Portugal), becoming strongly attractive both for listing firms and for private investors, especially institutional ones.

The second to last column of Table 4.1 reports the market capitalisation for the alternative trading platforms, while the last one reports the share of market capitalization of the alternative trading platform with respect to the market capitalization of the primary market, based on available data.[23] The SME segments with the highest capitalization (in absolute values) are the ones located in UK (AIM), Spain (MAB), and Germany (Scale), along with the international platform Euronext Growth. These figures are consistent with the year of establishment of these platforms and the level of development of financial markets in these countries. The most mature platforms are the ones the raised more capital during the years. Hence, we could expect a similar evolution also for those segments that were recently set up. Results are different when we analyse the share of market capitalization of alternative trading platform with respect to the primary market. The countries showing the highest percentages are Cyprus, Slovenia, and

[23] Information on capitalization for alternative trading platforms and primary markets is mainly gathered from the World Federation Exchanges' Annual Statistics Guide (2019), available at the following link: https://www.world-exchanges.org/our-work/articles/wfe-annual-statistics-guide-volume-4. Where this information is not available, the specific websites of the alternative trading platforms and primary markets were consulted.

Romania, i.e. countries where the primary market is not well-developed, compared to the EU average (see section 6.2). These data support the effectiveness of alternative trading platforms in reducing the market failure in the risk finance market, especially in those countries where the matching between providers of finance and SMEs in need of financing was more difficult in the aftermath of the financial crisis because of the low level of financial development.

Table 4.1: Alternative trading platforms for SMEs in Europe

Alternative trading platform (MS)	Main Stock Exchange	Year of establishment	Number of listed SMEs	Financial instruments	Market capitalisation (EUR mln)	% of primary market
Direct Market Plus **(Austria)**	Vienna Stock Exchange	2019	8	Equity	524.46	0.51%
SME Growth Market BEAM **(Bulgaria)**	Bulgarian Stock Exchange - Sofia	2018	0	Equity	N.A.	N.A.
Progress Market **(Croatia)**	Zagreb Stock Exchange	2018	4	Equity & Debt	N.A.	N.A.
ENA Step / ENA Plus **(Greece)**	Athens Stock Exchange	2018	0	Equity & Debt	107.73	0.32%
Start **(Czech Republic)**	Prague Stock Exchange	2018	5	Equity	95.30	0.23%
Progress Market **(Slovenia)**	Ljubljana Stock Exchange	2018	3	Equity & Debt	926.82	14.60%
Euronext Growth / Access / Access+ (**Belgium, France, Ireland, Netherlands, Portugal)**	Euronext	2017	232	Equity & Debt	10,219.00	0.31%
Scale **(Germany)**	Deutsche Börse	2017	49	Equity	6,676.05	0.44%
Prospects **(Malta)**	Malta Stock Exchange	2017	21	Equity & Debt	N.A.	N.A.
AeRO **(Romania)**	Bucharest Stock Exchange	2015	290	Equity & Debt	1,900.00	10.45%
T Market / Xtend **(Hungary)**	Budapest Stock Exchange	2012	8	Equity	9.42	0.04%
AIM Italia **(Italy)**	Borsa Italiana	2012	115	Equity	6,900.00	1.24%
Emerging Companies Market **(Cyprus)**	Cyprus Stock Exchange	2009	37	Equity & Debt	964.60	33.32%
MAB **(Spain)**	Bolsa de Madrid	2008	119	Equity	11,710.30	1.85%
Newconnect **(Poland)**	Warsaw Stock Exchange	2007	385	Equity	1,720.62	1.16%
AIM **(UK)**	London Stock Exchange	1995	901	Equity	108,434.43	3.41%

Source: Study Team based on WFE and Stock Exchanges' websites

The ability of alternative trading platforms to raise funds also depends on investors' propensity to invest in these segments. On the investor side, market segments for SMEs and mid-caps are characterized by high monitoring costs relative to the level of investment and low levels of liquidity, which may act as a significant deterrent (OECD, 2016). Hence, in those countries where alternative platforms are not successful, there may be a lack of institutional and retail investor appetite for SME financial instruments. This is mainly due to the reduced visibility of SMEs, arising for instance from insufficient research coverage, and challenges in respect of liquidity.

There is another concern related to alternative trading platform. The popularity of some SME segments in terms of high number of listings may be mainly due to the strict listing requirements in the main capital markets. Doukas and Hoque (2016) report that during the period 1995-2014, 557 out of 1,143 firms listed on AIM (UK) did not qualify for the main market, however the rest (566) could have joined it. This raises the question whether alternative trading platforms can actually reach SMEs or simply crowd out the main capital markets. Despite the risk of crowding out the main capital markets, alternative trading platforms seem to well support the financing of SMEs, especially in these countries where they are significantly widespread. By offering the possibility to raise equity capital (and debt capital, in some cases), these platforms sustain the competitiveness of SMEs and innovative midcaps, that could have been financially constrained otherwise.

Consistently with the above, among financial intermediaries and associations of financial intermediaries, the overall impression (around 92% of interviewees) is that the number of alternative trading platforms for SMEs and the number of SMEs listed on these platforms has certainly increased since 2014, and only a small share of interviewees (around 8%) state that the number has decreased (Figure D.23 in Annex D). Financial intermediaries are generally satisfied with this increase, as alternative trading platforms represent an additional market place where they can spot profitable undertakings: in other words, alternative trading platforms help meet demand and supply of financing for SMEs, and there is a big interest to further develop this type of access for SMEs. Indeed, one financial intermediary complains of the fact that they are still too few, whereas another one would like to see an improvement in their quality (as they reported that many early stages SMEs failed to raise money from these platforms).

Still, beneficiaries do not have a wide knowledge of the alternative trading platforms and their availability in order to pursue additional financing.[24] In fact, the average rate given by beneficiaries and relative associations to the awareness of alternative trading platform is 2.4[25], where 0 is “no knowledge” and 5 is “extremely good knowledge”. Although most of the beneficiaries interviewed never had the opportunity to raise funds in such platforms, they recognize their importance and the need to take them into account as possible instruments to raise new investments.

Indeed, alternative trading platforms are not perceived by stakeholders to play a particularly important role in providing additional capital to SMEs yet. As described above, owners of the SMEs are not always willing to share the control of their firms, and for this reason they often prefer to rely on bank financing; for those firms looking for equity measures, alternative trading platforms are more successful at raising equity, as BAs and other potential investors may join these platforms and help the SMEs reach their financing needs. In this sense, alternative trading

[24] Some stakeholders even misspecify them as crowdfunding platforms.

[25] 34 respondents.

platforms promote the matching between SMEs in need of equity finance and investors such as venture capitalists and BAs.

Financial intermediaries argue that it is too early to assess the role of alternative trading platforms (their number is still too small and they only address specific markets), but also that they are certainly promising as an avenue for SMEs to obtain financing (average rate of 2.8,with a slight discrepancy between beneficiaries, 2.6, and financial intermediaries, 3.0[26]). For instance, some financial intermediaries are planning to improve their guarantee products, and alternative trading platforms might certainly help. Transparency might help them become even more relevant. However, the effectiveness of these platforms is probably undermined by the limited volume of capital that can be raised: beneficiaries, especially in their early stages, might need greater volumes and flexibility for their investments. Clearly, alternative trading platforms might be very useful for "topping up".

Finally, interviewees argue that the impact of these platforms is positive with regard to the visibility of start-ups, whereas the effect is slightly less significant with respect to the market transparency[27] (Figure D.24 in Annex D). Among the other positive impacts mentioned by the stakeholders, alternative trading platforms have:

- improved the operational efficiency of the listed companies (professionalization of their working methods);
- increased the liquidity of the investments;
- facilitated the relations (even international) between suppliers and clients;
- increased brand loyalty and awareness of the listed company.

Still, there is room for improvement: according to the stakeholders, alternative trading platforms should certainly allow the inclusion of more type of companies (e.g. R&D companies). This would attract a greater turnout of investors. Moreover, alternative trading platforms should enhance their transparency, as most of the times beneficiaries do not know the identity of the investor(s).

[26] 65 respondents.

[27] In particular, on a scale from 1 (no impact) to 5 (significant impact), interviewees reported that alternative trading platform has had an impact equal to 3.0 on increased market transparency, and 3.7 on visibility of start-ups.

5 RELEVANCE OF THE RULES

5.1 General Block Exemption Regulation

In application of Articles 107 and 108 TFEU, the GBER declares certain categories of aid compatible with the internal market and exempted from the requirement of notification to the Commission. Section 3 ("Aid for access to finance for SMEs") of the GBER lays down the conditions under which risk finance aid schemes in favour of SMEs are compatible with the internal market and therefore not subject to prior approval from the Commission.

5.1.1 Instruments

According to the GBER, risk finance aid for SMEs is limited to certain forms, depending on the level at which the aid is granted. At the level of financial intermediaries, risk finance may take the form of equity or quasi-equity investments, loans, or guarantees; at the level of independent private investors, the forms are the same with the inclusion of tax incentives (to private investors who are natural persons); at the level of eligible undertakings the forms are equity or quasi-equity investments, loans, guarantees, or a mix thereof.

In the previous State aid framework regarding access to finance for SMEs, the general aim was to encourage risk capital investment predominantly in the form of equity and quasi-equity: such provision of capital entails a significant degree of risk, as the returns strictly depend on future company's profits.

The GBER framework aimed at broadening the set of financial instruments, and hence capture under the GBER safe harbour additional financial instruments and funding structures, as well as fiscal instruments. Indeed, the problem of the asymmetry of information, under which young companies are unable to signal themselves as viable investments, regards both debt and equity investors, and both these forms of risk finance are covered in the new framework. Moreover, VC fund managers and banks may have different incentives and business models: both choose their investments depending on the economic viability of the business, with the difference that the former, by its very nature, generally chooses more risky investments, whereas banks do so to a lesser extent, and they primarily base their choices on collaterals and track records, which cannot be easily produced by young companies and start-ups.

Regarding fiscal incentives, these were not covered in the previous version of the GBER, which involved only the classic private-public fund model, as the use of this instrument was tied to the notification to the Commission and regulated by the 2006 Risk Capital Guidelines[28] ("2006 RCG"). As reported in the "Revision of the State aid Rules for SME access to risk finance", fiscal instruments are both correlated with the amount of private investments raised from BAs and VC funds, and also very efficient in incentivising investment into the appropriate category of SMEs. For these reasons, the GBER extended the set of instruments in order to include also the fiscal incentives granted to subjects investing directly (or indirectly) into target SMEs.

[28] Available at the following link: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:C:2006:194:TOC

The purpose of the finance measures entailed in the GBER is to play a catalytic role by leveraging private capital. In the interviews conducted, financial intermediaries were asked whether the various forms of risk finance measures are sufficiently attractive for investors, as shown in Figure D.4:

- 53% of the financial intermediaries assert that equity and quasi-equity instruments are sufficiently attractive for private investor (while 29% of interviewees could not respond to the question). According to interviewees, equity instruments are particularly suitable for investments into companies that are too risky for debt finance. With equity and quasi-equity instruments, private investors' interests are completely aligned with those of the company, and, in the event that the business is particularly successful, equity investors get a greater share of the upside than lenders would;
- 45% of financial intermediaries think loans are sufficiently attractive for investors (while 45% could not respond). Interviewees have argued that, compared to equity and quasi-equity instruments, loans are generally less risky, as investors regularly get repayments of capital and interests, and require a lower degree of involvement. Financial intermediaries that have argued that loans are not sufficiently attractive have typically done so because they think that lending money to SMEs in their early stages of their life cycle is too risky, even in the presence of support measures;
- 38% of the financial intermediaries asserts that guarantees are sufficiently attractive for investors, whereas 62% was unable to respond. As discussed in section 3, insufficient guarantees are among the main factors behind the inability for SMEs, especially the smaller ones, to access funds. In this respect, the provision of guarantees through the GBER would make beneficiaries more attractive from the perspective of lenders;
- tax incentives to natural persons are regarded as sufficiently attractive only by 9% of the financial intermediaries interviewed, while 85% was unable to provide an answer. Financial intermediaries have explained that they would find it useful to expand the measure even for subjects who are not natural persons (currently this possibility is allowed under the Risk Finance Guidelines, and hence the measure requires notification to the Commission).

Evidence from case studies suggests that stakeholders are generally satisfied with the financial instruments entailed by the GBER. The range of instruments covered by the GBER seems to be sufficient to address the financial needs of target beneficiaries. Of the three case studies falling under the GBER, two entailed equity and quasi-equity investments (the Finnish and the Italian schemes, described in Annex B.2 and Annex B.3 respectively), and one loans (the Dutch scheme, described in Annex B.1). In all cases, the financial intermediaries interviewed seem to appreciate the fact that the public intervention is made through an investment in funds, either direct or through a loan, because this allows them to choose the best investment opportunities, thereby reducing the interference with market forces. This is particularly true for the Dutch Seed scheme, where the choice among the investment opportunities is entirely left to the investment funds that co-finance the projects. The advantage of such system is that the investment decision is delegated to professional operators that are typically very specialized in specific sectors, and therefore have the knowledge to identify the best investment opportunities in each market. The granting authority, therefore, does not directly intervene in choosing the sectors or businesses to which the funds will go, but only makes sure that only viable investors benefit from the scheme through the screening of an external commission that evaluates their requests. Equity or quasi-equity investments seem to entail a somewhat greater involvement of the granting authorities in the investment decisions, but still preserving the private investors' ability to choose among alternative investment opportunities.

The case studies also show that the financial instruments of the schemes under consideration are generally complementary to those of other support measures available in each Member State, such as regional programs, loans or tax measures. This complementarity was highlighted as a positive factor by the beneficiaries and the fund managers interviewed for the Dutch Seed scheme (see Annex B for details). These schemes are therefore seen as just one piece in the supply of capital to start-ups. With respect to other national support programs, the instruments chosen in these schemes seem to be specifically directed towards the objective of fostering investments by venture capitalists and BAs.

5.1.2 Eligibility criteria

Art. 21(5) of the GBER states that, at the time of the initial investment, undertakings should be unlisted SMEs (i.e. SMEs that are not listed on any stock exchange, except for alternative trading platforms) and should fulfil one of the following conditions:

- they have not been operating in any market;
- they have been operating in any market for less than seven years following their first commercial sale[29];
- they require an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographical market, is higher than 50 % of their average annual turnover in the preceding years.

These eligibility conditions aim at identifying those SMEs that may be affected by the market failure. This may be the case with companies that have yet to enter a market, and therefore have no track record to rely upon and that may represent a significant risk for potential investors; or with those companies that have only recently entered a market (less than seven years); or with those companies seeking to expand into new product and/or geographic markets , making existing track records less relevant to evaluating how risky the investment would be. Indeed, on the one hand, young SMEs are often unable to demonstrate their value (e.g. they are too young to provide sound track records, or they have no experience with regard to new markets); on the other hand, investors face screening costs whose expected value may be larger than returns from the potential investment itself. As a result, financial markets may fail to provide the necessary equity and debt to young (and potentially high growth) SMEs or to those that wish to enter a new market.[30] With respect to the previous GBER, the set of eligible SMEs has been broadened. One of the main problems of the previous GBER framework was that it targeted only SMEs in their early-

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[29] The first commercial sale is defined in Art.2(75) GBER as "the first sale by a company on a product or service market, excluding limited sales to test the market".

[30] Revision of State aid rules for SME access to risk finance, Issues Paper, European Commission, 2012.

growth development stages; however, also SMEs in later growth stages may face the market failure described above.

The choice to refer to the first commercial sale reflects the uncertainty over how long the development stage of an SME is. As explained, the Rules seek to target SMEs in their early stages of their life cycles, i.e. before they enter a market and for a limited number of years after they have done so. However, product development may take a different time, depending *inter alia* on the market SMEs operate in or on the resources that SMEs have been able to access. Using the first commercial sale as a reference point seeks to ensure that, however long the development stage is, SMEs are eligible for funding under the Rules for seven years after the development stage can be deemed to be concluded, i.e. the moment they make their first commercial sale.

Data collected and discussed in section 3 broadly supports the GBER eligibility criteria. The evidence collected suggests that the market failure may decrease with the age of the firm: the older the firm, the less severe the market failure. As they mature, SMEs might improve their ability to demonstrate their value, and hence they might be able to better signal their quality to potential investors. Overall, SMEs that are 10 years old or younger are more likely to face issues when accessing finance compared to more experienced SMEs. This is supported by the findings regarding the INVEST scheme described in Annex B.5, as the majority of the companies supported by the scheme in 2018 are in their early stages: as shown in Table B.12, almost half of the beneficiaries are younger than one year of age, and almost two thirds of them are younger than two years. More generally, the number of beneficiaries decreases as their age increases, suggesting that as the SMEs grow their need for support decreases.

Stakeholders interviewed for the Study were asked whether the eligibility criteria are justified and well-defined based on the types of firms that may be affected by the market failure. 64% of interviewees (74% of beneficiaries and 55% of financial intermediaries) state that the eligibility criteria set out above are justified (Figure D.1 in Annex D). 65% of interviewees (68% of beneficiaries and 62% of financial intermediaries) also state that these criteria are well-defined (Figure D.2 in Annex D).

However, interviewees raised some concerns. While the first criterion – SMEs who have not been operating in any market – is generally perceived as clear, straightforward, and apt to correctly identify the category of SMEs that suffers from the market failure (i.e. young companies that did not or were not able to reach the market yet), the second criterion (SMEs who have been operating in any market for less than seven years following the first commercial sale) is perceived to be more problematic, both in terms of its clarity and in terms of reaching its objective.

Interviewees point out that this criterion may be difficult to handle in practice: sometimes it is hard for the undertakings to trace back the first commercial sale, or clearly identify which of their sales was the first, in light of the fact that sales to test the market should be excluded under the GBER. There exists a general perplexity among the stakeholders, who assert that simpler and more straightforward requirements would be advisable, for instance replacing the first commercial sale with the date of the legal establishment of the company. Further, precisely in light of the potential interpretation problems that it can raise, in designing the INVEST scheme (described in detail in Annex B.5), the German granting authority decided to adopt this approach, setting aside the first commercial sale criterion in lieu of a more straightforward reference to the first entry in the public register. Similar concerns were expressed also in reference to the Italian and UK schemes (see Annex B.3 and Annex B.4 respectively). Granting authorities argue that the concept of “first commercial sale” is not straightforward to interpret and to reconcile with national legislation, and that as a result the moment of the first commercial sale is not always easy for beneficiaries to identify.

While such concerns on the reference to the first commercial sale are well founded, replacing it with a clearer reference point such as the legal establishment of the company would entail a significant drawback. As explained above, the use of the first commercial sale enables to target SMEs in their early years of operations in the market regardless of how long product development may have taken. Replacing the first commercial sale with the date of the legal establishment of the company would make the Rules significantly less flexible in this respect and would limit their ability to target SMEs in their early years of operations in the market.

Further, some interviewees argue that the seven-years threshold is arbitrary and inflexible, as it creates a discontinuity of treatment for SMEs which may be *ex ante* very similar (e.g. a company which is 6.9 years old and one that is 7.1 years old); further, some stakeholders have suggested to increase this time period (for instance to 10 years), as there may be cases where SMEs may need support past the seven years entailed by the GBER. However, while the threshold does create a discontinuity, any conceivable threshold would raise the same issue. Further, the evidence collected does not suggest that an extension of the seven years would be appropriate. As discussed above, data is showing that firms up to five years of activity are the ones that suffer the most from the market failure (see for instance Figure 3.3 and Figure 3.5), the seven-years rule is consistent with the GBER focus on young companies. Of course, there will be exceptions, i.e. companies needing (and deserving) public support past the seven years thresholds. However, based on available data, these would indeed appear to represent exceptions, and as such they may be best handled through the RFG rather than the GBER.

The third criterion concerns SMEs requiring an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographical market, is higher than 50% of their average annual turnover in the preceding five years. Stakeholders generally find that this criterion is successful in targeting SMEs which may suffer from the market failure: even for established SMEs risk finance may be difficult to obtain once they decide to enter a new product or geographical market, as investors can no longer rely on the existing track records of the company.

However, some stakeholders expressed their perplexity regarding the clarity of this rule. Indeed, one association of financial intermediaries reported that there are on-going discussions with national associations on how to assess and calculate the ratio between the initial investment needed and the annual turnover. Moreover, the 50% threshold is sometimes regarded as arbitrary. Finally, a number of interviewees were not even aware of this criterion, whereas others have even proposed to cancel it because it may not specifically address young companies in their early stages.[31]

According to some stakeholders interviewed for the case studies, the exception to the basic age limit granted to companies entering a new product or geographic market contains some ambiguities, because the concepts of "new product market" and "new geographic market" require a judgement to be made. In particular, this created some problems of interpretation when some companies that benefitted from a scheme with the old Rules tried to enter the new scheme. The vagueness of such concepts seems to leave room to arbitrary interpretations by the granting authorities. Some stakeholders even wonder whether the concepts of "new product market" and "new geographic market" should be interpreted in accordance with general concepts of competition law, which would entail making difficult market definition assessments.[32] Defining relevant markets is a complex exercise that would clearly be beyond the scope of granting authorities' activity and skillset. In the definition of the Finnish Tekes scheme, the granting authority decided not to include this eligibility criterion due to the fact that this scheme is very much focused on seed and start-up firms (see Annex B.2 for details).

This eligibility criterion seeks to capture situations where a market failure may indeed exist, as even more stabilised SMEs may find it more difficult to rely on their existing track record when initiating a new venture. Further, Member States can and do set aside this criterion when it does not serve the specific objective they are trying to reach with the scheme. However, the concepts of "new product market" and "new geographic market" may be considered somewhat vague and having a clearer definition of these concepts in the Rules may therefore facilitate their implementation.

Finally, interviewees point out that certain categories of SMEs wrongly excluded from the GBER eligibility criteria. This would apply to:

- older companies who have been out of business for some time and then come back ("rebooting companies");
- companies associated with older legal entities;
- companies who are focused on the product development but have been paid previously for other services;
- companies that sold something at early stages, but then changed strategy and decided to focus on R&D.

While the type of companies listed above may be in certain cases affected by the market failure, their inclusion in the GBER would entail a significant re-thinking of eligibility criteria. There is no

[31] In this sense, some stakeholders have suggested to increase the 50% threshold related to this criterion.

[32] This point was raised by the UK granting authority, see Annex B.4 for details.

evidence that they are so widespread that such a re-thinking would be appropriate. These categories likely represent exceptional cases that may best be handled through the RFG.[33]

Moreover, one financial intermediary pointed out that companies that need the funding to set-up a new establishment or branch in a specific Member State might be excluded from the State aid national schemes. In fact, according to the general initial provisions of the GBER, and more specifically to art. 1(5)(a), the regulation does not apply to State aid measures which entail "the obligation for the beneficiary to have its headquarters in the relevant Member State or to be predominantly established in that Member State", but it is allowed to include "requirements to have an establishment or branch in the aid granting Member State at the moment of payment of the aid". The financial intermediary asserts that actual market conditions show that a company might need the funding in order to set-up a new establishment or branch in the relevant Member State. Hence, this provision might halt certain investments for SMEs that, because of this rule, are not eligible for State aid.

Some of the granting authorities of the schemes considered in the case studies, in particular the Italian and the Dutch one, question the criterion whereby the beneficiary firm must not be a "undertaking in difficulty". They argue that the legislation should not limit investments by private co-investors that may see potentially profitable investment opportunities in a firm in difficulty. According to Art. 2(18) of the GBER, an undertaking in difficulty is defined as an SME for which at least one of the following cases occurs:

- in the case of a limited liability company (other than as SME that has been in existence for less than three years or within seven years from its first commercial sale that qualifies for risk finance investments following due diligence by the selected financial intermediary), more than half of its subscribed share capital has disappeared as a result of accumulated losses;
- in the case of a company where at least some members have unlimited liability for the debt of the company (other than as SME that has been in existence for less than three years or within seven years from its first commercial sale that qualifies for risk finance investments following due diligence by the selected financial intermediary), more than half of its capital as shown in the company accounts has disappeared as a result of accumulated losses;
- the undertaking is subject to collective insolvency proceedings or fulfils the criteria under its domestic law for being placed in collective insolvency proceedings at the request of its creditors;
- the undertaking has received rescue aid and has not yet reimbursed the loan or terminated the guarantee, or has received restructuring aid and is still subject to a restructuring plan;

Overall, this provision would appear to be justified. Granting aid for access to risk finance for SMEs in difficulty may be too risky, and lead to an inefficient use of the public resources. Given

[33] These companies do not necessarily fall under the third eligible criterion (they require an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographical market, is higher than 50 % of their average annual turnover in the preceding years) as they may not be planning to enter a new product or geographical market.

that schemes typically have limited budgets, arguably those funds would have a better chance to contribute to the development of SMEs if invested in healthier SMEs.

Finally, beyond the specific concerns reported and discussed above, case studies have confirmed a general satisfaction with the GBER eligibility criteria. All granting authorities interviewed for the case studies believe that the design of the scheme was not limited by the GBER, and that they were typically able to design the scheme such that it reached their desired targets. They have regarded the eligibility criteria entailed by the GBER seem to be very flexible with respect to the specific objectives of their schemes.

5.1.3 Quantitative restrictions

In addition to the eligibility criteria, the GBER entail a number of quantitative restrictions, which integrate the eligibility criteria and whose purpose is to help in reaching the policy objectives of the new GBER rules and narrow the perimeter of the applicability of these rules.

The first quantitative restriction regards equity and quasi-equity investments, for which a risk finance measure may provide support for replacement capital only if the latter is combined with new capital representing at least 50% of each investment round into the eligible undertakings (art. 21(7) GBER). This restriction allows aid for replacement capital, which was limited under the previous version of the GBER. The replacement capital represents the purchase of existing shares in a company from an earlier investor or shareholder. A typical example is a BA selling its shares to a VC fund. Introducing aid for replacement capital combined with new capital has a twofold effect: on the one hand, it brings additional fresh capital into the investee, hence sustaining its growth prospects. On the other hand, it facilitates the exit of the previous investor, enhancing ex ante incentives to invest in first place. Replacement capital is necessary for the former provider of capital to exit and for other investors to finance new growth investments.

Almost 64% of the financial intermediaries interviewed find that this restriction is justified, as shown in Figure D.25. Indeed, financial intermediaries agree that this provision guarantees fresh injections from private investors, while facilitating the previous investors in selling their shares. However, several financial intermediaries asserted that the 50% threshold might be too high, and hence limit the opportunities for SMEs to access replacement capital; in this sense, interviewees have suggested that a 30% threshold would be more appropriate. Another problem that has been highlighted by more than one interviewee is that this restriction can become an issue when the investor is a consortium of investors. By their nature, a consortium may change its composition over time (some new investors may join it, whereas old investors may decide to leave it) though maintaining the same name: in this case, in order to comply with the provision, it would be necessary to monitor the composition of the consortium, and this may be burdensome. Evidence from the case studies shows that this provision is seen as problematic in some cases. In particular, this is seen as a major limitation by stakeholders of the Finnish Tekes scheme (see Annex B.2), because the requirement that replacement capital can be used only in conjunction with new capital injection for the same amount into an eligible undertaking does not follow the general market practice and may cause lower returns for example to investors of financial intermediaries. It is not uncommon that existing shareholders are forced to sell their holdings in a company to the other shareholders of the company. These secondary transactions may normally be profitable to the shareholders as there might be good return expectations. Such events are typically unplanned and independent of possible investment rounds. Therefore, financial intermediaries that operate under GBER Article 21 may not always be able to purchase such shares from existing shareholders, to the possible detriment of their private investors.

Based on the available evidence, it is difficult to say how widespread the concern about this provision is. In particular, a balance should be made between the consideration that should be given to private investors' interests, which would call for more flexibility in the possibility of buying shares from existing shareholders, and the primary objective of State support, which is to solve a market failure caused by information asymmetry. In this respect, removing this provision altogether would imply that investment funds that are partly endowed with State resources would be free to acquire shares from other shareholders irrespective of the existence of a market failure. In this situation, a case-by-case assessment would probably be desirable, in order to make sure that the investment still meets the criteria required to obtain State aid. This would however cause delays and increase uncertainty, which is undesirable from the point of view of private investors. Another possibility would be to set a lower threshold for capital replacement, in order to reduce the share of private capital inflow. It is however difficult to assess which threshold would be more appropriate. Overall, at this stage it seems that this issue may deserve further attention, in order to understand whether there is a widespread consensus on its limitations also with respect to other schemes in different Member States. It is however premature, based on the evidence available so far, to think of an amendment of this provision in the direction of an increased flexibility.

The second quantitative restriction regards the total amount of risk finance, which should not exceed EUR 15 mln per eligible undertaking under any risk finance measure (art. 21(9) GBER). The requirement in the previous GBER was that each round of investments had to be at most EUR 1.5 mln for successive periods of 12 months: a threshold which was reported to be insufficient to fill the funding gap of the SMEs, whose needs, especially in key development years, may require additional funding and also more flexibility. Thus, this system has been replaced with an overall investment cap that lasts a longer period of time and should be arguably sufficiently large to accommodate successive financing rounds.

This restriction is regarded as justified by 60% of the financial intermediaries interviewed for the Study, whereas 20% did not know (Figure D.25). Most financial intermediaries noted that this amount is generally sufficient to cover any investment that the average SME may need during the time period set by the eligibility criteria. However, some financial intermediaries have argued that the threshold may be insufficient for SMEs operating in specific sectors of economic activities where large scale investments are needed due to the nature of the sector, e.g. health-care companies, or companies developing new drugs. These stakeholders suggest increasing this threshold to (at least) EUR 20 mln, even simply for certain economic sectors.

Other financial intermediaries assert that in theory this limit is too low, but in practice the schemes designed by Member States often do not allow for investments up to EUR 15 mln, which would mean that the problem may first lie with the national implementation of the GBER. Indeed, schemes analysed for the case studies entail thresholds that are far below the EUR 15 mln maximum set up by the GBER. The evolution of these schemes has led to an increased need of larger funds and of support for follow-on stages of investment, entailing an enlargement of the investment thresholds (in particular for the Dutch Seed scheme and for the Finnish Tekes scheme, see Annex B.1 and Annex B.2, respectively). Still, these enlargements have never reached the point that the limit of EUR 15 mln becomes restrictive or binding: for instance, a granting authority stated that the EUR 15 mln threshold was in practice not restrictive, because the type of firms targeted by the scheme generally need investments that are far below this threshold. The same generally holds for the other GBER schemes that have been analysed in the case studies, as it is possible to grasp from Table B.15 in Annex B.6, which summarizes the amount of the maximum investment per company for the national schemes analysed. Lastly, the Italian granting authority raised an interpretation problem for the Lazio scheme, namely whether follow-on investments should be subject to the investment limit of EUR 15 mln (see Annex B.3).

Overall, it would seem that the EUR 15 mln threshold is suitable for most cases, as most interviewees have indicated so and as the limit does not seem to be binding for the national schemes analysed. While it is conceivable that this amount may be insufficient in some situations, sector-specific thresholds may be extremely complicated to enforce: deciding the sector of economic activity is far from straightforward and such a provision would create room for discretionary (and potentially arbitrary) decisions. Exceptions may be better dealt with through the RFG rather than through a change to the GBER.

The third quantitative restriction regards the presence of independent private participation within the investment. For risk finance measures providing equity, quasi-equity or loan investments to eligible undertakings, the risk finance measure shall leverage additional finance from independent private investors, so that the aggregate private participation reaches the following thresholds (art. 21(10) GBER):

- 10% for undertakings prior to their first commercial sale;
- 40% for undertakings that have been operating in any market for less than seven years following their first commercial sale (60% in case it is a follow-on investment);
- 60% for undertakings that require an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographical market, is higher than 50% of their average annual turnover in the preceding 5 years (art. 21(10) GBER)

The main principle behind the private participation requirements is making sure that the investment has merit. Having a private investor on board is a guarantee that the investment has undergone a meticulous risk assessment by a skilled, specialised operator. To the extent that private investors take profit-driven investment decisions, these requirements ensure that there is potential in the investee, which is one of the necessary conditions for the existence of the market failure. Accordingly, the private investor should be independent from the investee. The increasing thresholds set in this quantitative restriction reflect the relative size of the funding gap: because of their difficulty to provide clean long-term track records, start-ups and young companies face greater funding gaps compared to older companies seeking to expand in other markets.

Financial intermediaries were asked whether they find that the minimum private participation rates entailed in the GBER are appropriate. Financial intermediaries generally find minimum participation rates appropriate (Figure D.26 in Annex D). In particular:

- the 10% rate for companies before the first commercial sale is appropriate for around 71% of the financial intermediaries. However, they also underline that, at this stage, it is generally difficult to attract investors, consistently with what beneficiaries reported;
- the 40% rate for companies that have been operating in any market for less than seven years following their first commercial sale is appropriate for around 60% of financial intermediaries, but some of them find it too steep and have suggested that it should be lowered;
- the 60% rate for companies requiring an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographical market, is higher than 50% of their average annual turnover in the preceding five years, and 60% in case it is a follow-on investment for companies that have been operating in any market for less than seven years following their first commercial sale, are deemed to be appropriate by 47% of the financial intermediaries, while 32% of them said the opposite. Most of the stakeholders report that this rate should be lowered to 40/50%, but that it also depends on the geographical position of the investment, as in certain countries/regions this may not represent a problem (for instance in those regions where the equity market is strongly developed).

Moreover, one financial intermediary reports that this provision may need to be clarified: the source of the lack of clarity is the timing when the private/public ratio must be attained. In fact, financing rounds might include investors coming in different periods in order to benefit from tax reliefs (e.g. within a window of a couple of months). Similarly, according to the financial intermediary the provision entailed in art. 21(11) GBER[34] may need clarification regarding the timing when the weighted average of the private participation rate must be computed. If it must be computed at the time of the funding round, it might be limiting; hence, it should be specified that the threshold must be reached at the end of the fund's investment period, if this is the case.

Beneficiaries have also been asked if, in their experience, it has been difficult to attract private capital in the required amount (Figure D.3 in Annex D): 50% of the beneficiaries assert that that it has represented an issue, while only 29% replied that it has not been. Interestingly, most of the beneficiaries who have asserted that attracting private capital has been difficult reside in Member States where the market capitalization is low compared to the GDP (for instance, Greece, Austria, and Italy, as further discussed in section 6.2). Besides confirming that their attractiveness for private investors hinges on the development stage of the company and its business model, beneficiaries also mention other difficulties they face in attracting private investors. First, there are not many private investors around. BAs (and associations of BAs) seem to be a valuable help in accessing funds, but their number is limited. Some schemes have tried to overcome this issue by directly intervening in the matching between private investors and beneficiaries. Second, private investors seem to be reluctant to invest if the company has not attracted public funds first. This seems to be a recursive problem: SMEs cannot access public funds because they lack

[34] Art. 21(11) GBER specifies that "where a risk finance measure is implemented through a financial intermediary targeting undertakings at different development stages as referred to in paragraph 10 and does not provide for private capital participation at the level of the eligible undertakings the financial intermediary shall achieve a private participation rate that represents at least the weighted average based on the volume of the individual investments in the underlying portfolio and resulting from the application of the minimum participation rates to such investments as referred to in paragraph 10".

private investors, and they lack private investors because they cannot access public funds. Some stakeholders have suggested to remove the minimum private participation at least for companies in their early stage.

Most of the concerns raised by beneficiaries seem to be related to countries where the development of financial markets is still at a low level. The European VC market has remained fragmented and financial markets are not all well-developed across Europe, especially for equity (as explained in following section 6.1 and section 6.2) despite an overall increase in the funds raised and investments in SMEs in the PE and VC markets (as extensively discussed in section 4): certain Member States (e.g. Poland, Romania, and Greece) lack of a critical size of financial markets, as well as a developed investor base. Hence, for SMEs operating in these countries it may be difficult to find and attract the minimum share of private investment required by the GBER. Thus, the private participation requirements may restrict the provision of risk finance to those SMEs that are affected by the market failure but struggle to find a private investor.

However, these provisions are central and unavoidable, as they ensure that the investment is evaluated based on market criteria and allow the Rules to play a catalytic role by leveraging private capital. Moreover, the increasing thresholds encompassed in this provision reflect the relative size of the funding gap, so that start-ups and young companies must cope with relatively lower minimum private shares. This problem could be ameliorated thanks to a more active role by granting authorities in trying and matching investors and investees, as granting authorities have done in some cases: for instance, for the INVEST scheme (see Annex B.5), the Ministry implemented an online database where INVEST-eligible companies can sign up in order to be visible for potential investors.

Besides, in various instances beneficiaries have asserted to have been helped by the granting authorities of national schemes granted under the Rules find private investors.

Stakeholders interviewed for the case studies generally believe that the minimum participation thresholds are appropriate and respond to the objective of attracting private capital. The only issue raised by some stakeholders concerns a provision of the Dutch Seed scheme (see Annex B) whereby the funds cannot be granted to firms that have already a professional investor. In particular, some fund managers interviewed for the case studies think that this provision can be restrictive because there are situations of early-stage start-ups with a professional investor already onboard but still experiencing an equity gap. More flexibility on this condition would therefore be desirable. This is also confirmed by the results of a survey recently conducted on the Dutch Seed scheme, where the majority of the Seed Capital fund managers seem dissatisfied with this provision (see Annex B for details).

The fourth (and last) set of quantitative restrictions states that the risk finance measure should fulfil the following conditions:

- it shall be implemented via one or more financial intermediaries (except for tax incentives). This is deemed necessary by 75% of interviewees, as it guarantees the sufficient level of incentives for the investors to look for the best companies to fund; indirectly, it represents an incentive even for the companies themselves, as they need to do their best in order to attract the attention of the investors;

- financial intermediaries shall be selected via an open, transparent, objective, and non-discriminatory procedure. This is considered necessary by 78% of stakeholders, as it creates the conditions for the financial intermediaries to compete among themselves;
- in the case of asymmetric loss-sharing between public and private investors, the first loss assumed by the public investor shall be capped at 25% of the total investment. This is considered necessary by 43% of financial intermediaries;
- for guarantees, the guarantee rate shall be limited to 80% and total losses assumed by a Member State capped at a maximum of 25% of the underlying guaranteed portfolio. 50% of financial intermediaries asserts that this condition is still necessary.

Full results for this set of quantitative restrictions are shown in Figure D.27 (Annex D).

5.2 Risk Finance Guidelines

The logic behind the RFG is to provide a set of rules and principles which are complementary to those expressed in the GBER, in order to enlarge the perimeter of rules and reach those SMEs which are not eligible under the GBER but in particular cases may still be affected by the market failure.

While the GBER establish general provisions that delineate a set of eligible undertakings (along with a number of quantitative restrictions) which are presumed to suffer from the market failure, the aim of the RFG is to guarantee access to finance even for those undertakings which do not fall within the criteria set in the GBER, but that are constrained by the market failure. Hence, the RFG only regulate the outliers, i.e. firms that in principle should not face problems in accessing finance, but that in reality do. For this reason, the Commission, according to the RFG these measures must be notified by the interested Member State and assessed by the Commission through the so-called compatibility assessment.

The RFG represent a revision of the 2006 RCG: after a public consultation launched in 2012, the Commission on the one hand concluded that the basic principles of these guidelines provided “a sound basis for channeling Member States’ resources to the intended target SMEs while limiting risks of crowding out” (§ 12, RFG), but on the other hand it found out that “the Risk Capital Guidelines were often considered to be too restrictive in terms of eligible SMEs, forms of financing, aid instruments and funding structures” (§ 12, RFG). Hence, the Commission undertook a substantial review of the guidelines to promote “a more efficient and effective provision of various forms of risk finance to a larger category of eligible undertakings” (§ 14, RFG). The RFG represent the result of this effort.

The RFG allows for measures targeted at categories of undertakings outside the scope of the GBER. The Member State must carry out an in-depth *ex ante* assessment of the market situation providing evidence of the market failure and explaining how the proposed measure would address it. In this case the measure applies to categories of companies that do not fulfil the requirements expressed in the GBER, and hence are not presumed to be affected by the market failure, so the Member State must specifically justify the aid to them. In particular, this encompasses measures targeting the undertakings described below. For each category, stakeholders were asked whether, in their experience, the limitation in the RFG to these types of companies reflect the companies that are potentially affected by the market failure and if these criteria are sufficiently clear (as shown in Figure D.5 in Annex D): [35]

- small mid-caps. Even if these undertakings might be very large compared to SMEs, under certain circumstances they may still be affected by the market failure, for instance when requesting large loans, they may not be able to exhibit sufficient collateral. In its assessment, the Commission examines the labour- and capital-intensity of the undertaking, together with other criteria that may signal the financing constraint. 69% of stakeholders (65% of beneficiaries and 71% of financial intermediaries) confirm that this type of company might be affected by the market failure: certain companies in this category might find themselves in the position of not being able to prove their business value;
- innovative mid-caps, for whom risk finance State aid may be necessary to increase their production capacities. Indeed, these companies may face financial constraints due to their innovative nature, which does not allow investors to make relevant assumptions with respect to their business value. 59% of beneficiaries and 65% of financial intermediaries assert that these companies might be affected by the market failure, especially considering their innovative and R&D nature;
- undertakings receiving first aided investment after seven years following their first commercial sale. Their inclusion is justified by the fact that this period might not be long enough for certain companies to overcome the expansion/early growth stage. In particular, this may occur in high-risk sectors (e.g. biotech) and for innovative SMEs. Among the stakeholders that were able to answer this question, 57% (59% of beneficiaries and 56% of financial intermediaries) agree that this category should be included in the RFG, though some stakeholders have also stated that such companies should qualify for aid under GBER (consistently with the discussion in section 5.1.2 above);
- undertakings requiring more than EUR 15 mln overall investment. Companies belonging to certain industries (e.g. energy or pharma, where upfront costs are high) need a total amount of risk finance higher than the EUR 15 mln set by the GBER. Hence the RFG set out precise conditions for access to finance by these companies. On average, 60% of the interviewees (47% of beneficiaries and 67% of financial intermediaries) agree with the inclusion of this category within the Risk Finance Guidelines, but some stakeholders express concerns that for amounts above EUR 15 mln it is necessary to go through the notification procedure set by the RFG, and were in favour of broadening the GBER safe harbour;
- alternative trading platforms not fulfilling the conditions of the GBER. Certain alternative trading platforms might face a financing gap but not fulfil the criteria set by the GBER. For instance, they may not be small enterprises, or may not only list SMEs. In these cases, the RFG allow for the use of fiscal incentives to corporate investors in order to support access to finance for SMEs: measures supporting an alternative trading platform are granted under the condition that the operator of the platform provides a business plan demonstrating that the

[35] It should be noted that stakeholders interviewed were generally less knowledgeable about the RFG than they were about the GBER, often because they did not have a direct experience with the Risk Finance Guidelines. As a result, the responses they provided are less detailed.

aided platform can become self-sustainable in less than ten years. 46% of interviewees agree that these types of companies should be eligible to aid under the RFG, whereas 52% did not know.

Further, 68% of interviewees (75% of the beneficiaries, 65% of the financial intermediaries) thinks that these criteria are clear and well defined (Figure D.6 in Annex D), though again there was some criticism with respect to the concept of the first commercial sale, which is relevant also for the RFG.

Case studies provide evidence on the implementation of the RFG. Following the introduction of the RFG, in 2015 UK authorities notified a set of amendments to the Enterprise Investment Scheme and Venture Capital Trust scheme. In line with the RFG, the main objective was to help business finance and VC markets to operate more efficiently and competitively across the UK and the EU, and to allow more SMEs and innovative mid-caps with growth potential to access the funding that they need to start-up and expand. The main amendments they introduced to pursue these objectives were related to mid-caps. In particular, UK authorities extended the “no age-limit” rule from 7 to 10 years for knowledge intensive mid-caps (see Annex B.4 for more details). However, in order to mitigate the risk that the program was used for investment into relatively established companies without genuine growth prospects, the UK authorities introduced a new rule to ensure that eligible undertakings demonstrate that they intend to use the finance that they seek under EIS and VCT to grow and develop the company.

As part of the risk finance measure, Member States may adopt the financial instruments already mentioned in the GBER. However, the RFG set additional conditions regarding the use of these instruments. In particular, the RFG allow the use of the financial instruments described below. For each instrument, stakeholders were asked whether the conditions for the instrument are still justified under the current market situation (Figure D.28 in Annex D):

- equity instruments with non-*pari passu* loss-sharing features may be adopted. Yet, to prevent extensive downside risk protection, the first loss piece borne by the public investor must be capped. 58% of stakeholders (52% of beneficiaries and 62% of financial intermediaries) assert that this condition is still justified; however, some of them assert that the cap should be eliminated, as this would make it easier to get investments from the private sector;
- loans where the public investor/lender assumes a first loss position exceeding the cap set out by the GBER (i.e. 25%).[36] Portfolio risk sharing loans should ensure a substantial co-investment rate by the selected financial intermediary, and this is presumed to occur when the co-investment rate is not lower than 30% of the value of the underlying loan. 53% of interviewees confirmed that this condition is still justified (62% of beneficiaries and 47% of financial intermediaries);
- guarantees where the guarantee rate may go beyond the limit set by the GBER (80%), but which must not exceed 90%. For capped guarantees, the cap should not exceed 35%, whereas uncapped guarantees must be priced in order to reflect the additional risk coverage. 56% of

[36] In the case of asymmetric loss-sharing between public and private investors, the first loss assumed by the public investor shall be capped at 25% of the total investment

stakeholders (62% of beneficiaries and 53% of financial intermediaries) confirm this condition is justified. Only 11% (14% among beneficiaries and 9% among financial intermediaries) pointed out that this condition is not justified;

- tax incentives (i.e. tax reliefs on income or on capital gains/dividends) targeted at investors who are not natural persons (e.g. corporate investors). Such fiscal measures are considered appropriate only when the Member States are able to produce a public, well-structured set of investment requirements (apt to select the eligible undertakings) together with a list of characteristics of the eligible undertakings. Fiscal schemes are limited to ten years[37], they must take into account the relevant national fiscal systems, and they must be open to all investors fulfilling the required criteria. Overall, 51% of interviewees (76% of beneficiaries and 35% of financial intermediaries) regards this condition as still justified, while the remainder of the interviewees does not know. Stakeholders think that this measure is particularly apt to incentivize private investment: it leverages private investors, as it switches the risk from private investors to the State, and this may be useful especially in recession periods. Hence, some stakeholders suggest extending the ten-years limit, as it may be inappropriate for certain sectors.

Furthermore, the RFG require a minimum participation of private investors. Almost 56% of financial intermediaries find that the forms of risk finance measures covered by the RFG are sufficiently attractive for investors, as shown in Figure D.7. In particular, one financial intermediary pointed out that, once an undertaking has successfully attracted private co-investors, it is easier to operate outside the rules set in the GBER as the provisions in the RFG allow for more flexibility and greater risk diversification.

[37] Later extensions are possible, but they must follow a new *ex ante* assessment and an evaluation report on the effectiveness of the scheme.

6 EFFECTS OF THE RULES

The Rules may have a variety of effects, from desired to undesired:

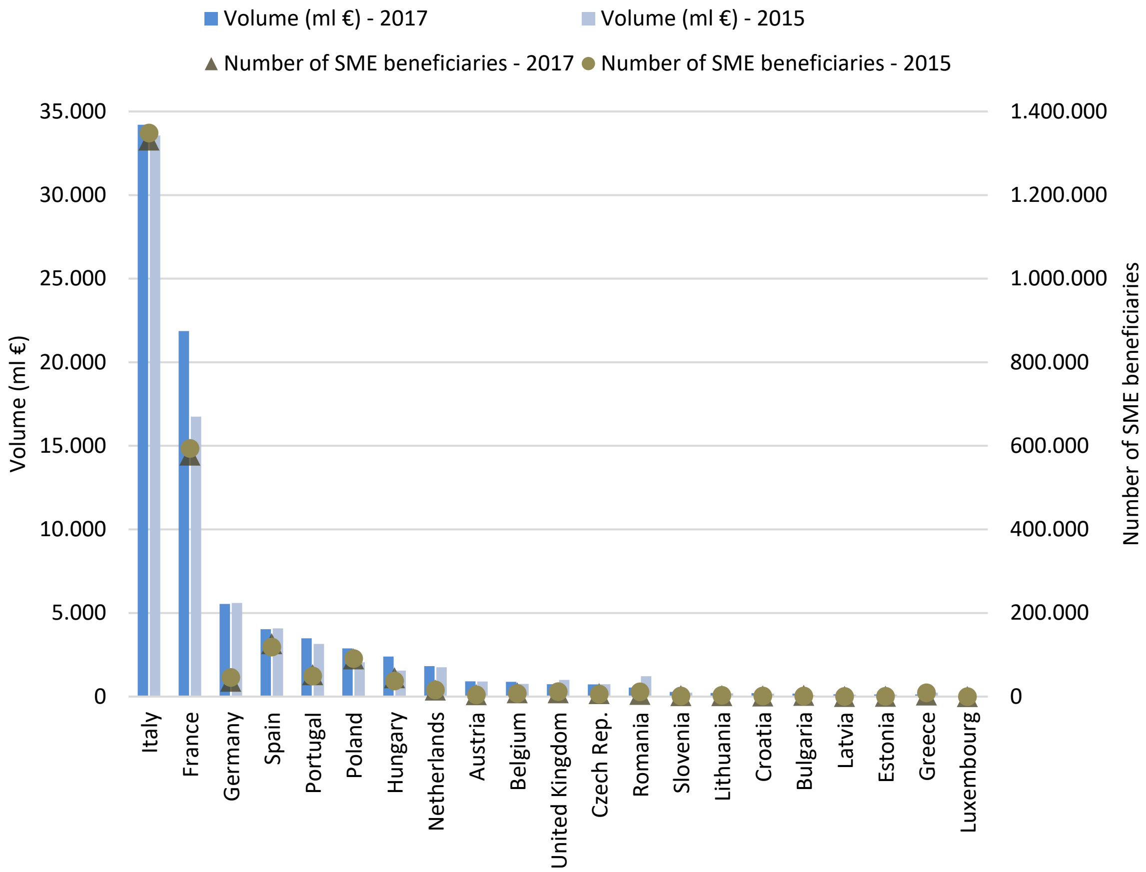
- first, the Rules aim at bridging the finance gap for firms affected by the market failure by directly favouring the supply of capital to these entities. This is explored in section 6.1;
- second, the Rules aim at encouraging the development of financial markets, thereby indirectly remedying the market failure. This is evaluated in section 6.2;
- third, by remedying the market failure, the Rules should help beneficiaries develop. This is assessed in section 6.3;
- fourth, the Rules may have a negative impact by incentivizing less thorough financing decisions by financial intermediaries, displacing the private provision of finance and distorting competition. This is explored in section 6.4.

6.1 Direct effects on the provision of risk finance to SMEs

As extensively described in section 3, SMEs' access to finance has improved in the last few years. This improvement may be the result, *inter alia*, of the adoption of State aid schemes under the new Rules, as well as the quantitative easing that took place in Europe since March 2015 to deal with the European financial crisis, along with the fact that the financial crisis itself may have favoured the survival of the most credit- and investment-worthy SMEs. In this section, we seek to provide evidence on whether the improvement may be attributed at least in part to the Rules by focusing on metrics that are more directly linked to the public support measures and by gauging the opinions expressed by stakeholders on this matter.

Figure 6.1 shows the outstanding guarantees on SME loan portfolios for the years 2015 and 2017. Starting from the last available data (end of 2017), in terms of volumes of outstanding guarantees, the core countries are Italy (EUR 34.2 mln) and France (EUR 21.9 mln), followed at some distance by Germany (EUR 5.6 mln) and Spain (EUR 4.0 mln). Concerning the total number of SME beneficiaries, nearly half of them (more than 1.3 ml) are located in Italy. Latvia granted the highest average size of outstanding guarantee in portfolio (EUR 159,400), followed by Austria (EUR 154,200), Germany (EUR 125,200), and Croatia (EUR 121,000). Italy and France, despite showing the two highest volumes of outstanding guarantees in portfolio, have relatively small average sizes of guarantees (EUR 32,400 and EUR 37,300 respectively), reflecting the presence of a high share of SMEs borrowing small loans. Compared to 2015, the guarantee activity has on average increased. The highest growth rates on the two years considered have been recorded in Bulgaria (+94%), Hungary (+54%), Poland (+41%), and France (+31%). Conversely, the amount of outstanding guarantees has significantly decreased in Romania (-56%), Greece (-44%) and United Kingdom (-26%).

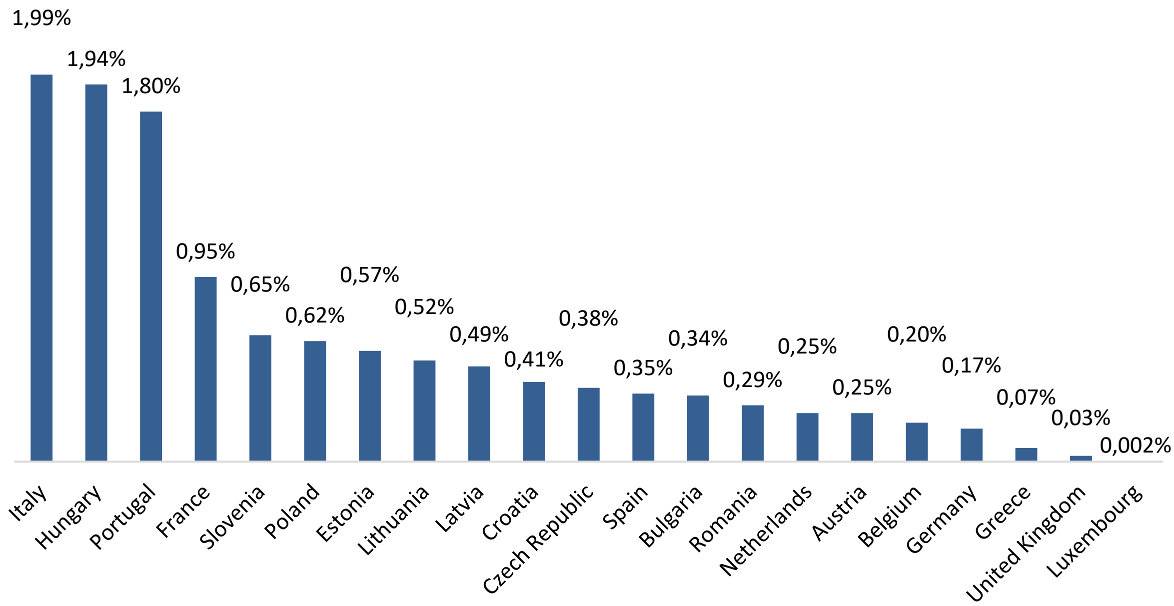
Figure 6.1: Outstanding guarantees and number of SME beneficiaries in portfolio (2015 vs. 2017)



Source: Study Team based on EIF Small Business Finance Outlook, June 2016-2018

As shown in Figure 6.2, and consistently with the data described above, for the year 2017 Italy leads the ranking in terms of the relative importance of guarantees compared to the volume of economic activity as proxied by the GDP (1.99%), followed by Hungary (1.94%) and Portugal (1.80%). Both figures, combined with the evidence provided in sections 3 and 4, suggest that credit guarantees may have been effective in addressing the market failure characterizing SMEs' access to finance. In those Member States where SMEs are most dependent upon bank financing, such as Italy, France, and Spain, guarantee schemes have reached a high share of SMEs thus alleviating their financial constraints.

Figure 6.2: Government guaranteed loans for SMEs (% of GDP; end of 2017)



Source: Study Team based on EIF Small Business Finance Outlook, June 2018. Notes: All types of guarantees included.

When asked whether in their opinion access to finance under the Rules has become easier after 2014, 42% of interviewees asserted that it has, either moderately or considerably (56% of financial intermediaries and 27% of beneficiaries), whereas 41% of interviewees were unable to respond (Figure D.8 in Annex D). Stakeholders agree that the main reason for this phenomenon is that in the last few years the number of VC companies has significantly increased, as well as the number of private investors. While stakeholders were generally unable to point out whether these improvements are in turn due to better market and economic situations, or if they are due to the Rules, most of them argue that the Rules have helped face the market failure affecting SMEs.

According to stakeholders interviewed, the positive contribution of the Rules in remedying the market failure has been driven by three characteristics of the Rules as compared to the previous framework:

- they are less strict than the old ones: for instance, the private participation rates have been lowered;
- they are more flexible, as they encompass many risk finance instruments and generally allow for more and better ways for firms to access finance;
- certain limits have been broadened, and especially the one on the total size of the investments, so investments are now more conspicuous.

Beneficiaries and financial intermediaries were also asked whether, in the cases they were directly involved, the finance measure that was granted was sufficient to address the financing gap of the beneficiary. Responses differ depending on the type of measure, i.e. equity, guarantee, or loan (Figure D.29 in Annex D):

- equity measures are regarded as sufficient by 47% of the interviewees, whereas 28% of them regard these measures as not sufficient (the remainder did not know). The majority of both beneficiaries and financial intermediaries were satisfied with the supplied equity measures;
- regarding loans, around 40% of the stakeholders think that granted loans were sufficient to address the financing gap, while roughly the same share believes the contrary (the remaining 20% did not respond). Among beneficiaries, loans are regarded as sufficient by only 24% of them, whereas the majority (47%) asserts the contrary. Financial intermediaries expressed a different idea, as 46% of them think the granted loan was sufficient, while only a smaller share (38%) do not. Those who assert that the granted loan was sufficient think that it has helped the beneficiary expand its business and build its credit history;
- around 30% of the stakeholders interviewed emphasize that the guarantees granted under the national schemes were sufficient to address the financing gap, while around 31% state the opposite. The remainder 39% could not answer this question. Stakeholders state that the main source of insufficiency is the (too) low share of the loan covered by the guarantee.

6.2 Effects on the broader availability of risk finance

The Rules seek to incentivize the development of financial markets: directly, by generally requiring a private investor to join in the investment; and indirectly, by creating favourable conditions for the development of SME financial markets.

The evaluation exercises undertaken for the schemes we analysed as part of the case studies show that these schemes were generally effective in stimulating the VC market in the countries in which they were implemented. These programmes stimulated investments not only by established investors, but also by new investors. Overall, the evidence collected in the case studies suggests that the support to skilled private venture capitalists allows not only to address the finance gap, but also to allow additional investment rounds. Established private venture capitalists are also able to catalyse potential investment projects and to create the conditions and prospects for the development of research-based start-up companies.

As regards for instance the UK scheme, the amount of funds raised by VCTs has been on a rising trend in recent years and has more than doubled since 2009-10. The increase in the amount of funds raised in 2016-17 and 2017-18 may reflect the growing attractiveness of VCTs relative to other investment possibilities. There has also been a steady increase in funds raised through the EIS since 2010, which could be due to sustained historically low interest rates, increasing promotion and involvement of fund managers.

Also the German INVEST scheme contributed to reducing the negative effects of asymmetric information, which are more pronounced during the early phase of financing. One channel whereby the program reduces the market failure is the reduction of the risks for investors. In addition, the signalling effect of INVEST can help reduce the market failure. Since the start of the programme, 4,670 investors received an INVEST grant. These financial intermediaries invested in 2,045 start-up companies, for a total amount of investments of EUR 419.35 mln over the period May 2013-July 2019. The program figures have grown over time. In particular, the growth in the number of investors and in the amount of funds seems to be more pronounced since 2016, when the scheme was reformed. It is interesting to notice that the average amount of investments per investee company has more than doubled since the introduction of the program. In parallel, also the average amount of funds per investor increased from EUR 60,000 to EUR 100,000. While, in the early years of the scheme, less than half of the companies could find at least two assisted investors, in recent years they find on average 2.5 investors each. All these figures suggest that the investments supported by the program have scaled up.

The case studies provide useful insights also on the channels through which State aid schemes fosters the development of SMEs financing markets. There are two main channels through which these programmes support the development of VC markets. On the one hand, in the case of equity investments, they often give the initial push to a fund by taking the role of leading investors. On the other hand, the presence of the public investor and its extensive experience with equity funds enables it to help a supported fund to find other investors, thereby allowing funds to reach a critical mass. It seems likely that some of the funds supported by these programmes would not have existed absent its initial support. Financial intermediaries also typically appreciate the fact that the public intervention is made through an investment in funds, because this allows them to choose the best investment opportunities.

More generally, the availability of these schemes is likely to have catalysed additional equity. These programmes typically mobilize additional VC through two channels. First, investors which are looking to make their first investments (the so-called *virgin angels*[38]) are encouraged to invest in start-ups. Many of them typically invest together with other experienced investors. Secondly, experienced investors may invest more equity capital. The total net effect resulting from investments by virgin angels and by experienced investors is generally positive. For the German INVEST scheme, for instance, each granted EURO induced an additional private investment in start-up companies of 50 cent, resulting in an overall investment of EUR 1.5. The Dutch Seed scheme is found to have an average leverage ratio of two, i.e. the capital from private investors has more than doubled the public funds.

Interviews to stakeholders would seem to bear this out. Beneficiaries were asked whether they had been successful in attracting private capital in addition to the aid instruments, and 83% of them replied that they were (Figure D.31 in Annex D). Further, around 43% of the beneficiaries report that due to the finance measures they were able to access bigger scale funds and 14% were not able to answer the question as they could not pinpoint whether the finance measure was the reason for their access to bigger scale funds (Figure D.30 in Annex D).

Beneficiaries have also explained the reasons why they think the finance measure may have helped them:

- applying for a finance measure under the Rules helps beneficiaries gain new expertise and more awareness of other possible funds;
- the presence of public money is a reassuring signal to the investor. From the standpoint of private investors, the presence of public money at the disposal of a potential investee entails the existence of a series of requirements that the beneficiary has to fulfil in order to prove that

[38] As defined by Landström and Mason, 2016.

the money is used in an efficient way. This is a positive signal for the investor, as they may infer the reliability and professionalism of the investee.

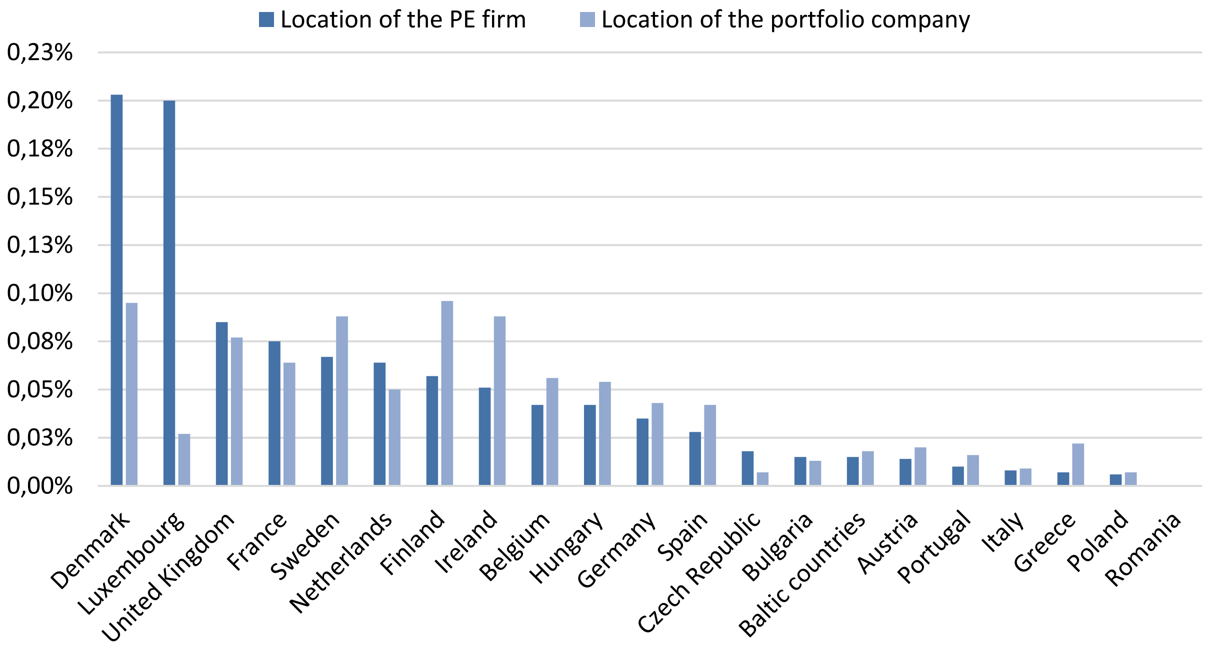
When asked if the Rules have contributed to the development of the SME lending market through banking and non-banking lenders, 61% of financial intermediaries interviewed for the Study confirm that this has been the case (Figure D.33 in Annex D). They argue that the Rules have contributed to making the loan instrument more attractive to lenders.

Still, 19% of financial intermediaries state that the Rules have not contributed to the development of the SME lending market. According to the financial intermediaries, one possible explanation is that banks have not significantly changed their behaviour towards risky investments. This may be true, but, as expressed above, the Rules expressly state that risk finance aid may take the form of guarantees, and this may help overcome the issue presented by financial intermediaries: non-banking lenders may supply beneficiaries with guarantees to cover the latter's bank loans and hence increase their probabilities to access the loan (without the need for a change in the behaviour of the bank). This is confirmed also by the experience of a financial intermediary interviewed, which explain that through the national scheme granted under the Rules it has been able to supply both debt financing (and act as a non-banking lender) and guarantees (providing insurance for commercial loans by banking lenders). Other financial intermediaries have stated that the SME lending market has recently improved, but not necessarily because of the implementation of the new GBER and RFG.

Consistently with the spill-over effect of the Rules described above, the evidence collected suggests the absence of a crowding-out effect, i.e. public money displacing private provision. Financial intermediaries have been asked whether the commercial financial providers have continued investing alongside the measures implemented in the SME finance market (Figure D.32 in Annex D). 89% report that this has been the case, explaining that not only have they continued investing, but in certain cases they have even increased their investments. This has been attributed to the same mechanism described above, whereby investments attract subsequent investments.

Despite the improvements described above, there are signals that SME finance markets may benefit from further development. Figure 6.3: VC Investments by country of PE firm and portfolio company (% of GDP, 2018) indicates that the European VC market has remained fragmented. In the figure, dark bars represent VC investments made by PE firms located in the country over the GDP of that country; light bars, instead, show VC investments made in firms located in country over the GDP of that country. As shown, PE firms are mainly located in some core countries (where the dark bars are higher). Among them, Denmark and Luxembourg are the most important ones, but also the traditional core markets in Europe, i.e. UK, France, Sweden, Netherlands, and Finland, have a relatively high market activity. In terms of location of portfolio companies, firms receiving VC funds are more homogeneously widespread in the EU. However, southern and eastern EU countries may still benefit from further development. Some of these states continue to struggle with the size of their domestic VC market, which is not related to their share in the aggregate GDP of the EU, such as Italy. Overall, sizeable differences in the development of the VC markets prevail, and several markets not only suffer from subcritical size but from an institutional investor base that is not yet ready to invest in this asset class (see Kraemer-Eis et al., 2018). This suggests that the positive effects described above have not reached all Member States, at least not to the extent that would have been necessary.

Figure 6.3: VC Investments by country of PE firm and portfolio company (% of GDP, 2018)

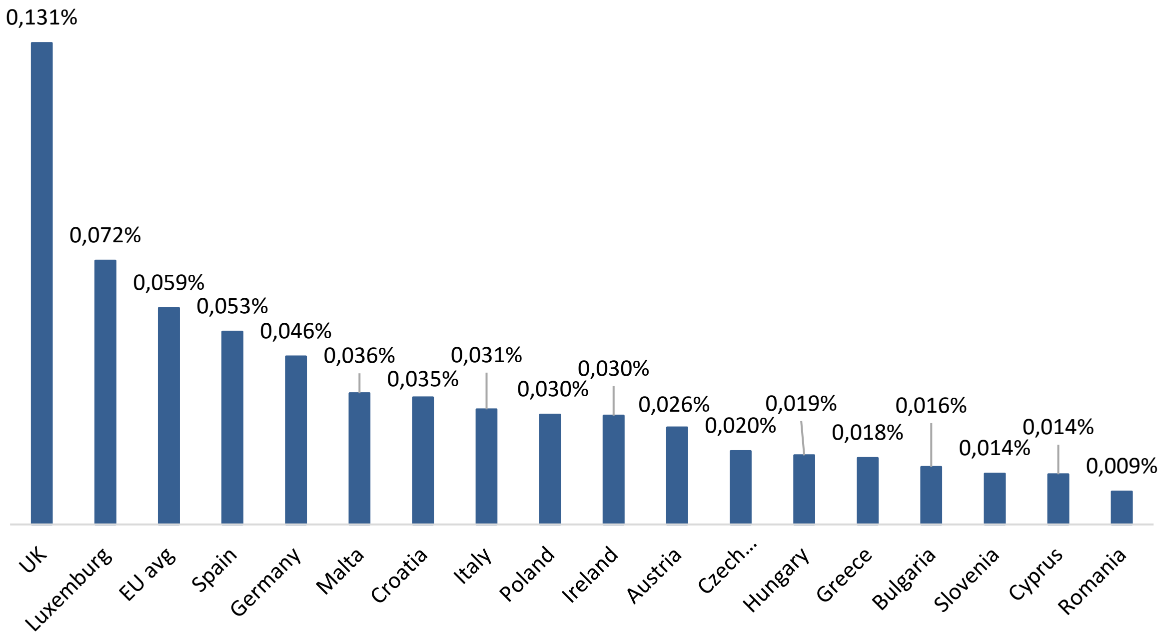


Source: Study Team based on Investeurope European Private Equity Activity, 2018

Figure 6.4 presents the level of market capitalization for the European countries for which data is available.[39] Although there are still differences in the level of financial development of European countries, public schemes aimed at incentivizing the use of equity capital markets have been adopted heterogeneously by Member States. Hence, future improvements in SMEs' access to equity capital may be observed also in those countries where capital markets are not yet well developed.

[39] Information on capitalization for primary markets is mainly gathered from the World Federation Exchanges' Annual Statistics Guide (2019), available at the following link: https://www.world-exchanges.org/our-work/articles/wfe-annual-statistics-guide-volume-4. Where this information is not available, the specific websites of the primary markets were consulted. Data on GDP (gross domestic product at market prices) is gathered from Eurostat. The "EU avg" observation refers to the sample mean.

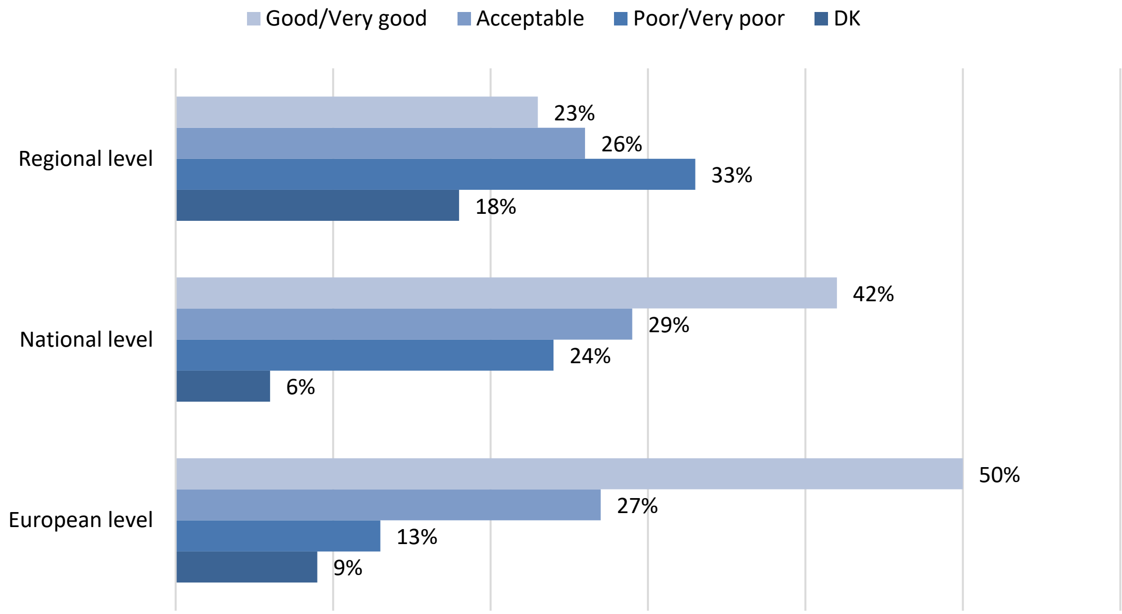
Figure 6.4: Market capitalization (EUR mln, 2018-2019)



Source: Study Team based on World Federation of Exchanges, Stock Exchanges' websites, and Eurostat

In recent years, the European Investment Fund (EIF) has started to perform a survey on European venture capitalists, in order to address the main criticisms of the VC market. Interestingly, when funds managers are asked about the existing governmental programs for VC, they seem to be highly satisfied with EU programs. As reported in Figure 6.5, half of the venture capitalists surveyed have stated that EU programs for VC are "Good/Very Good". However, as most GBER schemes are national and regional schemes, we are mainly interested in the evaluation of regional and national programmes. The percentage of satisfied fund managers is significantly lower when regional schemes are considered, and the highest percentage of venture capitalists has rated regional VC schemes as "Poor/Very poor". National VC schemes, instead, are valued by venture capitalists somewhat in the middle. Given the low number of regional VC schemes under the GBER, these findings may suggest that there is a growing need for this type of programmes.

Figure 6.5: Availability of governmental programs for VC

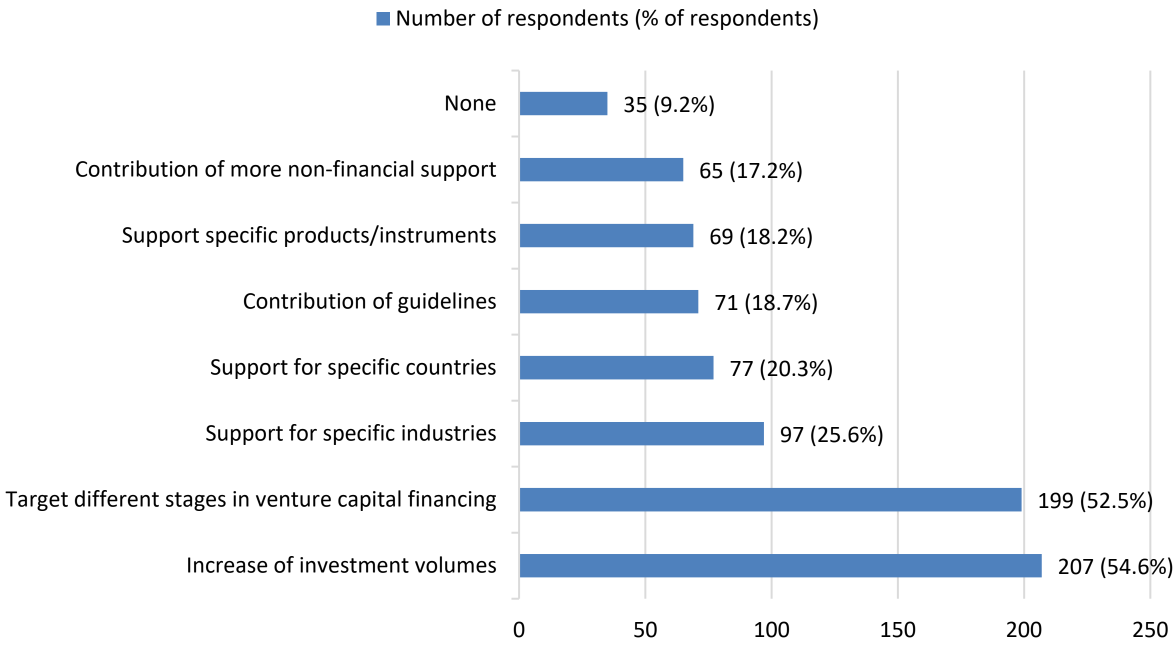


Source: Study Team based on EIF VC Survey, 2018

According to the economic literature, there are three main motivations in support of regionally-oriented VC (Sunley et al., 2005). First, regional schemes may better respond to specific regional conditions and problems, thanks to the creation of closer relationships and interactions between, investors, entrepreneurs and granting authorities. In this regard, there is wide evidence that the local proximity between VC firms and portfolio companies is positively related with the success of early-stage investments (Cumming and Dai, 2010). Second, regional VC schemes may be better coordinated with other local programmes aimed at fostering job and value creation. Third, regional VC schemes may better address regional equity gaps and market failures.

The EIF Venture Capitalist survey also asks fund managers about their views on the potential for public interventions in the VC market. Overall, the survey revealed that public support is still crucial for the European VC market. The vast majority of VC managers surveyed wants more public support, both financial and non-financial, in most of the areas and elements of the VC markets. Fund managers are especially calling for an improved public role for increasing investment volumes and targeting different stages in VC financing. As shown in Figure 6.6, more than half of the respondents, 54.6% and 52.5%, respectively, see room for improvement with regards to public support measures in these two areas. Consistently with the above-mentioned concerns about the fragmentation of the European VC markets, a high percentage of fund managers (20.3%) believes that further public support for specific Member States is needed.

Figure 6.6: Room for improvements in public support measures (2018)



Source: Study Team based on EIF VC Survey. Notes: 379 total respondents.

6.3 Effects on the development of SMEs

Another important effect of the Rules regards the development of the SMEs. Accessing finance through the Rules should help beneficiaries to survive, grow and expand their business. When this is not the case, it may also signal indirectly that the Rules have failed in guaranteeing a profit-driven decision by the financial intermediary involved.

Beneficiaries generally state that the funding obtained through the access to finance Rules helped them realize their innovations and bring them to the market more quickly than they would have been able to do without the funds (Figure D.9 in Annex D). On a scale of importance ranging from 1 (no impact) to 5 (significant impact), increased speed to reach the market has been assessed 4.1 by beneficiaries. In addition, beneficiaries assessed 3.9 to the increased level of innovation (and only 3.2 and 3.0 to increased marketing efforts and increased market geography reach, respectively). In general, a significant number of beneficiaries notes that, on top of all these possibilities, funding has helped them survive in first place. Among the direct opportunities that they were able to grasp thanks to financing, beneficiaries mentioned investments for new offices/structures, investment in human capital and new business opportunities. Indirect positive effects regarded the enhancement of the company profile and subsequent network effects.

When asked what they would have they done had they not obtained the funds, beneficiaries replied that:

- in the best-case scenario, they would have a smaller and less ambitious business today, as it would have taken considerably longer for them to scale up their business;
- in the worst-case scenario, they would not have survived.

More than three financial intermediaries out of four confirm that, in their opinion, the GBER/Risk Finance Guidelines have contributed to the development of a product/service and to its establishment on the market, especially in beneficiaries' early stage (Figure D.34 in Annex D) and explained that funds granted under the Rules had been one of the major catalysts of better access to finances for SMEs, particularly as they helped develop high risk investment at the early stages of the companies.

Case studies provide interesting evidence on the impact of State aid measures on beneficiaries. Overall, it seems that most of them would have struggled to receive investments in the first place. The schemes therefore helped them to find a first investor. Moreover, schemes improved their ability to eventually reach other non-professional investors, attracted by the high-quality due diligence required by the schemes and by the lower workload left to private investors. This is very valuable from the perspective of potential private investors, because it significantly reduces the uncertainty about the investment capability of the fund project and, at the very least, reduces their own workload once they decide to invest in the company.

There seem to be two channels whereby a scheme has an impact on final beneficiaries:

- it allows them to attract funds that are particularly difficult to find for high-tech start-ups. For some of them, the funds were crucial in the creation of the firm or in the very early stage;
- the programmes are important because they generally allow to get a professional investor onboard. Professional investors belong to larger networks of investors, which facilitates the companies' ability to obtain further private investments. The presence of experienced investors supported by public funds is also important in order to get access to other public funds (regional, national, or European). Overall, the presence of the public investment improved the beneficiaries' ability to reach other public and private investors.

The evidence available for the Dutch Seed scheme (see Annex B for details) provides systematic insights on the dimensions along which the beneficiaries improve their performance thanks to the State aid support. The effects of the Seed scheme on the beneficiaries seem to be mainly in the increase of the speed and ability to innovation. It does not seem that companies have started to take more risks with their innovation, as the target group is already high-risk. There is also a positive contribution because the added value per unit of product has increased and the company has started exporting more than before. Moreover, compared to similar companies that did not benefit from Seed funds, their growth was faster, both in terms of number of employees and of turnover. Their R&D investments are also higher.

6.4 Potential negative impact of the Rules

The Rules may have had some negative effects as well. First, aided access to finance may have discouraged financial intermediaries from making appropriate profit-driven financing decisions. Second, funding supplied thanks to the Rules may have substituted for funding that would have been supplied privately anyway. Third, the Rules may have generated harmful effects on competition.

A profit-driven financing decision can only be taken if financial intermediaries have explored deeply enough the worth of the investment. Therefore, financial intermediaries have been asked whether, in their experience, they have been mainly provided with sufficiently elaborated viable business plans by beneficiaries (Figure D.38 in Annex D). Almost 62% of financial intermediaries answered positively. They commented that business plans are generally precise and of high-quality. In writing their business plans, beneficiaries must follow due diligence and achieve the highest possible level of quality, in order to put the financial intermediaries in the best place to make their financing decision. Those financial intermediaries that have instead expressed dissatisfaction with the quality of the business plans that beneficiaries present argue that this may be due to the lack of experience and skills of the management of the SME (also suggested in section 3 above as one of the underlying reasons for the market failure). Indeed, financial intermediaries see a correlation between the quality of the business plan and the experience level of the management: usually larger SMEs tend to prepare more accurate business plans (also because often they have the possibility to hire specialized human capital), whereas smaller SMEs struggle to prepare elaborated business plans. However, when presented with inadequate business plans, financial intermediaries have explained that they reject them and urge the beneficiary to make improvements. In order to do so, often financial intermediaries work alongside beneficiaries, following them step by step during the whole investment process decision, and helping them identify their needs; by doing so, financial intermediaries can improve their knowledge of the beneficiaries' business and management.

As explained above, a potential negative effect of the Rules would be investors making sub-optimal (i.e. not profit-driven) decisions. Defining a sound exit strategy is one of the necessary conditions for making a profit-driven financing decision. Therefore, the stakeholders interviewed for the Study were asked about their opinion with the design of a clear and realistic exit strategy for equity and quasi-equity investments granted under the Rules. In particular, they were asked to rate from 1 (not difficult at all) to 5 (extremely difficult) their ability to devise an exit strategy at the time of financing decision. The average value of the responses is 3.9[40]: many interviewees stated that early stage companies often end up being totally different from the initial expectations of the financial intermediaries (according to one financial intermediary, around 25% of them), so it is hard to plan a priori an organized exit strategy; sometimes, even when the exit strategy is well defined, the company does not grow as expected and it is not easy to exit. Hence, financial intermediaries agree on the fact that very few times the exit strategy devised at the time of the financing decision has been respected in reality. However, this does not appear to be linked to the Rules, but rather to the nature of beneficiaries. Indeed, financial intermediaries were asked whether their exit strategy would have looked differently without a risk finance measure Figure D.39 in Annex D, and, consistently with the above, 39% of them responded negatively (42% could not answer this question).

Another potential negative effect of the Rules is that funding supplied thanks to the Rules could substitute for funding that would have been supplied anyway, without public support. This is clearly an undesirable outcome to the extent that in such cases we would not be in the presence of the market failure that the Rules seek to address. Financial intermediaries were therefore asked with what probability they would have undertaken the investment even without the

[40] 26 respondents.

finance measure. Reassuringly, most of them state that they would have not and that the finance measure was a necessary condition for their involvement. Similar findings have been provided by the limited empirical literature on this argument. Leleux and Surlemont (2003) show that public intervention in the European VC market caused larger amounts to be raised for VC investments overall. Although referring to a different period of time (1990-1996), the absence of support for the crowing-out hypothesis offered by the study should provide support for the active involvement of European government in VC markets through public schemes.

With respect to the potential adverse effects on competition, a company that receives government support inevitably gains an advantage over its competitors that do not, and this will generally distort competition in the relevant market where that company operates. Such distortion may be justified by the existence of other policy objectives being pursued by the policy maker, such as remedying or mitigating the market failure discussed in section 2.2.

71% of the beneficiaries interviewed reports that they gained a competitive advantage as a result of their improved access to finance, as shown in Figure D.35 in Annex D. However, they state that in practice the relevance of this advantage may be small, also because all SMEs with certain characteristics can apply for these State aid measures. Other beneficiaries assert that the competitive advantage was indeed negligible, if not absent. Indeed, these beneficiaries state that they were either facing no competition (a situation that can occur in innovative sectors) or facing the competition of much more established companies, which probably did not perceive the entry and/or expansion of an SME in the market as a threat to their position.

This vision is shared also by the financial intermediaries, which were asked whether in their opinion the beneficiaries were able to gain a competitive advantage because of their access to risk finance measures: 57% of financial intermediaries reports that beneficiaries did gain a competitive advantage (see Figure D.36 in Annex D). Still, most of the financial intermediaries remark the existence of a level playing field, whereby all the SMEs with certain characteristics may apply for certain State aid, so in their opinion the relevance of these negative effects on competition are negligible.

Finally, some stakeholders point out that the Rules have had pro-competitive effects, for instance increasing the number of companies in a market or allowing them to better compete in international markets. They argue that the potential negative *ex ante* effects of the Rules on competition must be compared with the potential positive *ex post* effects: helping one company survive and expand its business has a positive effect in the long run, as it may increase competition in the market to the benefit of the final consumers.

The evidence presented above seems consistent with the existence of a negative effect on competition brought about by the Rules. While the playing field would be level for all SMEs that are eligible under the Rules, eligible SMEs may compete with other types of firms that are not (for instance, larger firms or older SMEs). In such cases, SMEs that receive aid are provided with a competitive advantage, as beneficiaries themselves and financial intermediaries have confirmed. However, the existence of this negative effect is unavoidable, and must be balanced with the positive effects that the Rules may have, first and foremost addressing the market failure and enabling the development of SMEs that without the Rules would be financially constrained. Their development may in turn generate a positive effect on competition in the long run, though that will depend on the specific market where beneficiaries operate. For instance, beneficiaries of the SEED scheme (Annex B.1) state that the high-tech manufacturing sectors where they are active are characterized by a small number of established incumbents, for which access to credit is not an issue. They state that the initial support provided by the scheme enabled them to enter the market with innovative products, challenge the incumbent and increase competition.

Among the financial intermediaries (and relative associations), 65% of the interviewees agree on the fact that they did not gain any competitive advantage as a result of their participation in the aid scheme, as reported in Figure D.10 in Annex D. While some financial intermediaries state that, thanks to the aid scheme, they could offer lower interest rates and guarantees to commercial loans, they feel that access to the schemes is available to any financial intermediary.

7 AWARENESS, CLARITY AND BURDENSOMENESS OF THE RULES

For the Rules to be as effective as possible, it is important that financial intermediaries and potential beneficiaries are fully aware of them and of the benefits they can bring about. Moreover, applying for and complying with the Rules should not entail significant costs: if they do, financial intermediaries and beneficiaries may reduce their participation to the schemes.

When asked whether they are generally aware of the Rules, i.e. whether they know the provisions and the scope of the Rules, the instruments that may be adopted, the eligibility criteria, and the quantitative restrictions, 87% of financial intermediaries interviewed for the Study state that they are (Figure D.37 in Annex D). However, financial intermediaries are often much more familiar with the GBER rather than the RFG: this is not surprising considering the much higher number of schemes implemented the GBER as opposed to the RFG, giving stakeholders less opportunities to become acquainted with the RFG. In some cases, while expressing limited awareness of the Rules, financial intermediaries expressed a higher degree of awareness about the specific schemes they are involved with or applied for.

The level of awareness seems to be lower for beneficiaries, with only 30% of them stating to be aware of the Rules. Beneficiaries often state to be unaware that the scheme under which they were granted funding was implemented under the Rules. 55% of financial intermediaries agree that the level of awareness of the Rules among beneficiaries is quite low (Figure D.11 in Annex D). Financial intermediaries state that, while larger companies are typically more informed than smaller ones, broadly speaking beneficiaries are not interested in the legal framework but only in whether they fulfil the eligibility criteria to access financing. Some financial intermediaries have reported that they inform beneficiaries and include the main provisions and scope of the Rules in the agreements. Stakeholders suggest increasing the awareness through (i) targeted trainings; (ii) higher involvement in the decision-making process of the rules/guidelines (e.g. consultations whenever they are revised); and (iii) broader advertisement on the web, especially at the national level.

However, the low level of awareness of the Rules among beneficiaries should not necessarily be a reason for concern. What is most relevant is that financial intermediaries and potential beneficiaries are aware of the funding opportunities that are available to them in their countries/regions. Evidence collected through case studies shows that financial intermediaries are generally aware of older and more established schemes, such as the Finnish and the British one (see Annex B.2 and Annex B.4 respectively), while their knowledge of newer and smaller schemes, such as the Dutch scheme and the German scheme (Annex B.1 and Annex B.5 respectively), is not as widespread yet. Indeed, the visibility of the scheme seems to be an area for improvement in the German INVEST scheme. BAs, who are typically organized in networks, usually know about the programme. However, non-organised investors apparently do not: only 20% of the non-subsidised investors know about the INVEST programme.[41] Final beneficiaries, instead, may not know the

[41] These findings emerged from the online survey that was undertaken during the 2016 evaluation and are therefore relative to the period 2013-2015.

schemes directly, because they typically approach funds to search for financing and they do not necessarily know that they are partly funded by a State aid program. Beneficiaries may only have an indirect knowledge of the existence and features of the schemes through the investment funds from which they receive funds. Although for some schemes there is still a lack of knowledge about available funding opportunities among entrepreneurs, overall there seem to be an increased access to funds that are supported by State aid schemes.

Stakeholders were also asked whether the Rules are sufficiently clear and transparent (Figure D.12 in Annex D). This may be an area for improvement: 51% of the financial intermediaries assert that the Rules are not sufficiently clear, which creates difficulties in their interpretation. This is despite many stakeholders reporting an improvement in the current framework compared to the previous one with respect to the clarity of the Rules.

One of the main issues relates to the language, which is considered rather complex and technical. Some granting authorities interviewed for case studies and financial intermediaries state that it takes a significant amount of time to review and fully understand the Rules and that, in some cases it was necessary to consult an external advisor. Indeed, they point out that some definitions are not straightforward and may benefit from further clarification (for instance, the definition of first commercial sale, as discussed in section 5.1.2).

Moreover, in order to improve the clarity and the transparency of the Rules, stakeholders generally suggest simplifying the language, for instance using simpler wording and less technical language. In this sense, they suggest that it might be useful to include in the Rules an Annex encompassing, in a synthetic form, the list of eligibility conditions and quantitative restrictions relative to each financial instrument, along with the list of the monitoring and reporting requirements.[42]

Finally, it was investigated whether, and to what extent, the Rules represent an excessive administrative burden to stakeholders. Financial intermediaries and beneficiaries answered differently (Figure D.13 in Annex D). 64% of financial intermediaries assert that the existing Rules do entail an excessive burden; regarding beneficiaries, 38% of them report that dealing with existing rule is indeed quite burdensome, while 53% of them report that it is not.

Financial intermediaries' answers can be divided in two groups: one asserting that the burdensomeness for the application to the EU Rules is reasonable, not higher than the expectations, and not complex; moreover, they think it is a process which is worth undertaking. Overall, these financial intermediaries think that it is acceptable and legitimate for the EC to require high levels of control, as they are dealing with public money. The second group expressed negative opinions regarding the amount of paperwork and the cost to be borne for complying with the Rules. This group mainly consists of central and northern European investment funds, guarantee funds, investment banks and associations thereof, as well as VC funds. For them, the administrative burden concerns both the application process (e.g. excessive paperwork and long

[42] We do not hold any compelling evidence suggesting that the lack of clarity of the rules reflects on a lack of clarity of the national schemes, or that the lack of clarity only regards national schemes.

period to get the response on the funding, in some cases even up to 8 months) and the implementation phase, mainly in terms of reporting requirements (e.g. each step has to be planned and reported, each travel costs/expenses have to be justified and reported as well). Some of them have reported that they suffer the burdensomeness to the point that they prefer to apply the Article 22 of the GBER (“Aid for start-ups”) rather than Article 21 (“Risk finance aid”). They mentioned that, for financial intermediaries who are dealing with who are mostly dealing with start-ups, working under Article 22 is less complicated than working under Article 21, not only because Rules are set more clearly (for instance, the eligibility criteria entailed in Article 22 refer to the time of registration of the enterprise, rather than the first commercial sale[43]) but also because they avoid requirements such as the open, transparent, objective, and non-discriminatory selection of the financial intermediaries, which they consider burdensome. One of them mentioned that applying for aid measures under Article 22, instead of measures falling under Article 21, is a common practice for German financial intermediaries who mostly deal with small or small and innovative enterprises.

On the beneficiaries’ side, the main concerns are as follows concerns:

- excessive administrative burdens and costs, such as paperwork (some beneficiaries pointed out that the process should be more digitalised);
- excessive use of time and human resources (internal or external), which increase the costs for the application. Small companies usually do not have specialised staff or departments to deal with the application and it is either the owners or an external consultant that has to handle those procedures;
- long waiting time to find out the results of the application.

The perceived administrative burden to apply for and comply with finance measures may depend on the level of experience and specialization of the stakeholder, and more experienced SMEs might be able to rely on specialized human resources and be able to better deal with the requirements. This may also explain why beneficiaries find the Rules to be more burdensome than financial intermediaries.

Further, national authorities may impose additional requirements with respect to the EU framework, meaning that the burden may come from the national regulation rather than the European Rules. For instance, an Italian beneficiary asserted that complying with the anti-mafia requirements (a feature of the national scheme, and not of the GBER) has been particularly complex. Private investors had to present a certification of non-involvement in mafia-related proceedings or investigations, and it was difficult for foreign investors (e.g. the American ones) to provide such certificates, which are released by the FBI.

According to the evidence collected in the case studies, the burden is generally not perceived as excessive by the stakeholders. The burdensomeness of complying with the Rules seems to be related more to the difficulties of interpretation of certain concept (such as the first commercial sale and the absence of relation between investor and investee) than to the procedural burden,

[43] Which is still considered as the parameter for those enterprises which are not subject to registration.

which appears to be reasonable. Fund managers generally consider that the amount of reporting that they have to do for these schemes is similar to the one they have to do for their other investments. Non-professional, informal investors, however, are less used to strict reporting obligations and must gain experience in this area. Evidence available on the Dutch Seed scheme, for instance, shows that administrative burdens, including the efforts that applicants must make to submit an application and the reporting obligations towards RVO that Seed fund managers must meet after an application has been approved, are not perceived as excessive by the surveyed fund managers (see Annex B for details). Approximately three-quarters of them find the workload required for writing the fund application reasonable to very acceptable. Approximately 70% of the respondents find the reporting obligations acceptable.

8 ANSWERS TO GUIDING QUESTIONS

The Study entails a number of guiding questions to be answered. Below, based on the evidence gathered, we set out the answers to the guiding questions.

1 To what extent do the rules still correspond or are relevant to the current SMEs', small midcaps' and innovative midcaps' access to finance needs on the demand side? In particular: To what extent has SME access to finance in Europe improved since 2014 and what are the factors explaining it?

1.1 Has the market failure identified in the 2014 impact assessment improved or worsened? Are there specific Member States or regions particularly affected?

1.2 If the market failure still exists:

1.2.1 What are its main characteristics (e.g., which types of companies suffer, which are the relevant industries, what type of finance requirements are not met by private investors or banks)?

1.2.2 What are the underlying reasons for the market failure? In particular, what role do information asymmetry and growth externalities as identified in recitals 3 and 4 of the Risk Finance Guidelines play today; how important are knowledge externalities; are there any other issues affecting SMEs' access to finance?

The evidence shown in section 3 indicates that the market failure identified in the 2014 Impact assessment has improved, though not to the extent that it has disappeared. Our proxies for the market failure (percentage of SMEs that list access to finance as their most pressing problem, the outcome of European SMEs' external financing application, outstanding loans to non-financial corporations, the availability and use of equity capital for European SMEs) generally point in the direction of an improved ability of SMEs to obtain finance. Further, as discussed in section 4, VC markets and PE alternative trading platforms have developed over the last few years, facilitating the matching between demand and supply of finance inside and outside of State aid schemes. Stakeholders interviewed for the Study confirm that there exists a financing gap that might constrain the supply of external financing for SMEs that have valuable business models and fulfil all standard investment criteria. The extent to which SMEs may be subject to a market failure seem to depend on the regions/countries where they are located. Stakeholders interviewed stated that it may be easier to raise investments in certain regions/countries where financial markets are more developed. Consistently, our proxies for the market failure are higher in peripherical EU countries such as Croatia, Romania, Lithuania, and Cyprus.

The existence of the market failure is also heterogeneous among types of firms (section 3). Data shows that the types of firms most affected are: (i) young businesses with 0-2 years and 2-5 years of activity; (ii) high growth firms and gazelles; and (iii) firms investing in innovation activities. For all these companies, the high cost of credit and the lack of guarantees have represented the main factors behind the inability to access funds, which as explained are highly correlated with the market failure: high loan rates and the requirement of leverageable collateral guarantees are the first way whereby banks can reduce their exposure to credit risk when information asymmetries are significant. In terms of sectors of economic activity, stakeholders interviewed for the Study stated that the majority of risk finance goes into sectors where there could be high potential returns, most notably software companies, whereas sectors that are capital intensive and where the business requires more time to develop (e.g. chemical industries, or clean tech energy industries) experience a wider financing gap. Regarding the instruments, most of the stakeholders interviewed for the Study argue that the problem mainly regards equity.

Financial intermediaries and beneficiaries interviewed for the Study have helped shed light on the underlying reasons for the market failure (section 3). The most relevant appear to be:

- the need for investors to plan and execute an exit strategy;
- the lack of interest of the private investors;
- the need for investors to closely monitor that the business strategy is being well implemented;
- the cost necessary for investors to carefully analyse business plans;
- the quality of SMEs' key management;
- the ability of the SME to prepare sound business plans;
- the SMEs' unwillingness to share control with outside investors.

2 To what extent do the rules still correspond or are relevant to support the supply of capital to SMEs? In particular: how has the supply of capital to SMEs changed since the 2014 impact assessment?

2.1 How has the total value of the European Venture Capital Market changed since the 2014 impact assessment?

2.2 Have the negative effects of the financial crisis as identified in the 2014 impact assessment been overcome or do they still persist today?

As outlined in section 3, compared to 2014, credit lines and bank overdrafts remain the main sources of external financing for European SMEs. A growing percentage of firms have been financed through trade credit, bank loans, and retained earnings. On the contrary, the percentage of firms issuing new equity has decreased between 2014 and 2018 in all Member States, except for Cyprus, Latvia, the Netherlands and Sweden.

Yet, as described in section 4, the funds raised and the investments made by PE and VC firms both markedly increased between 2014 and 2018: VC more than doubled funds raised and investments, while PE increased by around 1.7 times. The sharp increase in investments by PE firms from 2016 to 2017 is mainly driven by investments in SMEs. The same holds true for venture capitalists: the share of investments into SMEs has reached 90.2% in 2018. The number of SMEs funded by venture capitalists has grown steadily between 2016 and 2018, and the average size of investment per SMEs is higher in 2018 than in 2016. Further, the supply of funds by BAs has increased steadily since 2014 (26%), mostly driven by the growth in the number of investors (17%).

Both in the demand and the supply side, stakeholders report that there has been a significant improvement regarding the factors underlying the existence of the financing gap for SMEs. Most of them report an increase in the quantity of capital in the market, as many SMEs with good business models, which previously could not fit into the market, have accessed financing thanks to new capital and also State aid measures. Among other reasons (for instance, the improved economic outlook), some mention the new GBER and RFG as possible sources of this improvement.

The negative effects associated to the financial crisis would seem to have been overcome, as can be inferred from the improved ability of SMEs to obtain access to finance described above. Financial intermediaries and beneficiaries interviewed confirm the existence of an improvement with respect to the conditions prevailing in 2014. However, they also confirm that the underlying causes of the market failure are of a structural, rather than transitional, nature, which would suggest that the financial crisis has only exacerbated them and that their existence (though not necessarily their magnitude) is independent from the financial crisis. This is described in more detail in section 3.

3 Has the number of SME alternative trading platforms and the number of SMEs listed on these platforms increased or decreased? Have these platforms provided a meaningful contribution in providing capital to SMEs?

3.1 How much additional financing have SMEs received via these platforms?

3.2 Is there evidence for other positive (quantitative or qualitative) impact of these platforms (e.g. increased market transparency, increased visibility of start-ups, network effects)?

Alternative trading platforms represent a tool that can facilitate the matching between SMEs in need of equity finance and institutional investors, such as venture capitalists and BAs. As outlined in section 4, in the last two years, six new alternative trading platforms have been established: Progress in Slovenia, Start in Czech Republic, Progress Market in Croatia, Roots in Greece, SME Growth Market BEAM in Bulgaria and Direct Market Plus in Austria. In 2017, two particularly successful platforms were set up: Scale in Germany, which counts 49 SMEs, and Euronext Growth – Enternext, with 232 SMEs listed. Like the associated main stock exchange (Euronext), Euronext Growth has been set up in several Member States (Belgium, France, Ireland, Netherlands, and Portugal), becoming strongly attractive both for listing firms and for private investors, especially institutional ones. The SME segments with the highest capitalization (in absolute values) are the ones located in UK (AIM), Spain (MAB), and Germany (Scale), along with the aforementioned Euronext Growth. Comparing alternative trading platforms capitalization with the capitalization of the primary market shows that the most developed platforms are those located in Cyprus, Slovenia, and Romania, i.e. countries where the primary market is not well-developed, compared to the EU average, and where the alternative trading platforms may have been effective in reducing the market failure.

Consistently with the above, among financial intermediaries and associations of financial intermediaries interviewed for the Study the overall impression is that the number of alternative trading platforms and the number of SMEs listed on these platforms has certainly increased since 2014. However, beneficiaries do not have a wide knowledge of the alternative trading platforms and their availability in order to pursue additional financing and, more broadly, alternative trading platforms are not perceived by stakeholders to play a particularly important role in providing additional capital to SMEs yet. Financial intermediaries argue that it is too early to assess the role of alternative trading platforms, but that they are certainly promising as an avenue for SMEs to obtain financing. While interviewees for the Study argue that alternative trading platforms may positively affect the visibility of start-ups, the available economic literature suggests that they may also have unwanted effects. The popularity of some SME segments in terms of high number of listings may be mainly due to the strict listing requirements in the main capital markets. This raises the question whether alternative trading platforms can actually reach SMEs or simply crowd out main capital markets.

4 How well adapted are the rules to the current developments in the SME finance market and to what extent do the SME access to finance rules reflect the existing SME access to finance market failure, namely:

4.1 Do the eligibility criteria (e.g., the limitation to start-ups, young and innovative SMEs and small and innovative midcaps) reflect the type of companies affected by the access to finance market failure? Are these criteria (incl. definition of SME and innovative enterprise in the GBER; small and innovative mid cap in the Risk Finance Guidelines; and criteria like the 7-year period after first commercial sale, etc.) well defined to address the market failure?

4.2 Do the thresholds applicable (including but not limited to the funding limits as defined in Art. 21 (5)c GBER, the conditions provided in Art. 21 (13) GBER, the specific requirements for private participation and caps as defined in the Risk Finance Guidelines etc.) correspond to the actual SME access to finance gap?

4.3 Are the conditions in regard to the type of measures (debt, equity, guarantees) and fiscal instruments still justified under the current market situation?

As described in section 5, both stakeholder interviews and case studies have revealed a general satisfaction with the eligibility criteria, which are deemed justified, well-defined and flexible enough for granting authorities to design their schemes based on their specific targets. Yet, certain features of the eligibility criteria have attracted some criticism, as emerged from interviews with stakeholders and from case studies:

- the rule whereby SMEs are eligible for funding under the GBER only if they have been operating in any market for less than seven years following their first commercial sale, whereas past this threshold the RFG apply. Interviewees point out that it may be hard for the undertakings to trace back the first commercial sale, or clearly identify which of their sales was the first, in light of the fact that sales to test the market should be excluded under the GBER. However, we believe that replacing this criterion with a clearer reference point (such as the legal establishment of the company) would entail a significant drawback: the use of the first commercial sale enables to target SMEs in their early years of activity in the market regardless of how long product development may have taken. Replacing the first commercial sale with the date of the legal establishment of the company would make the Rules significantly less flexible in this respect;
- the rule whereby SMEs are eligible for aid if they require an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographical market, is higher than 50 % of their average annual turnover in the preceding years. This is considered unclear as financial intermediaries reported that there are on-going discussions with national associations on how to assess and calculate the ratio between the initial investment needed and the annual turnover. Further, the concepts of “new product market” and “new geographic market” require a judgement to be made, leaving room for arbitrary

decisions by granting authorities, and defining relevant markets is a complex exercise that would clearly be beyond the scope of granting authorities' activity and skillset.

Regarding the quantitative restrictions, i.e. the investments' limits and thresholds set by the GBER, some stakeholders interviewed for the Study express the following concerns:

- under the GBER the total amount of risk finance cannot exceed EUR 15 mln. While this restriction is considered justified by the majority of stakeholders interviewed for the Study, some financial intermediaries have argued that the threshold may be insufficient for SMEs operating in specific sectors of economic activities where large-scale investments are needed (e.g. health-care companies). Overall, however, this Study suggests that the EUR 15 mln threshold is suitable for most cases, as the limit does not seem to be binding based on the national schemes analysed, which entail thresholds that are often far below the one set by the GBER.[44] While it is conceivable that this amount may be insufficient in some situations, sector-specific thresholds may be extremely complicated to enforce, leaving space for discretionary (and potentially arbitrary) decisions. Thus, greater funding needs may be better handled through the RFG rather than through a change to the GBER;
- the GBER requires that a private investor always participates in the investment (though with varying thresholds). Some of the stakeholders interviewed for the Study have pointed out that in those regions where financial markets are not strongly developed and for companies in the start-up stage (e.g. Poland, Romania, and Greece), finding a private investor may be particularly challenging. This is concerning because it would mean that the private participation requirements may restrict the provision of risk finance precisely to those SMEs that are most affected by the market failure, as they operate in markets where financial markets are less developed. However, we believe that this provision is central and unavoidable, as it ensures that the investment is evaluated based on market criteria and allows the Rules to play a catalytic role by leveraging private capital.

Finally, stakeholders interviewed for the Study have stated to be satisfied with the set of instruments available under the Rules. Case studies suggest that the range of instruments covered by the GBER seems to be sufficient to address the financial needs of target beneficiaries, and that these are effectively complementary to other support measures available in each Member State, such as regional programs, subsidised loans or tax measures.

5 Have the SME access to finance measures as implemented under the applicable rules remedied the SME finance market failure and improved the provision of finance to SMEs?

5.1 Have the aid instruments (financial instruments, fiscal incentives, subsidies) covered by the SME access to finance rules been effective in crowding in additional private capital (measured by total annual amount of financing available to SME and the specific ratio between private and public funds)? To what extent have they been complementary?

5.2 In what way has the State aid control of SME access to finance measures contributed to the development of the SME finance market?

[44] The maximum investment under the Dutch scheme is equal to EUR 3.5 mln, while for the Italian case it is equal to EUR 2.5 mln. The Finnish scheme maintained the GBER threshold.

5.2.1 Has it encouraged bigger scale and cross-region funds and reduced fragmentation in the Venture Capital ("VC") and SME financing market?

5.2.2 Has it contributed to the development of the SME lending market through banking and non-banking lenders?

5.3 Is there evidence that the SME access to finance rules contributed to facilitating the seamless transition from innovation to market, including the commercial implementation of research and development (R&D) results?

5.4 Have SME financing decisions involving SME support measures ensured profit-driven financing decisions based on an adequate credit risk assessment and an investment due diligence? What are the main factors taken into account for SME investment decisions? Is there evidence that these financing decisions would have been taken differently if there had not been any support measures?

5.5 Is there evidence that the applicable rules have ensured that commercial financial providers in the SME finance market have continued to invest alongside the measures implemented?

As explained in section 6.1, the evidence collected through the Study suggests that the Rules may have been effective, and that their possible negative effects limited. The outstanding guarantees on SME loan portfolios in 2017 have on average increased, suggesting that credit guarantees may have been effective in addressing the market failure characterising SMEs' access to finance. Moreover, most of the interviewees for the Study assert that access to finance under the new Rules has become easier, mostly because the number of VC companies and private investors has significantly increased in the last few years.

According to stakeholders interviewed, the positive contribution of the Rules in remedying the market failure has been driven by three characteristics of the Rules as compared to the previous framework:

- they are less strict than the old ones: for instance, the private participation rates have been lowered;
- they are more flexible, as they encompass many risk finance instruments and generally allow for more and better ways for firms to access finance;
- certain limits have been broadened, and especially the one on the total size of the investments, so investments are now more conspicuous.

The Rules would seem to have been successful in crowding in additional private capital. The case studies show that the schemes were generally effective in stimulating the VC market in the countries in which they were implemented. For the German INVEST scheme, for instance, each granted Euro induced an additional private investment in start-up companies of EUR 0.50, resulting in an overall investment of EUR 1.5. The Dutch Seed scheme is found to have an average leverage ratio of two, i.e. the capital from private investors has more than doubled the public funds. Interviews with stakeholders seem to bear this out, as most beneficiaries stated that they have been successful in attracting private capital in addition to the aid instruments: this is because applying for a finance measure under the Rules helps beneficiaries gain new expertise and more awareness of other possible funds and because the presence of public money is a signal of the value of the investee to the investor.

The above suggests that the Rules may have contributed to the development of the SME finance and lending market: such hypothesis is also confirmed by the majority of financial intermediaries interviewed for the Study. Indeed, as shown in section 6.2, financial intermediaries interviewed for the Study have largely confirmed that commercial financial providers have continued investing alongside funding granted through the Rules, consistently with the spill-over effect whereby investments attract subsequent investments. Yet, data indicates that the European VC market has remained fragmented. The traditional core markets in Europe, i.e. UK, Sweden, Finland, Denmark, and France, have a relatively high market activity in terms of percentage of portfolio companies located in the country. Conversely, other countries (e.g. Italy) continue to struggle with the size of their domestic VC market. Overall, sizeable differences in the development of the VC markets prevail, and several markets not only suffer from subcritical size but from an institutional investor base that is not yet ready to invest in this asset class, suggesting that the positive effects have not reached all Member States, at least not to the extent that would have been necessary.

As described in section 6.3, beneficiaries interviewed for the Study state that funding obtained through the Rules helped them realize their innovations and bring them to the market more quickly than they would have been able to do without the funds. Some beneficiaries point out that funding obtained through the Rules enabled them to survive in the first place. Case studies show the schemes were generally effective in stimulating the VC market in the countries in which they were implemented. National schemes have allowed beneficiaries to access networks of investors, which made it easier to obtain further private investments, thanks to the expertise of the first investor and to the knowledge and skills developed applying for funding through the Rules.

The evidence collected through stakeholder interviews suggests that financial intermediaries have examined deeply enough the value of the investment, and that they have mainly been provided with the necessary instruments to do so (i.e. business plans that are detailed enough). When this is not the case, financial intermediaries state to work alongside beneficiaries. Most financial intermediaries state that the finance measure was a necessary condition for their involvement.

The above also suggests that commercial financial providers have not been displaced by funding through the Rules, and that public and private funding are complementary rather than substitutes. It also suggests that the Rules have been effective in delivering funding to those that would not have obtained it otherwise.

6 Has the existing State aid control of SME access to finance measures had any negative impact?

6.1 Have commercial finance providers in those Member States that have made use of SME access to finance measures been crowded-out of the market?

6.2 Is there evidence for other unintended harmful effects of aid on competition in Member States implementing SME access to finance measures?

The complementarity between public and private funding would suggest that commercial finance providers working outside of the perimeter of the Rules have not been crowded out of the market.

As described in section 6.4, most of the beneficiaries interviewed for the Study report that they gained a competitive advantage as a result of their improved access to finance, as a company that receives government support inevitably gains an advantage over its competitors that do not. However, beneficiaries report that these effects have been mostly negligible, and that they should also be compared with the positive long-run effects (helping one company survive and expand its business may increase competition in the market to the benefit of the final consumers).

Among the financial intermediaries (and relative associations), interviewees agree on the fact that they did not gain any competitive advantage as a result of their participation in the aid scheme, since access to the schemes is available to any financial intermediary.

7 Have there been any barriers preventing State aid for SME access to finance from effectively addressing the SME finance market failure?

7.1 Are beneficiaries, investors and intermediaries aware of the applicable rules? Are the applicable rules sufficiently clear and transparent? If not, what suggestions do they have to improve clarity?

7.2 Have the state aid rules resulted in excessive administrative burden for interested investors/intermediaries and/or potential beneficiaries (for example with respect to the need to record the first commercial sale in order to prove the age of the SMEs or other selection criteria, overall reporting requirements, or other conditions attached to the support received). If yes: What are the specific burdens interested investors/intermediaries and/or potential beneficiaries face?

7.3 Have the state aid rules allowed to provide the type of financing (equity, debt, etc.) that effectively addresses the market gap or are there specific barriers to reach the desired effect?

As described in section 7, the majority of financial intermediaries state that they are generally aware of the Rules, though on average we have found that they are much more familiar with the GBER rather than the RFG. In some cases, while expressing limited awareness of the Rules, financial intermediaries expressed a higher degree of awareness about the specific national schemes they are involved with or applied for. Beneficiaries are generally unaware of the Rules, and case studies show that they may not know the schemes directly, because they typically approach funds to search for financing and they do not necessarily know that they are supported by a State aid program. Case studies also reveal that the level of awareness may vary depending on the scheme, and that this is higher for older and more established schemes, such as the Finnish and the British one. Regarding clarity, a number of financial intermediaries interviewed for the Study state that the Rules are not sufficiently clear, despite an improvement in the current framework compared to the previous one.

According to the evidence collected in the case studies, the burden is generally not perceived as excessive by the stakeholders. Fund managers generally consider that the amount of reporting that they must satisfy for these schemes is similar to the one they have to do for their other investments. However, stakeholders' interviews reveal that beneficiaries find the Rules to be more burdensome than financial intermediaries. This may be the result of the lack of experience and of specialized human resources on the side of beneficiaries.

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Annex B. Case studies

One source of evidence for this report is based on the analysis of five national or regional schemes set up by different Member States, listed below:

- SA.39243 – SEED Capital regeling (the Netherlands) (Annex B.1);
- SA.39418 – Tekes Pääomasijoitus Oy:n riskirahoitusohjelma (Finland) (Annex B.2);
- SA.43581 – Fondo Capitale di Rischio POR FESR Lazio (Italy) (Annex B.3);
- SA.49923 – Enterprise Investment Scheme and Venture Capital Trust (United Kingdom) (Annex B.4);
- SA.46308 – INVEST (Germany) (Annex B.5).

These schemes were selected according to several criteria among those listed in the "Risk Finance Dataset" provided by the Commission. First of all, two of them are notified schemes (SA.49923 and SA.46308), whereas the remaining schemes fall under the GBER. They should therefore allow us to draw implications on the full set of rules.

Secondly, the schemes entail different financial instruments: tax incentives for the British scheme, grants for the German scheme, loans for the Dutch scheme, and investments in funds for the Italian and the Finnish scheme. This diversity reflects the plurality of instruments encompassed by the Rules and is useful to make comparisons on the functioning and effectiveness of different financial instruments.

Four schemes are amendments to previously existing schemes, while one of them (the Finnish scheme) was instead entirely designed under the new Rules. The analysis of the amendments that took place after 2014 allows us to understand how the design of the different schemes was shaped to respond to the changes in the Rules.

The objectives of case studies are threefold. First, they should allow to take a deeper look into the functioning and the characteristics of specific State aid schemes, which can be informative of some more general features of the Rules. Secondly, case studies allow a better understanding of the motivations behind stakeholders' dissatisfaction with certain provisions of risk finance Rules, which emerged from interviews. Finally, case studies should provide direct evidence of the improved ability of beneficiaries to get access to large-scale funds and to attract private capital, and more generally to develop their products or services in the market. Case studies are not intended as monitoring exercises aimed at evaluating the compliance of the schemes analysed with the Rules.

From a methodological viewpoint, case studies are based on interviews with the relevant granting authorities and, where possible, with other stakeholders, such as fund managers and final beneficiaries. In this respect, it should be noted that contacts with fund managers and final beneficiaries were facilitated by the granting authorities. One should therefore be cautious in generalizing the evidence coming from these interviews, as they may represent the most positive and successful experiences.

Granting authorities also provided us with available information on the schemes. In particular, relevant information included internal documents (e.g. funds investment policy) and data on the scheme (e.g. amount of public aid and of total funding provided, number of beneficiaries and their characteristics, such as area of economic activity, age and size distribution). Moreover, most granting authorities made available evaluation reports that contained performance indicators at the level of the scheme and of beneficiaries. Finally, additional evidence was collected through desk research (e.g. official decisions for notified schemes, other documents describing the characteristics and functioning of the schemes, publicly available statistics etc.).

Case studies constitute a valuable source of information to address issues related both to the relevance and to the effectiveness of the EU Rules. As for the relevance issue, the case studies give insights on the extent to which the current Rules are well suited to address the SME access to finance market failure (guiding question 4). We specifically gathered information on the eligibility criteria (question 4.1), on the applicable thresholds (question 4.2), and on the conditions regarding the types of measures and fiscal instruments (question 4.3). Moreover, the case studies provided evidence on the awareness and burdensomeness of schemes (question 7.1 and 7.2 respectively).

As regards the effectiveness of the aid schemes, the case studies are aimed at understanding:

- whether private and public funding as well as the banking and non-banking sector have been complementary sources in providing additional capital to SMEs (questions 5.1 and 5.2.2);
- whether the access to finance Rules contributed to facilitate the transition of innovation to market (question 5.3), e.g. the German case study focuses on an aid scheme involving innovative companies;
- the role of the access to finance Rules in SMEs' investment decisions and to what extent SMEs' investment decisions would have been different in the absence of risk finance aid (question 5.4). On the supply-side, case studies focusing on investors and financial intermediaries shed light on the soundness of the financing decision process, regarding credit risk assessment and due diligence as tools to ensure profit-driven decisions.

In this respect, we focused on those features of the schemes which we deemed more relevant to the assessment of the Rules. This implies that our analysis of the schemes is not necessarily exhaustive and may omit certain features of the schemes.

Case studies have the advantage of analysing in detail the features of specific schemes and of providing a deep understanding of their features and functioning. They allow therefore to make a thorough assessment of the main issues that stakeholders raise about each scheme and of the underlying Rules, as well as of their impact on financial intermediaries and beneficiaries. However, while some of the insights emerging from case studies can be relevant in general, others are instead specific to each scheme and cannot therefore be generalized.

Annex B.1. SA.39243 – SEED Capital regeling (Netherlands)[1]

B.1.1. Characteristics and design of the scheme

Using the Seed Capital scheme, the Ministry of Economic Affairs and Climate Policy aims to support high-tech and innovative start-ups. The Ministry grants capital to investment funds that in turn invest in innovative entrepreneurs in the technological and creative sector. The program was created in 2005 to respond to the lack of private capital available to small start-ups. It went through a major change in 2014, in order to align it to the new GBER rules and to best market practices (see section B.1.2 for a description of the changes). The Netherlands Enterprise Agency (RVO) is responsible for its implementation.

The type of instrument is quite unique in the European area. The scheme offers an interest-free loan to investment funds that invest in start-ups through a public tender that opens twice a year.[2] It therefore encourages the formation of private funds thereby increasing the volume of the venture capital market. At the same time, the choice among the investment opportunities is left to the market, and in particular to the investment funds that co-finance the projects. The advantage of such system is that the investment decision is delegated to professional operators that are typically very specialized in certain sectors, and therefore have the knowledge to identify the best investment opportunities in each market. The granting authority, therefore, does not directly intervene in choosing the businesses to which the funds will go, but only makes sure that only viable investors benefit from the scheme through the screening of an external commission that evaluates the requests.

The loan provided by RVO has the following characteristics:

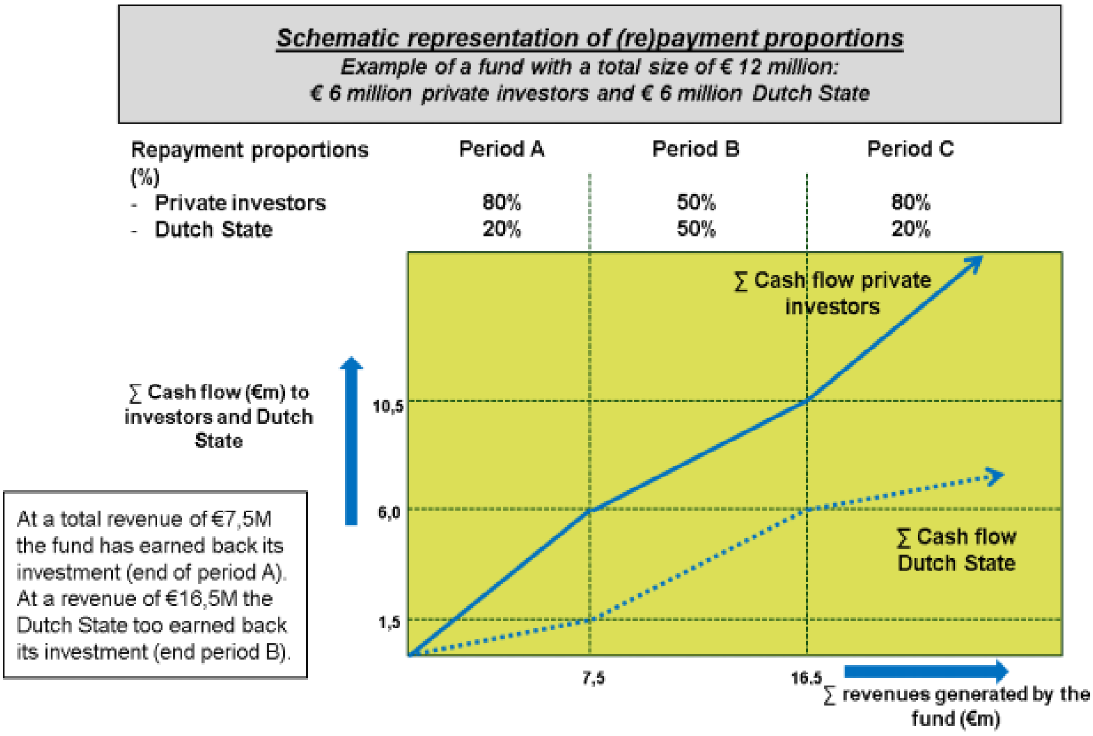
- it matches the private investment budget to a maximum of 50% of the total investment budget;
- the maximum amount invested per fund is EUR 6 mln;

[1] For the development of this case study, the following sources have been exploited: phone calls with representatives of the Directorate of Legislation and Legal Affairs, Ministry of Economic Affairs and Climate Policy, with representatives at the Netherlands Enterprise Agency (Rijksdienst voor Ondernemend, RVO), with two fund managers that benefitted from co-funding by the Seed program and with two beneficiaries; description of the scheme; independent Evaluation Report finalized in February 2019 by the Erasmus University of Rotterdam and Dialogic; statistics available on the Seed scheme website.

[2] The financial intermediary and the fund manager are selected through an open, transparent, and non-discriminatory selection call, based on objective criteria linked to experience, expertise, and operational and financial capacity. Funds that want to set up a Seed Fund must first prepare a plan in order to be eligible for the loan. Experts from an advisory committee assess the fund plan and give either a negative or a positive advice on it. Subsequently, applications with a positive advice are ranked on the basis of the fund managers' experience and expertise, of the potential contribution to the set-up of successful companies, and of the effectiveness of the plan design. The applications that have been rejected or that do not rank high enough do not receive support. The fund manager receives a remuneration that reflects current market levels in comparable situations and that is linked to performance (this is a condition of the Seed capital scheme).

- the interest rate is 0%;
- there is no repayment schedule. Repayments are based on realised income, according to the scheme presented in the following Figure B.1.

Figure B.1: SEED Capital scheme (re)payment proportions



Source: Rijksdienst voor Ondernemend Nederland, Seed Capital scheme internal document

The repayment scheme is such that, if the investment is not successful, part of the failure is born by the government. At the portfolio level, this allows a better risk/return ratio for the investment funds. The scheme therefore lowers the risk of investing in high-risk companies.

The budget depends on the year; for 2019, it amounts to EUR 27 mln in the spring and EUR 20 mln in the fall, while the budget allocated for BAs is EUR 10 mln. The maximum grant per fund is EUR 6 mln. The maximum average invested amount per start-up at the end of the investing period is EUR 1.2 mln. Occasionally, there have been sector-specific tenders with a dedicated budget:[3] these tenders are seen very favourably by fund managers because they allow to compete for dedicated funds with a smaller pool of competitors, thereby facilitating the access to funds in new markets with few track records.

From July 2017, the Seed Business Angel scheme has been created within the Seed program. This scheme is aimed at fostering an active involvement of BAs, which can bring their knowledge, networks and experience. They will invest in an earlier stage of the firm's life than the Seed Funds

[3] 2016: Agri, Horti and Food tender; 2017: two eHealth tenders (spring and autumn); 2019: eHealth tender and Climate & Energy tender.

and for smaller amounts. The available budget for this initiative is EUR 10 mln, and each fund receives a loan of a maximum of EUR 1 mln. The requirements set for the Seed Business Angel funds differ from the regular start-up funds in the Seed Capital scheme. The Seed Business Angel fund, for example, consists of two shareholders, as opposed to three or more shareholders in the start-up funds.

The scheme is aimed at the so-called "technostarters", i.e. firms that run a business or prepare its start-up, based on a technical innovation or on a new application of an existing technology. The target firms are therefore start-ups in the technological and creative sectors. Examples of companies that benefitted from the Seed funds are technological companies that produce software for B2B, companies in the transportation technology, and innovative companies in the sector of sustainability, food, agriculture, and life sciences.

B.1.2. Experience with GBER

Eligibility criteria, thresholds, and conditions

The scheme underwent a major change in 2014 in response to the revision of the GBER and to the new market conditions. The changes were as follows:

- the maximum amount of the Seed loan per investment fund changed from EUR 4 mln to EUR 6 mln;
- the maximum amount to be invested per company changed from EUR 2.5 mln to EUR 3.5 mln;
- the maximum average amount to be invested per company during the investment period changed from EUR 800.000 to EUR 1.2 mln;
- the maximum amount to be invested per period changed from EUR 500.000 per half year to EUR 2 mln per 12 months;
- the maximum percentage of the total investment budget to be invested through subordinated loans changed from 35% to 50%;
- the eligible age of the technostarter (at the moment of receiving Seed capital) changed from 5 years since Chamber of Commerce subscription to 7 years since first commercial revenue;
- there can be no professional investors amongst the shareholders of a company at the moment a Seed fund wants to invest (exceptions specified in the scheme), unless this professional investor is another Seed fund, or if it is an informal investor (not investing through a formal investment fund). The change in 2014 was that the scheme explicitly allowed for informal investors to be amongst the existing shareholders when a Seed fund wants to invest. If more than one Seed fund invests in the same company, the maximum investment amount per company of EUR 3,5 mln. applies to all Seed funds together (not individually). The rationale behind this provision, which is not part of the GBER rules but is specific to the Seed scheme, is to prioritize support to companies that face difficulties in finding a first professional investor,

and for which therefore the market failure is more severe. The Seed scheme is indeed focused on very early-stage companies;[4]

- possibility to convert (non-paid, accumulated) interest income into shares/equity.

Some of the above requirements are a direct consequence of the conditions introduced by the revision of the GBER rules, such as the 7-years limit. Others are instead an enlargement of the thresholds for investments, which were motivated on the basis of the increased size of funds needed by the potential beneficiaries. According to the granting authority, the GBER provision whereby the total amount of the investment in one beneficiary through multiple schemes must not exceed EUR 15 mln was in practice not restrictive for the type of companies that the Seed program is targeting, which are small and very early-stage start-ups.

According to both the granting authority and the financial intermediaries interviewed, the 7-years limit is generally not seen as a big issue for the type of companies that the Seed program is targeting, because this time frame is seen as sufficient.

According to the financial intermediaries interviewed, the maximum amounts of funds per company (EUR 3.5 mln) can be restrictive for sectors characterized by capital-intensive technology, such as recycling. This is also the main point where the 2019 evaluation report finds room for improvement, to allow for larger-scale funds in sectors where the investments for start-ups need to be higher.

Finally, private investors find the provision whereby the funds cannot be granted to firms that have already a professional investor as unduly restrictive in some cases, arguing that the market failure may still exist even where a professional investor is already onboard. Moreover, according to some financial intermediaries, it is sometimes debatable whether an existing shareholder is a professional or not. While this criticism is reasonable, the presence of a professional investor can be interpreted as a signal that the market failure for that particular company is less severe. Therefore, since the budget is limited, it may make sense to prioritize those companies for which the market failure is more severe, without however excluding those that have already a professional investor onboard from a residual access to public funding. In order to address these stakeholders' concern, one possibility would be to make this provision more flexible by allowing companies with a professional investor to be eligible for funding on a residual basis.

Awareness and burdensomeness

According to stakeholders interviewed, the Seed program is well known in the Netherlands, and investment funds are typically aware of it, but also due to how the scheme is structured final beneficiaries may not necessarily know that the investment is partly funded by the Seed program. Indeed, according to the 2019 evaluation, there is still a lack of knowledge about available funding opportunities among entrepreneurs. This issue deserves further attention to make a possibly latent demand for risk capital emerge.

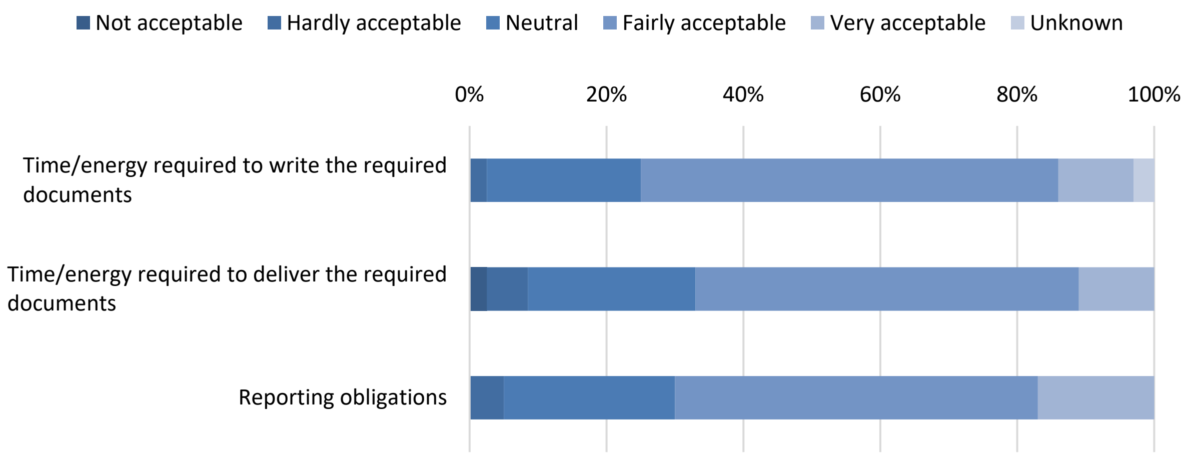
[4] In the Netherlands, there are also other State aid schemes aiming at financing SMEs at later stages of development.

As to the complexity and procedural burden, the granting authority believes that the level of complexity is not excessive, and this this confirmed by other stakeholders:

- investment funds do not find the procedural burden to be particularly heavy. The amount of reporting that they have to do for the Seed scheme is similar to the one they have to do for their private investors;
- beneficiaries state that for them the only burden consists of a two-weeks' waiting time to get the RVO's approval.[5]

According to the 2019 evaluation, administrative burdens, including the efforts that applicants must make to submit an application and the reporting obligations towards RVO that Seed fund managers must meet after an application has been approved, are not perceived as excessive by the fund managers surveyed (see Figure B.2). Approximately three-quarters of them find the workload required for writing the fund application reasonable to very acceptable. Approximately 70% of the respondents find the reporting obligations acceptable. Informal investors are less used to strict reporting obligations and must gain experience in this area.

Figure B.2: To what extent do you find the administrative burden acceptable? (N=36 fund managers)



Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019)

B.1.3. Impact of the scheme

Since the start of the scheme in 2005, 147 funds have applied for Seed. Of these, 70 (48%) have been granted a Seed loan.

According to both the granting authority and the stakeholders interviewed, the Seed scheme has been a very successful tool in attracting private funds to invest in high-risk profile companies. This is also confirmed by the 2019 evaluation report. We analyse the impact of the scheme based on

[5] RVO indicates that all investment funds know about the possibility to submit a request based on concept investment documents, which allows for alignment of approval by RVO.nl with their internal approval.

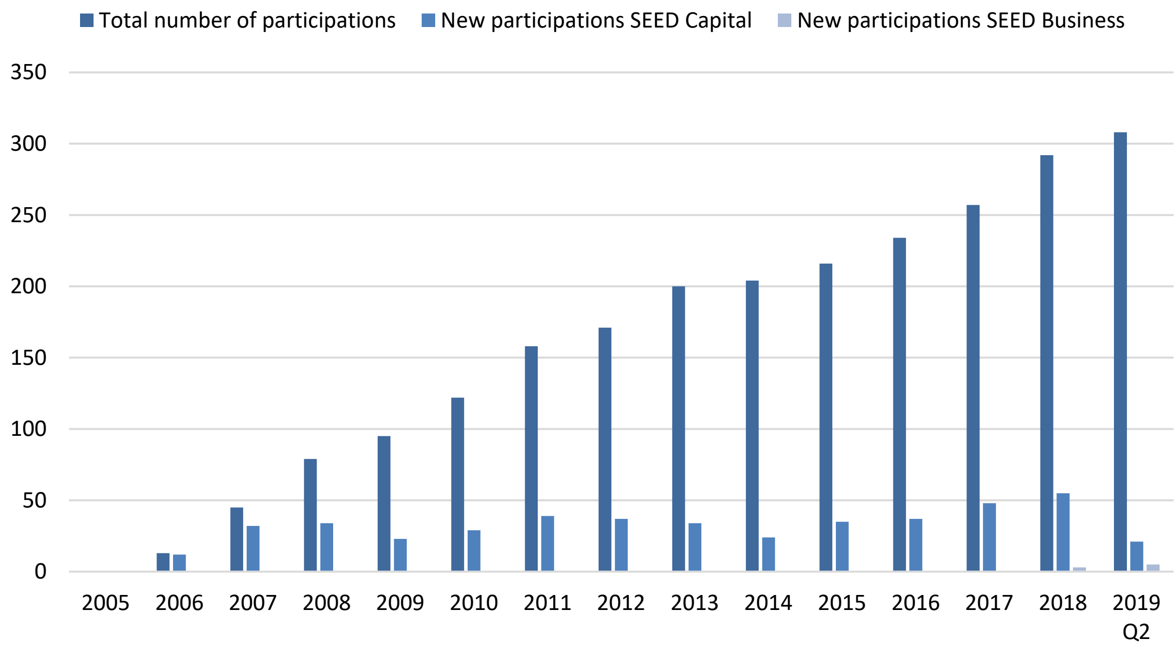
the statistics available on the Seed's website, on the evidence contained in the 2019 evaluation report, and on our interviews with financial intermediaries and beneficiaries.

We first provide some descriptive statistics on the activity of the Seed program. We then analyse its impact on the financial intermediaries as well as the effect on the start-ups that received Seed investments.

Descriptive statistics

Since the start of the scheme, the Seed funds have invested in more than 300 companies (see Figure B.3). After a drop in 2014, the number of investees has steadily increased in recent years.

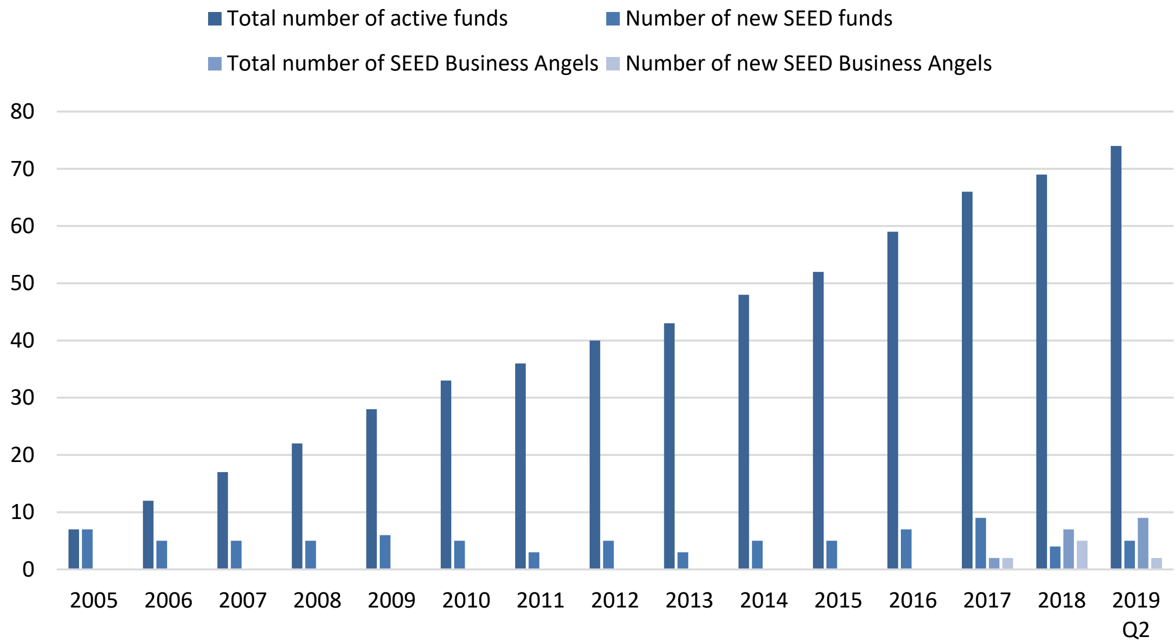
Figure B.3:Number of new participations and total number of new participations (participation = company/ultimate beneficiary), 2005-2019



Source: Study Team based on data from the Ministry of Economic Affairs and Climate Policy (https://www.bedrijvenbeleidinbeeld.nl/beleidsinstrumenten/s/seed-capital--seed-businss-angels)

At the end of the second quarter of 2019, there are 74 active funds, with an average of five new funds per year (see Figure B.4).

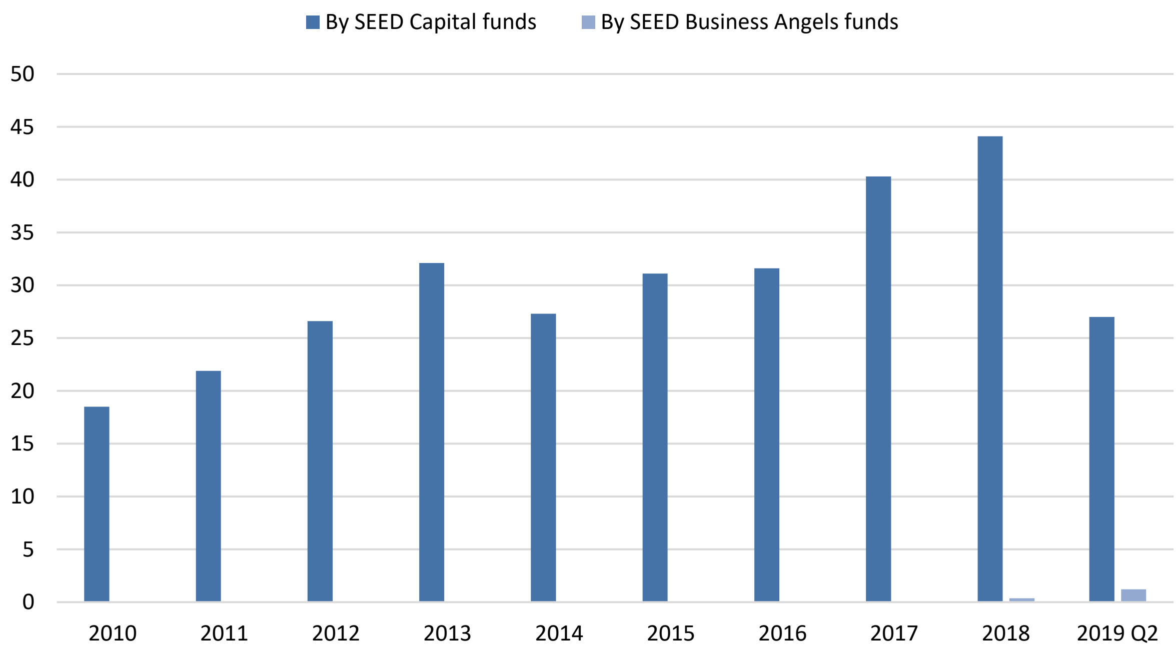
Figure B.4: Number of new funds and total number of active funds (Seedfund = intermediary), 2005-2019



Source: Study Team based on data from the Ministry of Economic Affairs and Climate Policy (https://www.bedrijvenbeleidinbeeld.nl/beleidsinstrumenten/s/seed-capital--seed-businss-angels)

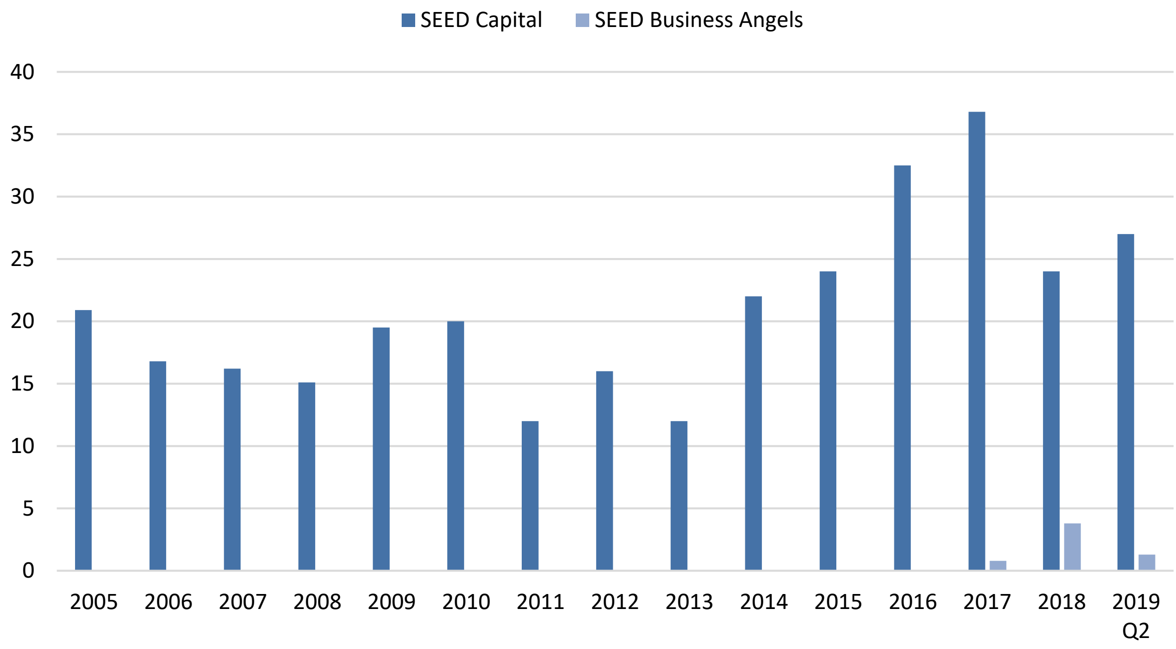
Figure B.5 shows the total amount of investment per year, of which approximately one half is financed with loans from the Seed scheme. Figure B.6 shows instead the amount of money made available by the Seed scheme. This amount does not coincide with the amount actually spent because there is capital committed to funds that have been terminated without the entire fund being invested. Figure B.7 shows the cumulative amount of funds (public and private) invested and available. The total amount of investments made until mid-2019 was EUR 643 mln.

Figure B.5: Total amount of risk capital invested in companies through the Seedfunds (public and private budget) per year, 2010-2019 (EUR mln)



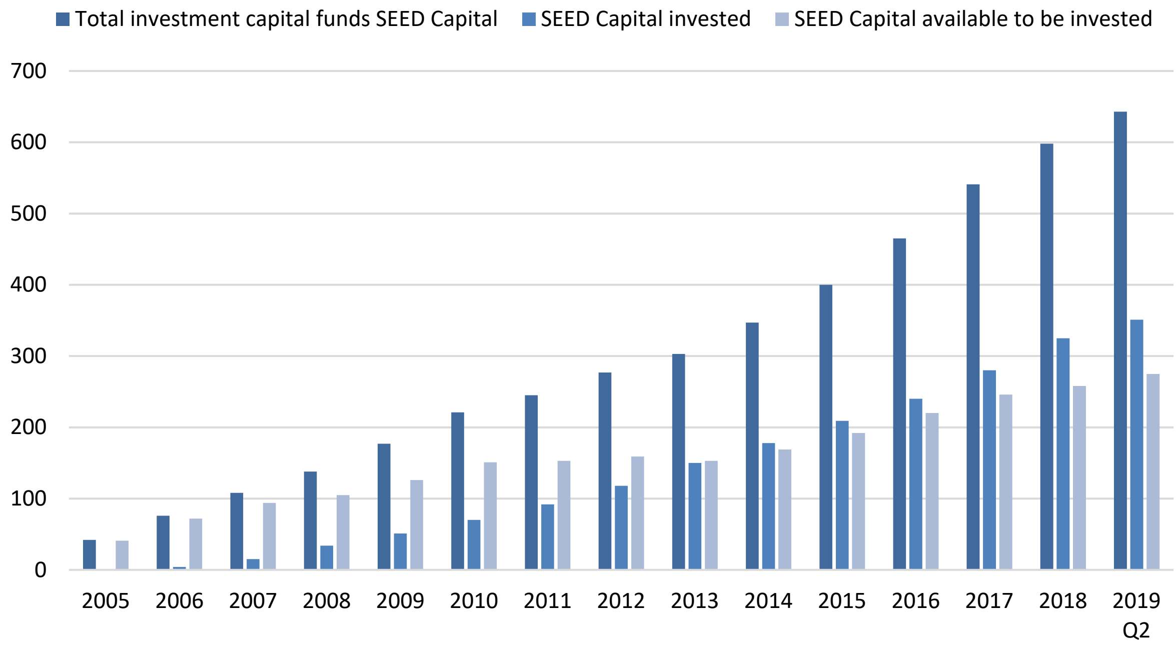
Source: Study Team based on data from the Ministry of Economic Affairs and Climate Policy (https://www.bedrijvenbeleidinbeeld.nl/beleidsinstrumenten/s/seed-capital--seed-businss-angels)

Figure B.6: The total amount of public resources made available in each year (to match the private budget of applicants), 2005-2019 (EUR mln)



Source: Study Team based on data from the Ministry of Economic Affairs and Climate Policy (https://www.bedrijvenbeleidinbeeld.nl/beleidsinstrumenten/s/seed-capital--seed-businss-angels)

Figure B.7: The total investment budget (private and public) of all Seedfunds, the total amount invested and the total amount still available to invest, since 2005 (EUR mln)



Source: Study Team based on data from the Ministry of Economic Affairs and Climate Policy (https://www.bedrijvenbeleidinbeeld.nl/beleidsinstrumenten/s/seed-capital--seed-businss-angels)

The 2019 evaluation includes statistics on the profile of companies that received Seed investments. Table B.1 below shows their characteristics in terms of age, number of employees, revenue, R&D intensity and amount of investment received. Companies that received an investment supported by the Seed program are compared with comparable start-ups that received an investment with a Regional Development program (ROM) or other private tools. The Seed companies are characterized by a much younger age than other companies, but are similar in terms of other characteristics. The average investment amount that a company receives from a Seed Capital fund is more than twice as high as that of ROMs. The private funds invest in considerably larger and older companies, and therefore the investment amount is more than twice as high as compared to investments received from a Seed Capital fund.

Table B.1: Profile of companies

	Age (in months)	Working people	Revenue	R&D[6] (EUR)	Investment received (EUR)
Seed Capital	21,15[7] (208)	5,81(187)	364.765 (214)	108.441 (133)	766.765 (238)
ROM	44,97 (307)	4,58 (273)	371.922(307)	121.740 (120)	305.538 (307)
No ROM	51,28 (93)	9,19 (84)	575.077 (93)	326.548 (55)	1.684.744 (93)

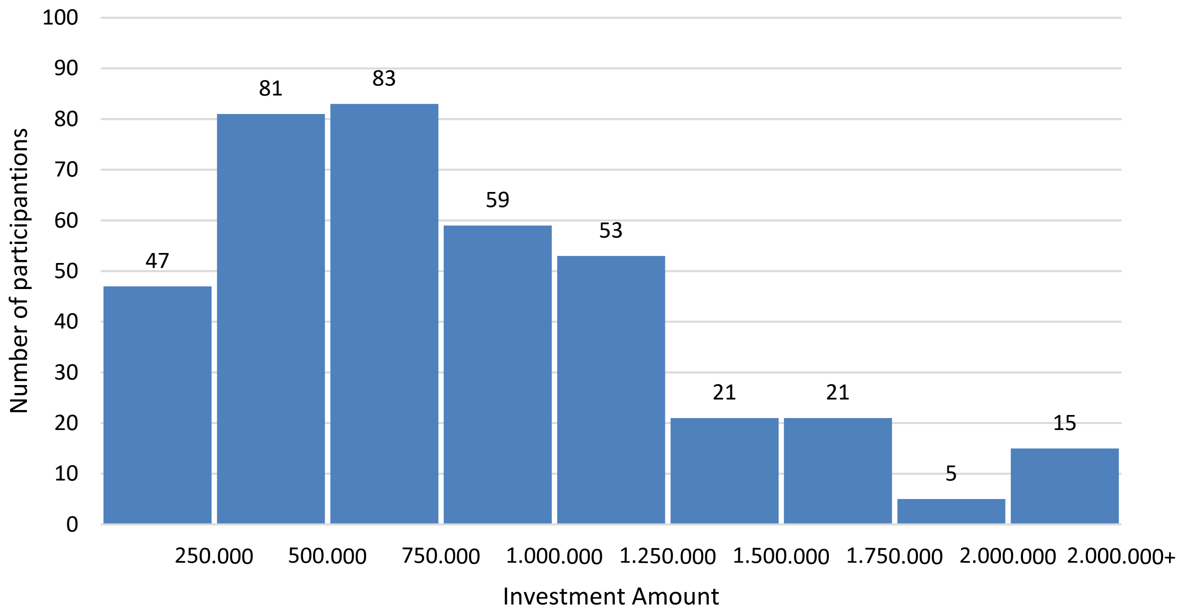
Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019). The number in brackets indicates the number of observations.

Figure B.8 shows the distribution of the investments made by the Seed Capital funds. The average investment amount per participation is EUR 0.78 mln and the median is EUR 0.7 mln. It is interesting to know that the average investment amounts also differ per sector. The 2019 evaluation also reports that the average investment amount for the Advice, research and other business services sector is EUR 0.96 mln, for Industry EUR 0.75 mln and for Information and communication EUR 0.7 mln. However, without knowing which specific economic activities fall into these categories, it is difficult to draw implications on the funding needs per sector based on these figures. In particular, the fact that “Advice, research and other business services” has higher average investments than industry, which may look counterintuitive as start-ups in manufacturing typically require higher investment costs in machinery etc., may be due to the fact that the former category includes very capital-intensive activities. It is instead not surprising that “information and communication” companies have slightly lower average investments, given that ICT start-ups generally require lower capitals for their set-up.

[6] Realized wage costs for carrying out research and development work per year (WBSO).

[7] The average age for the Seed Capital from the CBS microdata (21.15 months) is different from the average age from the portfolio data (26 months). This difference can be explained by the fact that with the CBS microdata there are only 208 observations from the 342 companies.

Figure B.8: Distribution on the investments of Seed Capital funds by sector



Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019)

The 2019 evaluation also reports figures on exits and bankruptcies (see Table B.2 below). There were no exits in the first four years of the scheme (2005-2008). Table B.2 shows that the number of exits increases over the course of the scheme, especially in recent years. This follows logically from the increased number of participations from the early stage of business. The number of bankruptcies on an annual basis is equal to 46, compared to a total of 257 over the whole period.

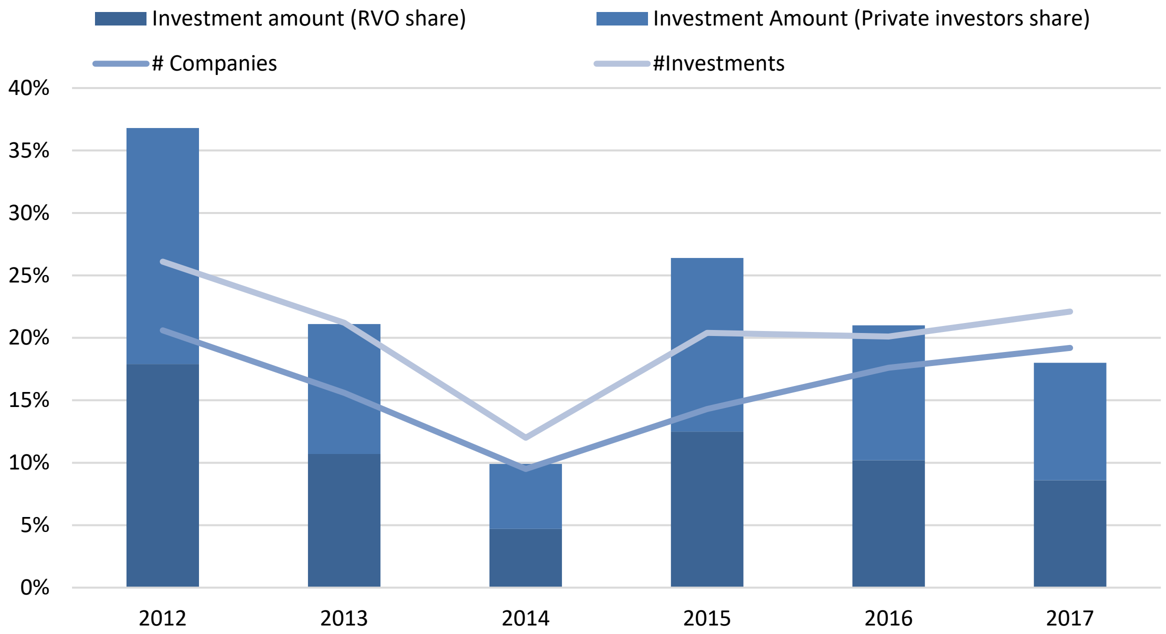
Table B.2: Profile of Companies

Year	Finished participations	Bankrupt Participations	Sold Participations
2009	7 (7)	3 (3)	4 (4)
2010	2 (1)	2 (1)	0 (0)
2011	3 (3)	3 (3)	0 (0)
2012	24 (19)	13 (11)	11 (8)
2013	5 (5)	2 (2)	3 (3)
2014	20 (19)	7 (6)	13 (13)
2015	23 (21)	10 (9)	13 (12)
2016	19 (14)	6 (4)	13 (10)
2017	25 (25)	7 (7)	18 (18)
Total	**128 (114)**	**53 (46)**	**75 (68)**

Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019). The number in brackets indicates the number of unique companies corresponding to the number of participations.

It is also interesting to compare the Seed Capital funds with the total Dutch market for seed and start-ups. Figure B.9 shows the percentage of Seed Capital is in relation to the total market with regard to investment amount, number of investments and number of companies.

Figure B.9: Seed Capital funds in the total Seed and Start-up market in the Netherlands



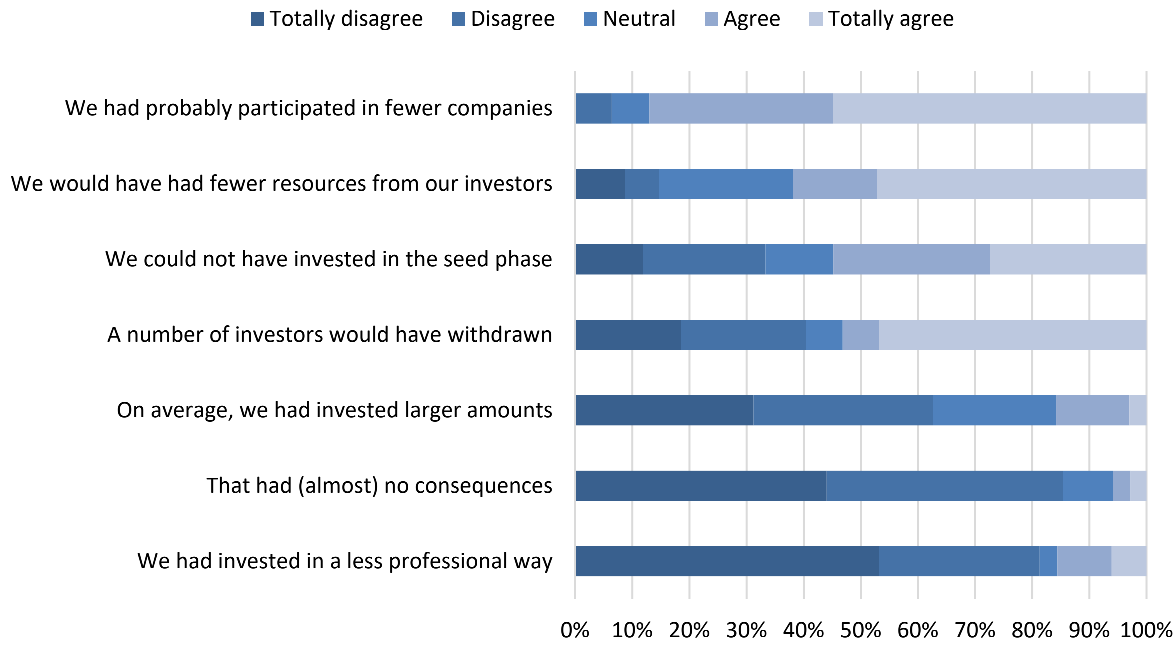
Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019)

Seed funds cover a relatively high percentage of the investment amount. There was a decrease in 2014, both in terms of investment amount and in terms of number of companies and investments, but the share of Seed Capital investments has increased again since then.

Impact on financial intermediaries

The vast majority of the 36 fund managers surveyed during the 2019 assessment believe that the Seed Capital scheme has strengthened the risk capital market in the Netherlands. Absent the scheme, their investments in start-ups would have been much lower, as they would have raised fewer funds from their investors. The impact of the Seed scheme on venture capital funds is summarized in Figure B.10.

Figure B.10: Suppose you could not have made use of the Seed Capital scheme. What did this mean for your investment company? (N=36 managers)



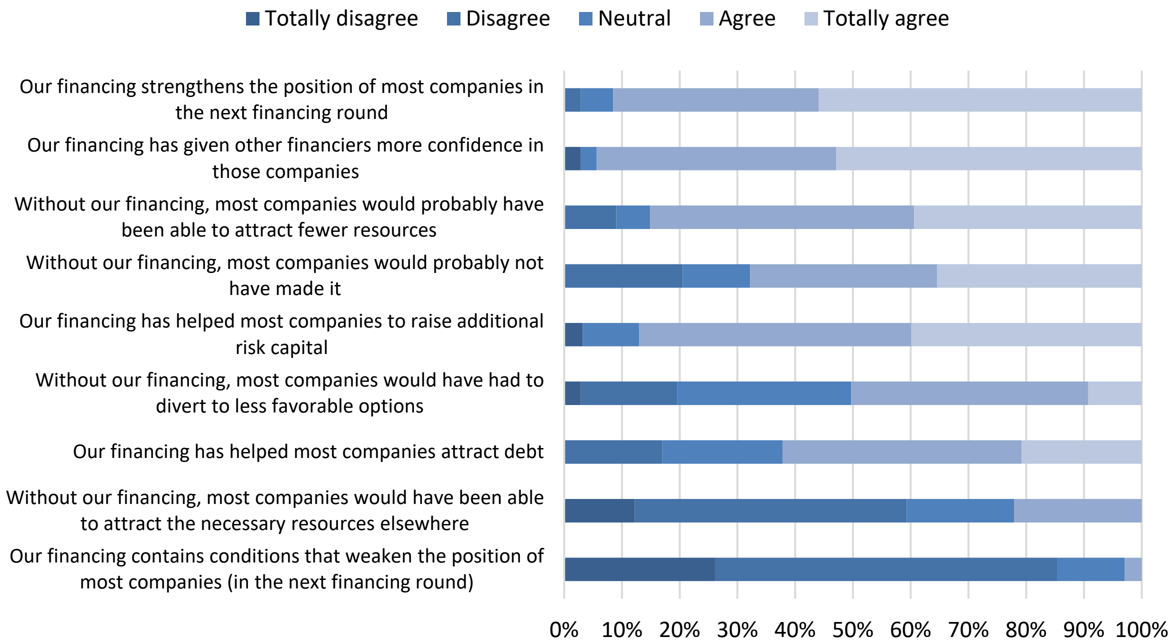
Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019)

According to the 2019 evaluation, thanks to the scheme certification, 48 fund managers have been able to set up a total of 55 follow-up funds, with an average leverage ratio of two. The capital from private investors has more than doubled the Seed funds.

Impact on target start-ups

The Seed scheme has improved entrepreneurs' access to venture capital for innovative start-ups. As Figure B.11 shows, more than two thirds of the Seed fund managers surveyed during the 2019 evaluation believe that their investment was crucial for existence of the receiving company. Fund managers also argue that the involvement of a Seed Capital fund helps companies attract more funds (~85%), gives other investors more confidence in the company (~94%) and helps them to obtain additional equity (~93%) and loans from other financiers (~62%).

Figure B.11: Statements about the effect of the Seed Capital scheme (N=36 fund managers)



Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019)

These findings are confirmed in the survey of the 23 companies that have received funding from a Seed Capital fund, also reported in the 2019 assessment. Respondents strongly report that Seed Capital financing strengthens their position in the next financing round (~67%), access to more risk capital (~94%) and debt (~57%) and gives other investors more confidence (~67%).

The results of the microdata analysis reported in the 2019 evaluation support these findings:

> *"There are 78 of the 238 companies (~33%) that succeed in attracting risk-bearing follow-up financing from the Seed Capital fund (30), a regional development company (15) or a private investment fund (35). This is an investment of on average 554 thousand euros, on average 15 months after the first investment by a Seed Capital fund. A number of companies even succeed in attracting follow-up financing several times (26 companies twice, 11 companies three times and 4 companies four times (not shown in the table because CBS does not allow reporting on fewer than 10 observations). Compared to companies that have first funded funding from regional development companies, companies that have received the first funding from a Seed Capital fund are more likely to attract follow-up funding. The percentage of follow-up financing at 307 companies that received the first financing round from regional development companies is 11.4%, significantly lower than the 33% for companies that have received the first financing round from a Seed Capital fund (this difference is statistically significant at 1 percent level). A causal relationship is, however, difficult to demonstrate in connection with selection mechanisms that play a role in these different types of investors. For 93 companies that received the first financing from a private investment fund, the percentage of companies with follow-on financing (~26%) is comparable to the percentage for companies that receive the first financing from a Seed Capital fund (~33%)."*[8]

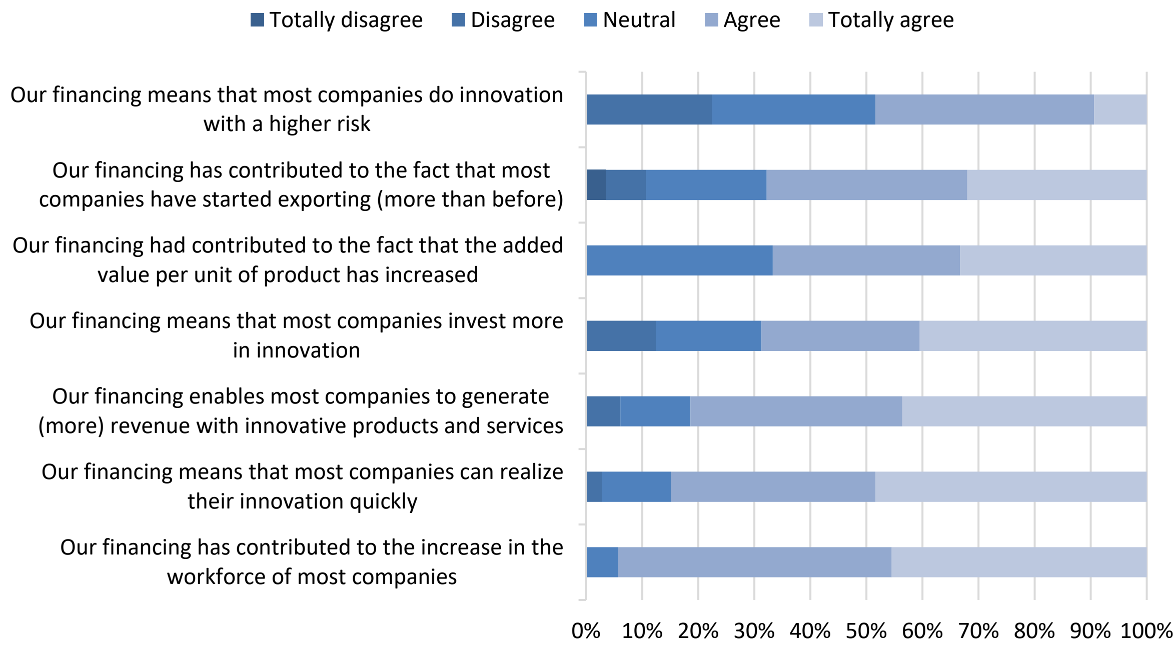
The interviews that we have conducted with fund managers and beneficiaries confirm this view. There seem to be two channels whereby the program has an impact on final beneficiaries:

[8] Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative, 2019 (our translation from Dutch).

- it allows them to attract funds that are particularly difficult to find for high-tech start-ups. For some of them, the Seed funds were crucial in the creation of the firm or in the very early stage;
- the Seed program is important because it generally allows to get a professional investor onboard, with high requirements in terms of professional reporting. Moreover, professional investors belong to larger networks of investors, which facilitate the companies' ability to obtain further private investments. The presence of experienced investors supported by public funds is also important in order to get access to other public funds (regional, national or European). Overall, the presence of the public investment improved the beneficiaries' ability to reach other public and private investors.

According to the majority of the fund managers surveyed during the 2019 evaluation, the effects of the Seed scheme on the beneficiaries are mainly in the increase of the speed and ability to innovate (see Figure B.12). It does not seem that companies have started to take more risks with their innovation, as the target group is already high-risk. There is also a positive contribution because the added value per unit of product has increased and the company has started exporting more than before.

Figure B.12: Propositions about the effect of financing by a Seed fund on the companies (N=36 fund managers)



Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019)

The microdata used in the 2019 evaluation also allow a comparison in the performance of companies that have raised their first financing from a Seed Capital fund and with similar companies that have collected their first financing from a regional development company (ROM).[9] The matched company is in the same stage of development, is active in the same industry (two-

[9] See the 2019 evaluation report for details on the matching procedure.

digit SBI code), and is in the same size class as the Seed company. This comparison shows that Seed firms grow on average faster than comparable companies that raise money from ROMs (see Table B.3).

Table B.3: Performance of companies that received a first investment from a Seed Capital fund in year 0 versus a regional development company (ROM)

Number of employed persons					
	Year	0	1	2	3
Seed Capital	average	3,47	6,94	8,87	11,33
	obs	47	47	47	47
ROM	average	2,99	4,47	4,9	4,95
	obs	47	47	47	47
Revenue					
Seed Capital	average	€ 207.707	€ 459.017	€ 579.056	€ 741.863
	obs	46	46	46	46
ROM	average	€ 251.391	€ 337.452	€ 454.922	€ 583.106
	obs	46	46	46	46
Labour costs R&D personnel					
Seed Capital	average	€ 120.421	€ 203.843	€ 267.678	€ 282.554
	obs	24	24	24	24
ROM	average	€ 66.540	€ 66.375	€ 64.357	€ 64.402
	obs	24	24	24	24

Source: Evaluation of the SEED Capital Scheme, Growth Facility & Dutch Venture Initiative (2019)

In the third year after the first investment, the average number of employees and the average turnover of companies with a first financing by a Seed Capital fund more than tripled, while for ROM companies it only doubled. This is closely related to the fact that the companies with first financing from a Seed Capital fund are more likely to attract follow-on financing (~47%) than the companies that received their first financing from a ROM (~11%). According to the stakeholders that we interviewed, this is also due to the fact that, by having professional venture capitalists onboard, Seed companies are supported by professional investors that can provide specialized know-how and access to large venture capitalists networks. This follow-up financing enables companies to accelerate their growth path. The wage costs of personnel involved in research and development and who receive a tax reduction for this through the WBSO scheme are also growing faster in companies with financing through a Seed Capital fund than in comparable companies that have received first financing through a ROM.

B.1.4. Conclusions

- The scheme was created in 2005 and went through a major change in 2014, in order to align it to the new GBER rules and to best market practices (see section "Experience with GBER" for a description of the changes).
- The scheme offers an interest-free loan to investment funds that invest in start-ups ("technostarters"), through an open tender that opens twice a year.
- The repayment scheme is such that, if the investment is not successful, part of the failure is born by the government. The scheme therefore lowers the risk of investing in high-risk companies.
- The advantage of such system is that the investment decision is delegated to professional operators that are typically very specialized in specific sectors, and therefore have the knowledge to identify the best investment opportunities in each market.
- There have been sector-specific tenders with a dedicated budget, in order to address particular financing needs of some sectors.
- The modifications introduced after the 2014 revision of the GBER did not negatively affect the effectiveness of the scheme.
- According to both the 2019 evaluation and our interviews with stakeholders, there is room for improvement in some specific provisions of the scheme (such as the absence of professional investors) and in some thresholds for the amount of investments, that could be higher. Although the decision to prioritize companies that do not have professional investors onboard appears reasonable, this provision could be made more flexible by allowing them to apply for funding on a residual basis.
- According to both the evaluation report and to the interviewed stakeholders (financial intermediaries and beneficiaries) the scheme has been successful in fostering the development of the venture capital market and support start-ups.
- There seem to be two channels whereby the program has an impact on final beneficiaries:
  - it allows them to attract funds that are particularly difficult to find for high-tech start-ups. For some of them, the Seed funds were crucial in the creation of the firm or in the very early stage;
  - it allows to get a professional investor onboard, with high requirements in terms of professional reporting. Moreover, professional investors belong to larger networks of investors, which facilitate the companies' ability to obtain further private investments.

Annex B.2. SA.39418 – Tekes Pääomasijoitus Oy:n riskirahoitusohjelma (Finland)[10]

B.2.1. Characteristics and design of the scheme

The Tekes scheme was designed at the beginning of 2014 and was launched in August 2014, just after the introduction of the new GBER rules. Unlike other pre-existing schemes that were modified following the new regulation, this scheme was entirely designed under the new rules. The scheme was then subject to an independent assessment in November 2018, following which some modifications were made (see below for details).[11]

In line with the BFVC Act (967/2013), the program seeks to "*promote the growth of start-up companies in Finland by developing the venture capital market, remedying shortcomings in the provision of early-stage financing for companies*". The purpose of the program is to enable the emergence of new venture capital companies in Finland and to increase the number of domestic and foreign private investments in start-up companies.

The scheme is managed by Business Finland Venture Capital Oy (BFVC; originally Tekes Venture Capital Ltd), a company that is fully owned by the Republic of Finland and belongs to the administrative branch of the Ministry of Employment and the Economy.[12] Business Finland (formerly known as Tekes), the Finnish Innovation Fund, is responsible for its steering ownership. The statutory objective of BFVC is to develop the venture capital market by remedying shortcomings in the provision of early-stage financing to companies. BFVC can make both state aid investments based on Article 21 of the General Block Exemption Regulation, and non-state aid investments.[13] BFVC invests in funds that in turn invest in business start-up companies. Venture capital funds act as intermediaries and are responsible for the preparation and implementation of investments in portfolio companies. BFVC selects its investment targets through an open and non-discriminatory application procedure.[14] The investment policy is based on return on investment, competitive terms and a skilled and professional management company, in order to attract sufficient private capital. The funds are managed by private management companies acting as

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[10] For the development of this case study, the following sources have been exploited: phone calls with representatives of Business Finland, with two managers of funds supported by the scheme and with one beneficiary; description of the scheme (http://businessfinland.vc/wp-content/uploads/2019/02/Riskirahoitusohjelma.pdf, 2019); investment policy of the scheme provided by Business Finland (in Finnish); Act of the foundation of Business Finland (967/2013); independent assessment undertaken in November 2018 (carried out by Professor Markku Maula from Advestia Oy).

[11] The current State aid scheme number is SA.53571, and it has been introduced in January 2019.

[12] See Act on Risk Funding for Private Equity Funds and state-owned company 967/2013.

[13] Non-aid investments are made through separate funds and the general partner of a fund is responsible of making investment decisions. Therefore, a fund would be either a non-aid or a state-aid fund, and its management company would only make non-aid or state-aid investments to final beneficiaries.

[14] The analysis of this scheme did not cover the procedure to select the financial intermediaries allowed to participate in the scheme. Therefore, we did not assess the GBER conditions regarding aid to financial intermediaries.

partners or under contract. The partners of the funds make independent decisions on investments in portfolio companies in accordance with the agreed investment policy.

The financial instrument is the provision of risk capital in the form of equity or quasi-equity investments in venture capital funds or a loan, which may be unsecured. The investment in the target company must be an equity or quasi-equity investment, a debt or guarantee, or a combination of both. BFVC's investment commitment may be between 25% and 50% of the size of the fund (usually around 35-40%). The rest is owned by private investors. In the latest version of the State aid scheme, implemented in January 2019, BFVC’s investment commitment can be up to 50% of the total commitments.

There are other instruments available to early-stage Finnish SMEs in the form of innovation and R&D grants and loans, guarantees etc. This scheme, instead, was originally set up to make investments into venture capital funds, indirect investments to seed and start-up companies via investment funds. Therefore, it represents just one piece in the supply of capital to Finnish start-ups.

At the time of its launch, the program budget over the period in 2014-2020 was estimated to be about EUR 20 mln per year. As defined in BFVC's Investment Principles[15], the goal has been to make investments in 2-4 new funds annually. The size of BFVC's investment commitment is set at a maximum of EUR 6 mln per fund. For the time being, BFVC has only invested in funds designated by management companies as first funds, although the possibility of investing in second funds is not directly limited.

The measure targets seed and start-up companies mainly under six years of age, whose products or business model are still in the process of development and have low turnover and no breakthrough in international markets.

In the first version of the scheme, the investment funds to be financed may invest in foreign target companies up to 15% of the fund's capital. This limit derives from the program’s objective of targeting Finnish companies.[16] This limit emerged as one of the main weaknesses of the scheme in the 2018 assessment and was therefore loosened. In the most recent version of the program, therefore, the funds may invest up to 40% of the fund's capital in companies registered outside Finland.

The investment in the target company must be based on a viable business plan that includes detailed information on the target company's products and services, sales and profitability trends, and a prior assessment of the business's chances of success. The fund must have a clear and realistic exit plan for each target company. The portfolio companies of the funds and the investment to be made must also meet the requirements of the GBER. BFVC aims to invest in

[15] Available at http://www.businessfinland.vc/hakijalle/.

[16] This results from a decision made by the Finnish Ministry of Employment and the Economy. Depending on how they are set up, geographical restrictions may be non-compliant with the Rules.

early-stage PE funds specializing in different fields and investing in different themes. The investment criteria are not industry-specific and the company's investment activities have no regional objectives.

B.2.2. Experience with GBER

Eligibility criteria, thresholds, and conditions

The scheme is more restrictive than the Art. 21 criteria would allow. As a result, the measure is more targeted towards startup companies.

In the design of the scheme, Business Finland decided not to adopt the GBER eligibility criterion requiring SMEs' initial investment to be higher than 50% of average annual turnover, with a view to entering into new product or geographic market, as these companies do not necessarily meet the national criteria of being a seed or a start-up company at the time of investment. The reason behind the choice of narrower eligibility criteria lies in the fact that this scheme is very much targeted on seed and start-up firms.

According to both the granting authority and the fund manager interviewed, the main limitation related to the GBER rules seems to be the rule whereby the risk finance measure may provide support for replacement capital only if the latter is combined with new capital (provided by private investors) representing at least 50% of each investment round. In the view of these stakeholders, the requirement that replacement capital, i.e. buying shares from existing shareholders, can be used only in conjunction with new capital injection for the same amount does not follow the general market practice in venture capital and may cause lower returns for example to investors of financial intermediaries. It is not uncommon that existing shareholders are forced to sell their holdings in a company to the other shareholders of the company. These secondary transactions may normally be profitable to the shareholders as there might be good return expectations. Such events are typically unplanned and independent of possible investment rounds. Therefore, financial intermediaries that operate under art. 21 of the GBER may not always be able to purchase such shares from existing shareholders, to the possible detriment of their private investors. Also, an eligible undertaking may not be able to organize a new investment round together with a secondary transaction as it may dilute shareholdings of other shareholders. According to the interviewed stakeholders, the current version of art. 21 of the GBER may therefore cause an inequality between shareholders of a company in such situations.

Furthermore, according to the interviewed stakeholders, this provision may be in contrast with the Regulation 345/2013 on European Venture Capital Funds (EuVECA), which instead allows venture capital funds to acquire shares of an eligible undertaking from existing shareholders without restrictions (Article 3, item (e), point (iii)).

Based on the available evidence, it is difficult to say how widespread the concern about this provision is. In the interviews conducted for the 2018 evaluation, there is no evidence of such concern among other relevant stakeholders. However, given that both the granting authority and a financial intermediary raised this issue, we believe it is worth some attention. In particular, a balance should be made between the consideration that should be given to private investors' interests, which would call for more flexibility in the possibility of buying shares from existing shareholders, and the primary objective of State support, which is to solve a market failure caused by information asymmetry. In this respect, removing this provision altogether would imply that investment funds that are partly endowed with State resources would be free to acquire shares from other shareholders irrespective of the existence of a market failure. In this situation, a case-by-case assessment would probably be desirable, in order to make sure that the investment still meets the criteria required to obtain State aid. This would however cause delays and increase uncertainty, which is undesirable from the point of view of private investors. Another possibility would be to set a lower threshold for capital replacement, in order to reduce the share of private capital inflow. It is however difficult to assess which threshold would be more appropriate. Overall, at this stage it seems that this issue may deserve further attention, in order to understand whether there is a widespread consensus on its limitations also with respect to other schemes in different Member States. It is however premature, based on the evidence available so far, to think of an amendment of this provision in the direction of an increased flexibility.

Another weakness of the original scheme, which however does not come from the GBER rules, is the provision whereby a maximum of 15% of the target fund's capital may be invested in foreign countries. Stakeholders consider this requirement a major limitation of the scheme, as it may prevent the emergence of internationally strong early-stage equity funds that are anchored to Finland. It seems that this provision forces financial intermediaries to give up interesting investment opportunities in nearby countries. This limit was therefore increased from 15% to 40% in January 2019.

Secondly, the maximum of EUR 20 mln for the target funds was generally perceived as too low to create successful management companies, because a) it limits the building of strong managerial teams with strong international experience (the rule of thumb in the field offered by many interviewees is about EUR 10 mln of managed capital per partner) and (b) it limits opportunities to make large-scale follow-up investments in the best-performing companies, which would be important in terms of returns. For these reasons, stakeholders interviewed during the 2018 assessment seemed to favour an increase of the limit, which in fact has been removed in the 2019 State aid program.

The other constraints imposed by the GBER rules do not seem to raise problems in the context of this aid scheme. In particular, the constraint whereby the age of the target companies for commencing commercial activities (first sale) may not be longer than 7 years at the time of the initial investment has not proved to be a problem for funds investing in start-up companies, especially since further investments are allowed, as long as they are initially prepared.

Awareness and burdensomeness

Fund managers in Finland are generally well aware of the existence of the scheme. Start-ups may not know it directly, because they typically approach funds to search for equity capital.

Complying with the EU State aid Rules does not entail any particular burden for the granting authority. The additional burden imposed on financial intermediaries is seen as manageable and not excessive. As for final beneficiaries, the burden on them is low, as it only comes from a slightly more detailed due diligence.

B.2.3. Impact of the scheme

Until 30 May 2019, the funds in which BFVC has invested made investments in 109 early-stage companies of which approximately 15 are registered outside Finland. Up to that date, the total commitments of the five active funds are EUR 89 mln, of which approximately 48% have been drawn down. This amount includes costs of the partnership and management fees.

Due to the relatively little time since the introduction of the program, there is no reliable data on the financial returns of the investments undertaken so far, most of which are still ongoing. The independent assessment undertaken at the end of 2018 is therefore mainly qualitative, as it is based on 26 interviews with stakeholders.[17] Our discussion on the impact of the program is therefore based on the findings of the 2018 assessment, as well as with interviews with the granting authority and a fund manager.

The 2018 assessment outlined that establishing venture capital companies investing in new start-ups has long been challenging in Finland. Since, after the turn of the millennium, there was not enough new private VC funds investing in the start-up phase, the public sector started to fill the market gap by making direct equity investments. In 2013, venture capital operations of state start-up companies were concentrated in Tekes (now Business Finland), and since 2014, the market needs have been addressed by BFVC through an indirect fund of funds model that aims to catalyze the emergence of new venture capital companies focusing on new start-ups.

In the light of the interviews conducted during the 2018 Assessment, the scarcity of funds investing in start-up companies is a very persistent area of market failure, justifying the intervention of the public sector. The objective of the program to encourage the creation of new venture capital companies thereby increasing the number of domestic and foreign private investments in start-up companies remains a clear need and the program is seen as an effective instrument to respond to it.

The program supports access to finance for start-up companies through a model of indirect private fund. This instrument has been perceived as superior to previously used models. Supporting skilled private venture capitalists allows not only to address the equity gap, but also to enable additional investment rounds, also from outside Finland. Indeed, foreign investors are often incentivized by the presence of experiences and reliable local investors. Established private venture capitalists are also able to catalyze potential investment projects and to create the conditions and prospects for the development of research-based start-up companies.

During the first four years, the program has been a key enabler for the formation of several new start-up companies and was seen by all interviewees as very valuable for the development of the

[17] Interviewed stakeholders include BFVC's target funds, potential fund projects, active and potential fund investors, and other private equity investors.

early VC market in Finland. From the point of view of institutional investors, it has made it much easier to invest in small funds, thereby expanding the potential and active base of investors in VC funds.

There are two channels through which the program supports the development of venture capital markets. On the one hand, BFVC often gives the initial push to a fund by taking the role of leading investor, with a share that typically lies between 35% and 40%. On the other hand, Business Finland's extensive experience with equity funds enables it to help a supported fund to find other investors, thereby allowing funds to reach a critical mass.

It is likely that some of the funds supported by the program would not have existed absent its initial support. Financial intermediaries also typically appreciate the fact that the public intervention is made through an investment in funds, because this allows them to choose the best investment opportunities.

As to the impact of the scheme on final beneficiaries, it seems that most of them would have struggled to receive investments in the first place. The program therefore helped them to find a first investing fund. Moreover, it improved their ability to eventually reach other non-professional investors, attracted by the high-quality due diligence required by the program and by the lower workload left to private investors. This is very valuable from the perspective of potential private investors, because it significantly reduces the uncertainty about the investment capability of the fund project and, at the very least, reduces their own workload once they decide to invest in the company.

B.2.4. Conclusions

- The Tekes scheme was launched in August 2014, just after the introduction of the new GBER rules.
- The financial instrument is the provision of risk capital in the form of equity or quasi-equity investments in venture capital funds or a loan.
- One feature of the scheme is that it allows up to 40% of the target fund's capital to be invested in foreign countries. This provision is intended to facilitate the emergence of internationally strong early-stage equity funds that are anchored to Finland.
- The eligibility criteria entailed by the GBER seem to be very flexible with respect to the objectives of the program. The design of the scheme was not limited by these rules.
- According to interviewed stakeholders, the main limitation related to the GBER rules seems to be the 50% replacement rule. The drawback of this rule would be that financial intermediaries that operate under art. 21 of the GBER may not always be able to purchase shares from existing shareholders, to the possible detriment of their private investors. A balance should be made between the consideration that should be given to private investors' interests, which would call for more flexibility in the possibility of buying shares from existing shareholders, and the primary objective of State support, which is to solve a market failure. It is premature, based on the evidence available so far, to think of an amendment of this provision in the direction of an increased flexibility.

- During the first four years, the program has been a key enabler for the formation of several new start-up companies and was seen by all interviewees as very valuable for the development of the early VC market in Finland.
- In particular, the scheme helped beneficiaries to find a first investing fund. Moreover, it improved their ability to eventually reach other non-professional investors, attracted by the high-quality due diligence required by the program and by the lower workload left to private investors.

Annex B.3. SA.43581 – Fondo Capitale di Rischio POR FESR Lazio (Italy)[18]

B.3.1. Characteristics and design of the scheme

The scheme "Fondo Capitale di Rischio" (Risk Capital Fund, hereafter "FUND"), funded by the Lazio ERDF PO 2007-2013, was originally approved by the Commission in 2010, with the decision C(2010) 6068, and further amended in 2011 (SA.32525).[19]

The original scheme, notified in 2010, entailed a public fund that invested, together with private co-investors, in SMEs. Lazio Innova decided to create this co-investment scheme because, at the time, the number of VC funds was significantly low in the Lazio region and in Italy, and so it was extremely difficult to implement the scheme of public and private co-funding of venture capital funds, the only one allowed by the GBER then in force.[20]

This scheme was path-breaking in the Italian risk-capital landscape, where there were very few experiences of co-financing with private capitals. In 2014, with the new risk finance legislation, co-funding with private investors was exempted from notification, thereby falling under the new GBER rules. Lazio Innova introduced some changes regarding the eligibility conditions (see below for details) in response to the new Rules, and the scheme proceeded until 2016.

In 2014, the number of VC funds in Italy was substantially higher than in 2010. Hence, under the new scheme, EUR 56 mln have been invested in VC funds, and only EUR 24 mln have been intended to the co-investment instrument. This is meant to promote the development of market VC funds, which have a right of first refusal on individual investments in SMEs, in this way the co-investment scheme is dedicated to investments where the market failure is greater.

The scheme aims to increase the overall efficiency of the capital market and improve the access to equity capital for SMEs operating in the Lazio region. The scheme allows to invest in SMEs at seed, start-up, and expansion stage or for the realization of new projects, penetration of new markets or new developments by existing enterprises through co-investment agreements (partnership approach) with co-investors on a deal-by-deal basis.

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[18] For the development of this case study, the following sources have been exploited: phone calls with representatives of Lazio Innova (the granting authority), and with two beneficiaries of the scheme; decision on the notified scheme SA.43581 (2015/X); *ex-ante* evaluations on financial instruments for risk capital (May 2017; May 2018); call for interest to invest in risk capital (BURL n.5, 07/02/2011 and BURL n.15, 23.02.2016).

[19] The changes made through the decision SA.32525 were related to the maximum investment amount, raised to EUR 2.5 mln.

[20] Art. 28 and 29 of Reg. (EU) 800/08).

The scheme is entirely managed by Lazio Innova, a company owned by the Lazio region, which was also in charge of the selection of private co-investors on the basis of an open tender[21] along with the fund management committee.

The FUND, in co-participation with other private investors (hereafter "co-investors"), provides the total funding for SMEs in the form of both equity and quasi-equity instruments. Equity instruments are the direct (minority) ownership of the company through new equity issue, whereas quasi-equity instruments are the subscription of hybrid financial instruments, subordinated to other debt instruments, with a medium or long investment horizon. The performance of the latter is connected to the one of the issuing target company, and their repayment is not guaranteed in the event of bad business performance (such as convertible loans). Consistently with the new Rules, loans in the form of debt instruments are excluded.

The direct acquisition of equity and the subscription of quasi-equity instruments must refer to new financial instruments, as they aim to increase the financing sources of the target SMEs. The maximum investment in each target company (the sum of the FUND and the co-investor investments) must be lower than EUR 2.5 mln but higher than EUR 200,000. The minimum amount to be invested may be less than EUR 200,000 (but always more than EUR 50,000) if the target firm aims to invest in the development of products or services that do not already exist in the market. Equity instruments must be lower than 49.9% of total equity capital of the beneficiary. The investment horizon, independently from the type of the financial instrument, must be less than 5 years. However, a "grace period" up to 2 years is admitted for necessities connected with the divestment activity.

The initial budget of the scheme was EUR 24 mln, including Lazio Innova management costs, which amounted to nearly EUR 3 mln. Of the EUR 21 mln available, in total EUR 20.4 mln were invested, i.e. more than 97% of the initial budget.

Target companies must be unlisted SMEs satisfying at least one of the following conditions, according to the GBER eligibility criteria: they have not yet operated in the market; they have operated in the market for less than 7 years after their first commercial sale; they require an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographic market, is higher than 50% of their average annual turnover in the preceding five years. Moreover, the firm must not be in difficulty as defined by art. 2(18) of the GBER.

B.3.2. Experience with Risk Finance Guidelines

Eligibility criteria, thresholds, and conditions.

One of the issues raised by the granting authority, related to the eligibility criteria, is the **definition of the first commercial sale**. Although in most cases this has not been an issue, this

[21] The analysis of this scheme did not cover the procedure to select the financial intermediaries allowed to participate in the scheme. Therefore, we did not assess the GBER conditions regarding aid to financial intermediary.

concept can occasionally raise problems of interpretation and therefore creates a grey area. For example, it is not clear how to identify the first commercial sale for:

- spin-off firms or for firms buying patents or copyrights related to products already sold in the market;
- firms selling “collateral” services while developing their core product.

Additionally, there is uncertainty on whether commercial tests should be classified as first commercial sales or not. According to the granting authority, considering the age of the firm may be easier and less confusing.

The **7-year limit** imposed by the new Rules has not produced significant problems in the implementation of the scheme. Venture capitalists usually invest in firms in their seed or start-up phase, which usually are less than 7 years old. However, the Italian business sector, and in particular the Lazio one, is mainly composed by mature, medium-sized enterprises which aim to grow and invest in new products, services and markets. Biosciences is one of the sectors for which this issue is particularly relevant. The 7-year limit does not allow the funds to invest in these companies, although they may represent a very interesting investment opportunity for private co-investors.[22] According to the granting authority, also companies with longer development periods, or companies for which the first commercial sale is not referred to the core product, may be harmed by this provision. These potential problems, however, only concern a limited number of firms that were no longer eligible under the new GBER. The granting authority therefore concluded that, all in all, the new provision did not impose an excessive constraint.

A change in the new regulation was also related to the **share of private and public investment**. Since 2015, the investments made by private co-investors have to be more than 10% of the investments made by the fund. Until 2014, this percentage was set to 30%. With a reduced percentage of private investments, it may be easy to finance SMEs, because fewer private funds are required. However, the granting authority highlights that, by reducing the percentage of private investments, the incentives of co-investors to appropriately evaluate and monitor the target company are lower. For this reason, the granting authority decided not to exploit the opportunity to reduce this percentage and maintained it to 30%.

Another issue raised by the granting authority refers to the **asymmetric redistribution of profits and losses** between the public FUND and private co-investors, as it “shall be given preference over downside protection” in the “risk-reward sharing arrangements”[23]. According to the granting authority, retirement funds would also invest in VC Funds more than the minimum required for private investors, if in the risk-reward sharing arrangements it was possible to give preference to downside protection over asymmetric profit sharing.

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[22] The previous legislation did not specify any age limit but focused on the stage of development of the SME (seed, start-up and expansion stages).

[23] Art. 21 (13) (b) GBER.

The new Rules also reduced the type of financial instruments allowed, by excluding **debt instruments**. This change did not affect the implementation of the scheme, because debt instruments were already excluded from the previous program.

The granting authority also raised an issue related to the investment limit of EUR 15 mln in the company's life. The problem here is how to apply this rule in the case of follow-on investments that lead to exceeding this limit. It was considered that the public fund can make the follow-on investment up to a total of EUR 15 mln (according to the co-investment ratio) and the additional amount must be invested only by private investors. In this way the asymmetric redistribution of profits is limited to only EUR 15 mln of public and private overall co-investment.

Finally, according to the granting authority, one potential limitation resulting due to aid legislation could be the compliance with the ban on investing in (formally) an **undertaking in difficulty** as defined by art. 2(18) of the GBER. The motivation behind this limit is to avoid public support aimed at the simple reduction of layoffs, without any significant effect on firm growth and innovation. Since the proportion of private investors must always be large (at least 40%), from the point of view of the granting authority this rule imposes an unnecessary constraint. In their view, therefore, the legislation should not limit investment decisions of private investors in undertakings in difficulty, especially if these investors assess the investment as profitable. It should however be taken into account that the rule does not limit such investment decisions, but simply limits the possibility of participating to such investments for funds that receive State aid. Therefore, the goal of making sure that public money is invested in companies with a significant growth potential, which is behind such rule, does not necessarily conflict with the possibility for private investors to invest in firms in difficulty.

Awareness and burdensomeness

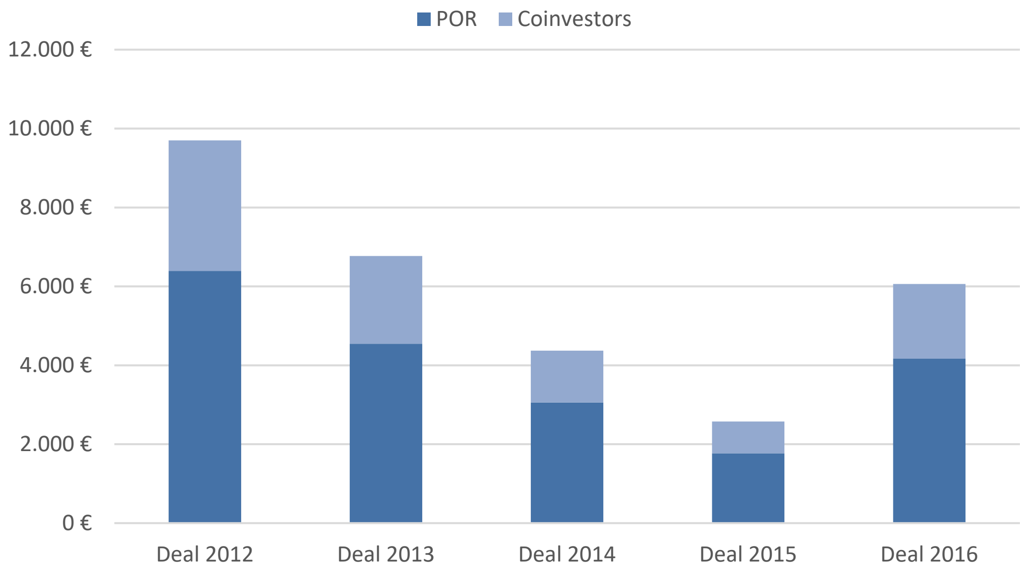
According to the granting authority and the beneficiaries of the scheme, firms are generally well aware of the existence of this program, also because it has existed for many years. There is not any particular burden imposed by the legislation on the granting authority, whereas there is on beneficiaries. This mainly derives from the Italian legislation on "antimafia" and "casellario giudiziale" self-certification and controls for target companies and co-investors, rather than the rules.

B.3.3. Impact of the scheme

The fund promoted by Lazio Innova made investments in 27 companies (EUR 16.6 mln) in 2011-2015, and in 6 beneficiaries (EUR 3.8 mln) in 2016. However, the number of applications received was much higher, and the vast majority of companies that applied for the support scheme did not receive it: the number of firms applying for the scheme was 148 in 2011 and 58 in 2016, for a total of EUR 260 mln (EUR 205 mln in 2011 and EUR 55 mln in 2016). More than 87% of applications belonged to companies in their seed/start-up phase. While all the companies that applied were eligible for the scheme, funds were not sufficient for all of them, and the Italian granting authority had to select among them.

Some statistics are available with respect to the described scheme. Figure B.13 reports the amount invested by the fund and by private co-investors between 2012 and 2016. As can be noted, almost half of the investments have been made in the first year of the program (nine deals). In the following years, the number of investments made decreased (eight deals, with one follow-on, in 2013, nine deals, with two follow-ons, in 2014, and only two deals in 2015, as per the adaptation to the new GBER), although it increased again in 2016 (eight deals, two of which are follow-ons). This trend was due the fact that at the end of 2013 almost all the resources originally allocated (EUR 20 mln) were committed, although some investments were not made.

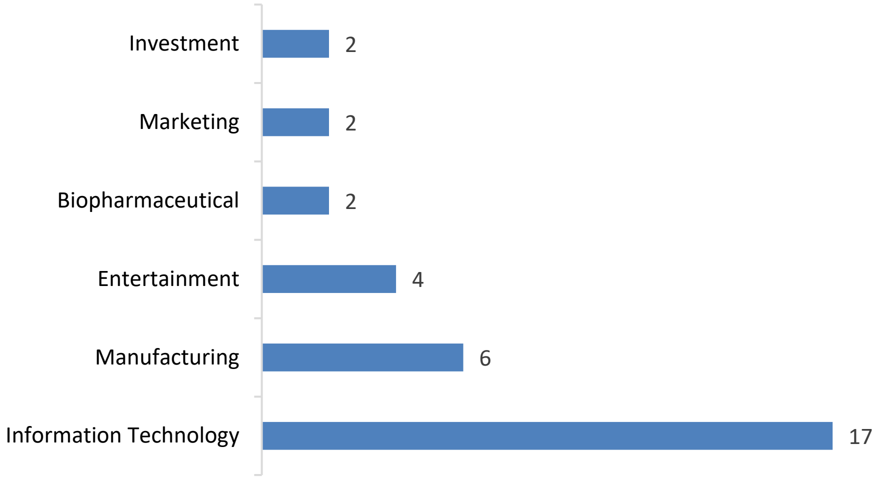
Figure B.13: Amount invested by the FUND and by private co-investors (2012-2016)



Source: Study Team based on Vexa 2017 data

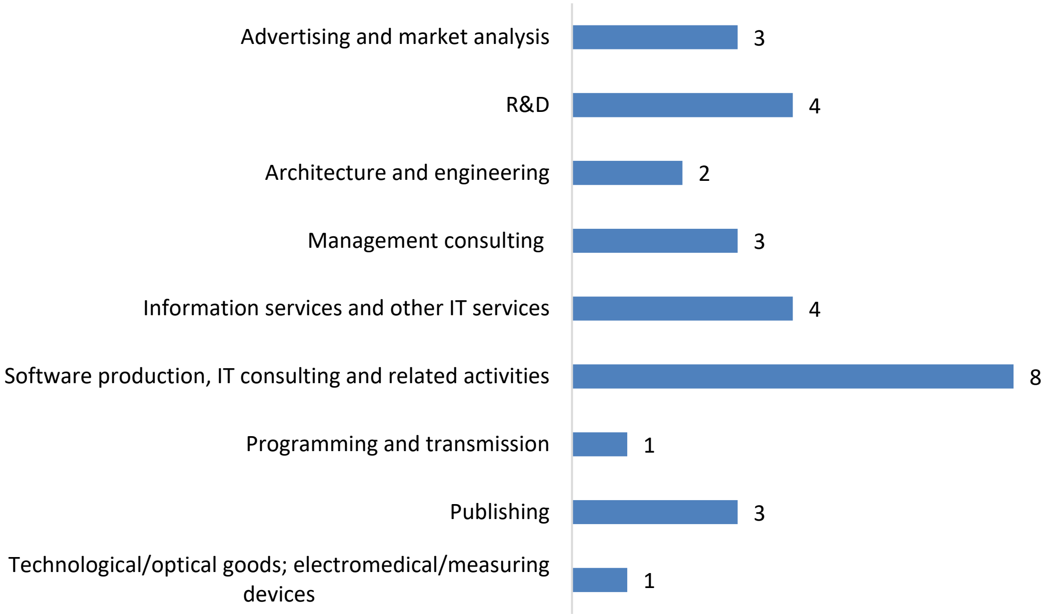
By looking at the distribution of the financed firms by sector, it results that most of the beneficiaries (17 companies, 52%) operated in the IT sector (Figure B.14), followed by the manufacturing and the entertainment ones (with 6 and 4 companies, respectively). The biopharmaceutical, marketing and investment sectors, instead, counted only two financed firms. Hence, most investments have been made in knowledge intensive industries: 29 out of 33 firms and 88% of total funds (Figure B.15).

Figure B.14: Number of companies financed by activity sector (full period)



Source: Study Team based on Vexa 2017 data

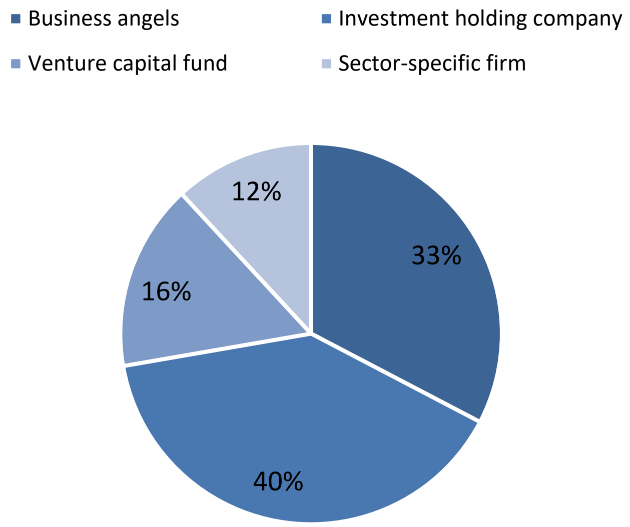
Figure B.15: Number of companies financed by activity sector: knowledge intensive industries (full period)



Source: Study Team based on Vexa 2017 data

The private co-investors involved in the scheme were 300. Among them, 55% were BAs, 22% non-financial corporations, 18% investment holding companies, and only 6% venture capital funds. The distribution of private co-investors is different when we consider the amount invested, instead of the absolute number of them. As reported in Figure B.16, most of the investments have been made by investment holding companies, followed by BAs, and venture capital funds.

Figure B.16: Types of co-investors (as percentage of total investments made)



Source: Study Team based on Vexa 2017 data

B.3.4. Conclusions

- The scheme was notified in 2010 and amended in 2014 following the new RFG.
- The FUND, in co-participation with other co-investors, provides the total funding for SMEs in the form of both equity and quasi-equity instruments.
- It allows to invest in SMEs at seed, start-up, and expansion stage.
- The interviewed stakeholders are generally satisfied with the risk finance Rules. They however highlight some interpretation issues regarding concepts that were introduced with the new regulation, and in particular:
  - the definition of first commercial sale;
  - the applicability of the EUR 15 mln threshold in case of follow-on investments.
- Some of the stakeholders interviewed also see the ban on investing in undertakings in difficulty as one potential limitation of the scheme (and of the Rules). In their view, the legislation should not limit investment decisions of private investors in undertakings in difficulty, especially if these investors assess the investment as profitable. It should however be taken into account that the rule does not limit such investment decisions, but simply limits the possibility of participating to such investments for funds that receive State aid. Therefore, the goal of making sure that public money is invested in companies with a significant growth potential, which is behind such rule, does not necessarily conflict with the possibility for private investors of investing in firms in difficulty.
- Minor concerns were also expressed on the 7-year limit imposed by the new Rules, since the Lazio business sector is mainly composed by mature, medium-sized enterprises. The 7-year limit does not allow the funds to invest in these companies, although they may represent a very interesting investment opportunity for private co-investors.

- Since 2011, the FUND made investments in 33 companies, mainly start-ups (90%) active in knowledge intensive industries (29 out of 33).

Annex B.4. SA. 49923 – Enterprise Investment Scheme and Venture Capital Trust (United Kingdom)[24]

B.4.1. Characteristics and design of the scheme

The "Enterprise Investment Scheme" (hereafter, "EIS") and the "Venture Capital Trust" ("VCT") schemes were introduced in the mid-Nineties and, following the introduction of the RFG, underwent major changes that were authorized by the Commission in 2015 and in 2018.

The aim of the amended EIS/VCT scheme is threefold. First, it aims to support the growth of non-knowledge intensive SMEs, knowledge intensive SMEs and mid-caps,[25] which due to their early development stage and the lack of established track records would otherwise suffer from financing constraints. Second, by reducing the funding gap faced by the targeted companies in the long term, the EIS/VCT scheme aims to stimulate an entrepreneurial culture and greater risk-taking among investors. Finally, the focus on knowledge intensive SMEs is expected to lead to an increase in R&D and patent applications, with a general positive effect on the economy at large.

To achieve these goals, the scheme includes tax incentives to private individuals investing in qualifying companies (EIS) or in financial intermediaries (VCT) which carry out the eligible investments.[26] The choice of a tax-based incentive was originally motivated by the government's intent to encourage entrepreneurial activities by private investors without having to directly choose which companies to support.

More specifically, under the EIS measure, investments are made by private individuals directly into a qualifying company. Investments can also be made via collective investment schemes managed by specialized fund managers that invest on behalf of investors in a portfolio of target companies. In this case, the ownership of the underlying shares in the target companies remains

[24] For the development of this case study, the following sources have been exploited: phone calls with a representative of the HM Revenue & Customs; decision on the notified scheme SA.40991 (2015/N); statistics available in the website gov.uk; technical guidance on the impact of the 2014 changes for companies and their advisers, provided by HM R&C; Fitness check submissions available at https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-6623981/public-consultation_en.

[25] The definition of knowledge intensive SMEs and mid-caps corresponds to the definition of 'innovative company' set out in the RFGs is based on two alternative criteria: (i) R&D and innovation costs represent at least 15% of total operating costs in at least one of the accounting periods ending in the three years preceding the accounting period in which the first investment under the risk finance State aid measure is made or (ii) R&D and innovation costs represent at least 10% per year of total operating costs in each of the accounting periods ending in the 3 years preceding the accounting period in which the first investment under the risk finance State aid measure is made. In addition, one of the two conditions mentioned below needs also to be fulfilled: (i) At least 20% of the workforce is required to have a level 7 (Masters) or 8 (Doctoral) or equivalent qualification as defined by the Framework for Higher Education Qualifications (FHEQ) or an equivalent framework, and are engaged in R&D activity; or (ii) The company can demonstrate that it is intending to innovate, or develop new patents, where the exploitation of these innovations will represent the greater part of its business activity within the next 10 years.

[26] Private individuals need to be subject to income tax in the UK, although they do not have to be resident there.

with the individual investors, thus satisfying the requirement of investing directly into individual companies.

Under the VCT measure, instead, individual investors take an equity stake in the VCT. The VCT then uses the money raised to invest in the qualifying companies. A VCT is a stock-exchange listed company that, according to the HM Revenue & Customs (hereafter, “HMRC”), meets the requirements of the legislation to be authorized as a VCT. VCTs are supervised by the Financial Conduct Authority, but there is no government intervention to appoint the VCT fund managers.

The tax incentives provided by the scheme require that eligible shares must be held for at least three years under the EIS rules, and five years under the VCT rules. Moreover, the investors that benefit from the incentives provided by these measures must be independent from the target company, i.e. they must not possess more than 30% of the company and must not work for the firm.

The scheme requires that the target company be unlisted, with gross assets of maximum GBP 15 mln, with fewer than 250 employees (500 employees for knowledge intensive companies), with a permanent establishment in the UK and a business of all types of trade, except for certain activities that are considered less risky and thus less affected by a market failure.

The annual investment tranche that each target company can obtain under the existing EIS and VCT rules is limited to GBP 5 mln (GBP 10 mln for knowledge intensive companies). No limit exists, however, on the number of investment tranches per investee.

In 2015, following the revision of the RFGs, the UK authorities notified the following amendments to the EIS/VCT legislation, all approved by the Commission:

- the extension of the duration from 2017 to 2025 and a new budget allocation;
- introduction of an age limit for investees in which a relevant investment (the State aid) is allowed (7 and 10 years since the first commercial sale for non-knowledge intensive SMEs and knowledge intensive SMEs, respectively) and of a limit to the maximum volume of investments into each final investee (GBP 12 mln and GBP 20 mln for non-knowledge intensive SMEs and knowledge intensive SMEs, respectively);
- a new definition of “independent investor” aligned with the requirement of the new RFGs;
- the introduction of a growth and development rule. The UK authorities introduced a new rule to ensure that eligible undertakings demonstrate that they intend to use the finance that they seek under EIS and VCT to grow and develop the company. This seeks to mitigate the risk that tax-advantaged monies may be used for investment into relatively established companies without genuine growth prospects.

These amendments incorporated the provisions of the 2014 RFG. The UK authorities, however, proposed some changes that go beyond the requirements set by the GBER, in terms of age and funding limits, and were assessed under the RFG. These amendments were designed to better tailor the new Rules to the needs of beneficiaries in the UK market and enlarge the pool of potential beneficiaries.

In 2018, two main amendments were further approved, which have led to the current framework of the scheme, all related to knowledge intensive companies.

First, the UK authorities proposed to increase the annual limit for knowledge intensive companies from GBP 5 mln to GBP 10 mln, which is half the lifetime limit for knowledge intensive companies of GBP 20 mln (which remained unchanged).

Second, the UK authorities proposed to introduce greater flexibility regarding the age test for knowledge intensive companies through VCTs and EIS, by allowing knowledge intensive companies to choose either the current test or the point at which they reach GBP 200,000 of turnover as the point at which the 10-years 'clock starts' on the age test. Then, the company remains eligible for the next ten years, irrespective of the turnover levels during these subsequent years. According to the UK authorities, this would have solved administrative issues associated with the age test as a knowledge intensive company would be able to use its annual accounts to calculate the point at which the clock would start.

The cost of the scheme was forecasted to be around GBP 580 mln in 2015, GBP 530 mln in 2016, GBP 570 mln in 2017, GBP 600 mln in 2018, GBP 630 mln in 2019, GBP 660 mln in 2020, and GBP 690 mln in 2021.

B.4.2. Experience with Risk Finance Guidelines

Eligibility criteria, thresholds, and conditions.

Among the changes introduced in 2015, the first one is related to the age limits for investments targeting non-knowledge intensive SMEs and innovative SMEs.

Eligible investees for the EIS or the VCT are as follows:

- all SMEs requiring an initial risk finance investment which, based on a business plan prepared in view of entering a new product or geographic market, is higher than 50% of their average annual turnover in the preceding five years;
- non-knowledge intensive SMEs for seven years after their first commercial sale;
- knowledge intensive companies (innovative SMEs or mid-caps) for ten years after their first commercial sale.

With respect to the 7-year age limit, an association of investment funds has proposed to replace the age restriction with a different threshold, such as a limit on gross assets, claiming that this would have the advantage of facilitating a clear assessment of eligibility and rapidly directing investments where the funding gap is most significant. On the other hand, the UK authorities argue that such an extension would significantly increase the pool of potential investees to older and less risky ones, potentially beyond those that are affected by a market failure.

Both the granting authority and other stakeholders have pointed out that the concept of "first commercial sale" is not a familiar concept and has therefore created some difficulties in its use. This is regarded as unclear, also because it is not used anywhere else in the UK domestic framework.

The UK authorities have also highlighted some issues with the eligibility criterion whereby aid can be granted to companies entering a new product or geographic market which require a risk finance investment which, based on a business plan, is higher than 50% of their average annual turnover in the preceding five years. According to the UK authorities, this exception contains some ambiguities, because the concepts of “new product market” and “new geographic market” require a judgement to be made. Further, it is unclear whether the “new product” and “new geographic” market should be interpreted in accordance with general concepts of competition law.

With the new Rules, some changes have been made with respect to the following issues. First, the definition of “independent investor” has been aligned with the requirement of the new RFG: individual investors can only qualify for tax relief if they do not have a share in the underlying company at the moment of their initial investment under the scheme. Second, a growth and development rule was introduced. The UK authorities introduced this rule to ensure that eligible undertakings demonstrate that they intend to use the finance that they seek under EIS and VCT to grow and develop the company. This seeks to mitigate the risk that tax-advantaged monies may be used for investment into relatively established companies without genuine growth prospects.

Another issue raised by an association of investment funds is related to the replacement rule. According to this association, allowing a limited amount of replacement capital, as long as there is also a significant provision of development capital, would help VCTs and other State-aided investors facilitate changes to the shareholder register of small businesses as part of the normal cycle of business development. Moreover, this association argues that facilitating shareholder exits is beneficial for a wide variety of reasons. For example, it can enable investors to recycle their capital into other early stage companies once their initial investment objectives have been achieved.

The UK authorities do not support this view. According to them, the very generous tax reliefs provided by the scheme should not be used for such a purpose. With respect to this issue, it is necessary to balance private investors’ interests, which would call for more flexibility in the possibility of buying shares from existing shareholders, and the primary objective of State support, which is to solve a market failure. It seems to be premature, based on the evidence available so far, to think of an amendment of this provision in the direction of an increased flexibility.

The UK authorities have explained that the amendments to the EIS/VCT scheme have been implemented in view of helping business finance and venture capital markets to operate more efficiently and competitively across the UK and the EU. As a result, more SMEs and innovative mid-caps with growth potential should access the funding that they need to start-up and expand, stimulating growth of the company, higher levels of productivity and innovation, as noted in the RFGs (§83).

Awareness and burdensomeness

As these schemes have been in place for a long time (EIS has been in place since 1994 and the VCT scheme since 1995) and entail significant fiscal benefits for private investors, firms are generally well aware of their existence and characteristics. The level of complexity, however, seems to have increased over time. In order to ameliorate these problems, the UK authorities issued a technical guidance seeking to help firms understand the new Rules. The VCT primary legislation consists of over 75 statutory provisions, many of which are very long and highly detailed. The UK authorities highlighted that most of them have been driven by domestic policy requirements and by the need to avoid abuses.

B.4.3. Impact of the scheme

Venture Capital Trusts (VCTs)

Venture Capital Trusts (VCTs) issued shares to the value of GBP 745 mln in 2017-18, with a 30% increase from 2016-17 (GBP 570 mln) and the highest amount raised since 2005-06 (Table B.4).

Table B.4: Amount of funds raised and number of Venture Capital Trusts (VCT)

Year	Amount funds raised	Number of VCTs raising funds	Number of VCTs managing funds	Rate of income tax relief (%)
Apr- 2016-Apr. 2017	570	38	75	30

Source: Study Team based on VCT data

The amount of funds raised by VCTs has been on a rising trend in recent years and has more than doubled since 2009-10 (Table B.5). A rule change enhanced share buy-backs from April 2014, which allowed VCT investors to sell their current shares to VCTs and re-invest in the same VCT at around the same time. It is likely this will have impacted on the levels of investment in 2014-15 and 2015-16. However, the amount of funds raised increased again in 2016-17 and 2017-18, which may reflect the growing attractiveness of VCTs relative to other investment possibilities.

Table B.5: Distribution of investors and amount of investments[27]

Size of investment per year	2014-2015		2015-2016		2016-2017	
Upper limit (GBP)	**Investors**	**Amount of investment (GBP mln)**	**Investors**	**Amount of investment (GBP mln)**	**Investors**	**Amount of investment (GBP mln)**
1,000	1,035	0	1,235	1	1,055	0
2,500	610	1	630	1	770	1
5,000	1,315	6	1.365	6	1,605	7
10,000	2,775	24	2,545	22	2,775	24
15,000	1,285	17	1,195	16	1,435	19
20,000	1,270	24	1,285	24	1,480	28
25,000	760	18	775	18	910	21
50,000	2,025	78	2,150	83	2,530	97
75,000	550	34	640	40	760	47
100,000	580	54	635	60	670	62
150,000	285	36	330	41	405	50
200,000	585	115	620	121	725	142
Total	**13,070**	**406**	**13,405**	**433**	**15,120**	**500**

Source: Study Team based on VCT data

The number of VCTs raising funds in 2017-18 rose from 38 to 43 in 2016-17. In the past, the amount of funds raised by VCTs and the number of VCTs raising funds was closely linked. However, this has been less evident in recent years where similar amounts of funds have been raised by a smaller number of larger VCTs. Several VCTs have merged over the last few years to achieve economies of scale. This trend has continued in 2017-18 as individual VCTs are raising more funds on average than all previous years.

A rise in the income tax relief rate in 2004-05 from 20% to 40% was the likely driver of the increased investments as the amount of funds raised increased from GBP 70 mln in 2003-04 to GBP 520 mln in 2004-05; there was a corresponding increase in the number of VCTs raising funds. Both the number of VCTs raising funds and the amount of funds raised peaked in the following year (2005-06) when GBP 780 mln was raised by 82 VCTs.

[27] Numbers are rounded to the nearest 5 and amounts are rounded to the nearest GPB 1 mln.

A reduction in the income tax relief rate to 30% in 2006-07 was accompanied by a sharp fall in activity to GBP 270 mln raised by 32 VCTs, and activity remained relatively low until 2009-10. The amount raised by VCTs then gradually increased from GBP 340 mln (2009-10) to GBP 440 mln (2013-14). The amount remained almost stable in 2014-15 and 2015-16, but 2016-17 saw a rise to GBP 570 mln raised by 38 VCTs and again to GBP 745 mln in 2017-18 by 43 VCTs.

The expansion of the VCT schemes from 2012-13 also encouraged the growth in funds raised in the last five years, despite a declining trend in the number of VCTs raising funds. The number of VCTs managing funds has fallen from 75 in 2016-17 to 70 in 2017-18. Since the introduction of VCTs in 1995 they have raised approximately GBP 7.7 bln of funds. In 2016-17, VCT investors claimed Income Tax relief on GBP 500 mln of their investment, a GBP 67 mln (15%) increase compared to 2015-16 when there were claims on GBP 433 mln of investment. The number of investors increased by 13% to 15,120 in 2016-17. The majority of VCT investors tend to invest smaller amounts into VCT funds. In 2016-17, 41% of investors made a claim for an investment of GBP 10,000 or less, and only 7% invested above GBP 100,000. Amounts invested between GBP 150,000 and GBP 200,000 (the maximum amount allowed) accounted for over a quarter (28%) of the total amount of investment in 2016-17.

Enterprise Investment Scheme (EIS)

Since EIS was launched, in 1993-94, 29,770 individual companies have received investments through the scheme, and GBP 20 bln of funds have been raised (see Table B.6). The numbers of companies raising funds and the level of investment have shown similar trends since EIS was introduced. In 2017-18 the number of companies raising funds increased to 3,920 which raised total of GBP 1,929 mln.

Table B.6: Number of companies raising funds, number of subscriptions, and amount raised from 1993-1994 to 2017-2018

Year	Companies raising funds for first time (number)	All companies raising funds (number)	Subscriptions (number)	Companies raising funds for first time (amount)	All companies raising funds (amount)
1993-94	75	75	480	4	4
1994-95	400	425	4,970	39	41
1995-96	440	550	5,140	46	53
1996-97	475	650	11,820	73	94
1997-98	530	725	11,410	85	113
1998-99	1,035	1,265	15,330	238	294
1999-00	1,640	2,105	29,340	463	614
2000-01	2,375	3,315	45,780	668	1,065
2001-02	1,685	2,855	25,480	419	761
2002-03	1,340	2,455	27,635	372	667
2003-04	1,150	2,175	28,125	334	627
2004-05	1,210	2,190	32,360	325	606
2005-06	1,155	2,140	31,525	306	648
2006-07	1,150	2,170	39,695	377	733
2007-08	1,130	2,205	37,135	366	707
2008-09	940	1,920	23,545	288	518
2009-10	990	1,975	25,960	363	623
2010-11	1,070	2,025	32,430	312	549
2011-12	1,565	2,680	88,865	691	1,034
2012-13	1,195	2,475	64,120	577	1,034
2013-14	1,415	2,850	123,140	897	1,592
2014-15r	1,745	3,380	154,475	1,125	1,930
2015-16r	1,725	3,575	184,790	1,073	1,976
2016-17pr	1,615	3,655	165,920	844	1,901
2017-18p	1,710	3,920	190,950	759	1,929
Total	**29,770**	-	**1,400,410**	**11,043**	**20,113**

Source: Study Team based on EIS data

There has been a steady increase in EIS since 2010, which could be due to sustained historically low interest rates, increasing promotion and involvement of fund managers. In addition, the change in Income Tax relief from 20% to 30% in 2011-12 and the introduction of the Feed in Tariffs (FiTs) initiative from April 2010 (resulting in large amounts of investment into the renewable energy sector) both attracted EIS investment.

The amount of funds raised almost doubled in the period from 2012-13 to 2014-15. Subsidized energy activities were progressively excluded from eligibility for EIS from April 2015, and all energy activities were excluded from April 2016.

Further limits on eligible companies were introduced from November 2015, including age limits and funding limits, and a new growth and development requirement. Despite these measures, investment in EIS has continued to increase in 2017-18.

The majority of investment through the scheme (55%) since the inception of EIS has been investment into companies raising EIS funds for the first time (Table B.6). However, in 2017-18, only 39% of funding was raised by companies using EIS for the first time. This decrease could be due to the fact that the scheme has been available since 1993-94, when by definition all the companies were using EIS for the first time. As time has gone on, more and more companies raising funds were repeatedly using EIS.

As reported in Table B.7, in 2017-18, companies from just four sectors (the Information & Communication, the Professional, Scientific & Technical, the Manufacturing, and the Wholesale & Retail Trade, Repairs sectors) together accounted for over GBP 1.2 bln of investment and made up 66% of all EIS Investment. This is a similar amount and proportion to the 2016-17 figures. The highest number of companies receiving EIS investment in 2017-18 were also in these four categories, which represent 70% of the total number of companies receiving investment through EIS.[28]

[28] In the last column of Table B.7, the average is computed along the overall period.

Table B.7: Number of companies and amounts of funds raised, by industry (SIC2007), from 2015-16 to 2017-18

Industry	2015-2016		2016-2017		2017-2018		
	Number	Amount (GBP mln)	Number	Amount (GBP mln)	Number	Amount (GBP mln)	Average (GBP mln)
A. Agriculture, Forestry and Fishing; B. Mining and Quarrying	15	5	20	9	20	16	0.55
C. Manufacturing	370	126	410	182	455	186	0.40
D. Electricity, Gas, Steam and Air Conditioning; E. Water, Sewerage and Waste	90	254	40	48	20	20	2.15
F. Construction	35	36	45	49	25	16	0.96
G. Wholesale and Retail Trade, Repairs	430	165	410	166	430	168	0.39
H. Transport and Storage	30	34	30	34	30	24	1.02
I. Accommodation and Food	145	90	155	102	160	85	0.60
J. Information and Communication	1,085	596	1,170	677	1,250	641	0.55
K. Financial and Insurance	135	80	140	89	170	118	0.64
L. Real Estate	40	18	35	13	30	13	0.42
M. Professional, Scientific & Technical	615	285	580	253	625	283	0.45
N. Admin & Support Services; O. Public Admin, Defence & Social	230	123	260	131	295	129	0.49
P. Education	50	16	55	18	60	26	0.36
Q. Health and Social Work	50	35	55	22	75	42	0.55
R. Arts, Entertainment and Recreation	95	37	105	41	105	48	0.41
S. Other services activities; T. Households; U. Overseas	50	22	60	32	90	71	0.63
Unknown SIC2007	105	54	90	36	85	43	0.48
Total	**3,575**	**1,976**	**3,655**	**1,901**	**3,920**	**1,929**	**0.52**

Source: Study Team based on EIS data

The distribution of the number of companies raising money under EIS by investment size differs from the distribution of amount of funds raised by size of investment (Table B.8). A large proportion of companies receive relatively small investments, with 43% (1,680) of companies receiving investments of GBP 150,000 or less in 2017-18. At the same time, in 2017-18, 36% (GBP 704m) of the amount of funds is concentrated in investments above GBP 2m, with 16% (GBP 317m) going to investments over GBP 4m, which is lower than in 2016-17.

The number of investors claiming Income Tax relief under EIS stayed approximately the same, with 33,605 in 2016-17 and 33,185 in 2017-18.

The majority of investors claiming Income Tax relief tend to invest smaller amounts of money into companies qualifying for EIS (Table B.9). In 2017-18, 82% of EIS investors made a claim for tax relief in respect of an investment of GBP 50,000 or less. This is similar to the levels seen in 2016-17.

Investments of GBP 500,000 to GBP 1 mln contributed 17% (GBP 223 mln) of the total amount of EIS investment raised on which claims were made in 2017-18.

Companies considering using EIS can obtain advance assurance that HMRC will regard the shares to be issued as satisfying the requirements of the scheme. The statistics reported in Table B.10 show the number of companies seeking advance assurance, the number of AARs applications received and, of these, how many were approved, rejected or not pursued further. In 2018-19, HMRC received 3,270 advance assurance applications for EIS, a decrease of 545 from 2017-18, which ends the year-on-year growth in applications seen since 2008-09. A number of applications for 2018-19 are still being processed, but as of April 2019, 62% have been approved so far. Of the 3,815 applications received in 2017-18, 2,860 (75%) have been approved, of which 2,645 (69%) had been approved by this time last year.

Table B.8: Number of companies and amounts of funds raised, by size of funds, from 2015-16 to 2017-18

Size of funds raised per company	2015-2016		2016-2017		2017-2018	
Upper limit (GBP)	Number	Amount (GBP mln)	Number	Amount (GBP mln)	Number	Amount (GBP mln)
10.000	150	1	135	1	140	1
25.000	225	4	215	4	215	4
50.000	345	14	345	14	395	16
100.000	520	40	530	41	540	41
150.000	345	44	365	46	390	49
200.000	255	46	285	50	300	53
250.000	215	49	250	57	250	57
300.000	160	44	175	49	205	57
350.000	160	51	135	45	160	52
400.000	125	47	115	44	125	48
450.000	95	40	105	45	115	48
500.000	90	42	95	46	125	60
750.000	245	152	275	168	305	187
1.000.000	160	141	165	145	175	153
1.250.000	85	96	85	97	115	129
1.500.000	70	93	80	107	55	75
1.750.000	45	75	45	75	60	99
2.000.000	30	53	20	34	50	95
3.000.000	100	242	100	234	90	218
4.000.000	55	203	35	128	50	169
5.000.000	105	499	100	474	65	317
Total	**3,575**	**1,976**	**3,655**	**1,901**	**3,920**	**1,929**

Source: Study Team based on EIS data

Table B.9: Income tax relief, distribution of investors, and amount of investment on which relief was claimed from 2015-16 to 2017-18

Size of investment in year	2015-2016		2016-2017		2017-2018	
Upper limit (GBP)	**Number**	**Amount (GBP mln)**	**Number**	**Amount (GBP mln)**	**Number**	**Amount (GBP mln)**
500	2,455	1	2,120	1	2,525	1
1.000	1,905	2	1,535	1	1,885	2
2.500	2,705	5	2,515	4	2,860	5
5.000	3,420	14	3,235	13	3,400	14
10.000	4,730	39	4,710	38	4,600	37
15.000	2,755	35	2,805	36	2,870	36
20.000	2,380	43	2,320	42	2,205	40
25.000	2,290	54	2,180	51	2,170	50
50.000	5,550	211	5,270	198	4,820	180
75.000	2,105	130	2,145	132	1,885	115
100.000	1,630	147	1,495	135	1,240	112
150.000	1,345	167	1,265	157	1,070	131
200.000	745	132	685	121	520	91
250.000	395	89	370	84	305	69
300.000	300	83	250	70	210	58
350.000	150	49	135	44	120	40
400.000	125	46	105	40	70	27
450.000	85	37	85	36	75	32
500.000	95	46	75	36	65	31
750.000	210	127	145	89	140	86
1.000.000	200	184	165	152	150	138
Total	**35,575**	**1,642**	**33,605**	**1,478**	**33,185**	**1,294**

Source: Study Team based on EIS data

Table B.10: Number of companies seeking advance assurance, number of applications received, approved, and rejected from 2006-07 to 2017-18

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Companies seeking advance assurance	1,035	1,025	965	1,095	1,375	2,030	2,265	2,640	3,075	3,450	3,515	3,710	3,145	
AARs applications received	1,080	1,060	995	1,125	1,460	2,150	2,340	2,730	3,170	3,575	3,625	3,815	3,270	**30,965**
Applications process in current yea														
Of which, applications approved in year	880	875	840	880	1,195	1,770	1,785	2,085	2,370	2,380	2,520	2,605	2,040	**22,630**
Of which, applications rejected in year	65	80	80	90	105	135	150	140	165	280	250	290	300	**2,185**
Of which, applications not pursued further	50	20	25	40	30	55	60	80	100	175	265	435		**2,250**
Applications processed in subsequent years														
Of which, applications later approved	50	45	30	80	80	130	285	340	400	500	430	260	-	**2,710**
Of which, applications later rejected	30	45	20	35	50	60	60	80	130	235	150	230	-	**1,140**
Total AAR applications received	**1,080**	**1,060**	**995**	**1,125**	**1,460**	**2,150**	**2,340**	**2,730**	**3,170**	**3,575**	**3,625**	**3,815**	**3,270**	**30,965**
Total AAR applications approved	**930**	**920**	**870**	**960**	**1,275**	**1,900**	**2,075**	**2,425**	**2,775**	**2,880**	**2,955**	**2,860**	**2,040**	**25,340**

Source: Study Team based on EIS data

B.4.4. Conclusions

- The EIS and the VCT schemes were introduced in the mid-1990s and, following the introduction of the RFG, underwent major changes in 2015 and in 2018.
- The aim of the amended EIS/VCT scheme is to support the growth of non-knowledge intensive SMEs, knowledge intensive SMEs and mid-caps that suffer from financing constraints. Secondly, by reducing the funding gap faced by the targeted companies in the long term, the EIS/VCT scheme aims to stimulate an entrepreneurial culture and greater risk-taking among investors.
- The amended EIS/VCT scheme has a specific focus on knowledge intensive SMEs, with the objective of leading to an increase in R&D and patent applications, and to a general positive effect on the economy at large. Knowledge intensive SMEs and mid-caps benefit of higher investment thresholds and age limits, with the idea that they face more severe and more prolonged financing constraints.
- To achieve these goals, the scheme includes tax incentives to private individuals investing in qualifying companies (EIS) or in financial intermediaries (VCT) which carry out the eligible investments.
- Both the granting authority and other stakeholders have pointed out that the concept of “first commercial sale” is not a familiar concept in the UK domestic framework and has therefore created some difficulties in its use.
- According to the UK authorities, also the concepts of “new product market” and “new geographic market” contain some ambiguities, because they require a judgement to be made on the market definition.
- One association of investment funds expressed some criticism on the age limit and on the replacement rule. With respect to these concerns, it is necessary to balance private investors’ interests, which would call for more flexibility in the age limits and in the possibility of buying shares from existing shareholders, and the primary objective of State support, which is to solve a market failure. It seems to be premature, based on the evidence available so far, to think of an amendment of these provisions in the direction of an increased flexibility.
- The amount of funds raised by VCTs has been on a rising trend in recent years and has more than doubled since 2009-10. The expansion of the VCT schemes from 2012-13 also encouraged the growth in funds raised in the last five years, despite a declining trend in the number of VCTs raising funds.
- There has been a steady increase in EIS since 2010. The amount of funds raised almost doubled in the period from 2012-13 to 2014-15.

Annex B.5. SA.46308 – INVEST (Germany)[88]

B.5.1. Characteristics and design of the scheme

The scheme is an amendment to a previous scheme (SA.35455), initially approved on 17 April 2013 under the Risk Capital Guidelines 2006. The measure was approved in December 2016 and will expire on 31 December 2020.

The objective of the scheme is to increase the provision of private risk capital for small, young and innovative companies in Germany. The measure aims in particular at strengthening the activity of BAs, who are considered to have an important role in providing private capital to the target companies. According to the evidence provided by the German authorities at the moment of the notification, the provision of risk capital by BAs is particularly weak in Germany.[89] The measure aims therefore at incentivizing investments by BAs.

The financial instrument chosen for this scheme is the direct grant. The German authorities consider this instrument as the most suitable to foster the activity of BAs. The scheme is inspired by the British Enterprise Investment Scheme (EIS), a measure in support of the development of risk capital from private investors. The difference is that in the EIS the incentives to private investors take the form of fiscal incentives, and not of direct grants. There are several reasons behind the German authorities' choice of direct grants over tax reliefs. First, grants allow a higher control over the expenses of a measure, because the award of the grant is subject to budget availability. In case of tax incentives, instead, companies have a legal claim on their award. Moreover, tax reliefs would require a legislative process of modification of the tax system, whose implementation is lengthier and more complex. Furthermore, the German authorities considered that it would have a single administration (the BAFA) managing the measure, instead of getting also local tax offices involved, as it would have been the case with a tax incentive. Finally, the German fiscal system is such that the tax revenue is fed by taxes of the Länder and taxes of the federal state. A tax exemption would therefore entail both tax losses by the Länder and by the federal state. With a grant, instead, the burden is only on the institution that is given the grant, which is the federal state in case of the INVEST scheme.

The Commission indeed considered that the grant could be considered equivalent to an income tax relief.

The granting authority for this scheme is the BAFA (the Federal Office of Economics and Export Control), acting on behalf of the Federal Ministry for Economy and Energy. The Ministry writes the programme guidelines, sets the criteria and handles the notification procedure. The BAFA is

[88] For the development of this case study, the following sources have been exploited: notified decision, call with representatives of the Federal Ministry of Economy and Energy and of the BAFA, statistics provided by the Ministry , and English short version of the Evaluation report on the scheme undertaken by Zentrum für Europäische Wirtschaftsforschung (ZEW) Mannheim, VDI Technologiezentrum Düsseldorf, and Verband Vereine Creditreform e.V. Neuss, July 2016 (provided by the Ministry).
[89] EC decision on the INVEST scheme SA.46308, C(2016) 8228, 12/12/2016, par. 50.

instead the administrative authority and is in charge of reviewing the applications submitted by potential beneficiaries and of the payment of grants.

The overall budget of the measure is EUR 184 mln (EUR 46 mln per year since 2017).

The target group are private investors (natural persons or BA syndicates) investing in small, young, and innovative companies. These private investors must comply with certain conditions:

- their principal residence must be in the EEA;
- they shall not hold, either directly or indirectly, shares in the investee company;
- they shall not be related to the investee company (a condition which extends to a five-year period starting two years before the investment);
- they shall not conclude any forward agreements which would oblige a third party to re-purchase the investors' equity shares at a later stage.

The scheme underwent an independent assessment in 2016 and, at the end of 2016, some changes to the programme were implemented in order to incorporate the stakeholders' suggestions that emerged during the evaluation. These amendments, that required a further notification, concern an increase of the maximum annual investment amount per investor and the maximum annual investment amount per target undertaking, the introduction of an exit grant, the provision that shares can be acquired via convertible loans and that follow-on investments are allowed, a broadening of the innovation criteria for the target undertakings and modifications regarding the types of legal entities through which investors can invest. All the provisions included in the INVEST guidelines were approved by the Commission without any request for additional amendments.

Further, in 2019, the Ministry implemented an online database where INVEST-eligible companies can sign up in order to be visible for potential investors. Companies remain visible on the database for six months.

INVEST specifics

The measure entails two types of grants: an ***acquisition grant*** and an ***exit grant***.

The ***acquisition grant*** is a non-repayable tax-free grant for the purchase of company shares, amounting to 20% of the equity investment made (issue price of the shares acquired by the investor in the company, including any premiums paid).[90] The investment must be between EUR 10,000 and EUR 500,000 annually per investor. Per investee company, a maximum of EUR 600,000 in acquisition grants (for investments totalling EUR 3 mln) can be awarded per calendar year to all investors in that company. In combination with earlier risk capital measures, an overall threshold of supported investments into a single investee company of EUR 15 mln must not be exceeded. The grant should be reimbursed if the shares are not held for a minimum period of three years (lock-up period). The idea behind the minimum holding period is to make sure that there is a commitment to invest by the financial intermediary, and that the investment is not just part of a

[90] Note that the 20% acquisition grant is comparable in its aid element to a partial tax relief.

hit-and-run strategy aimed at benefiting from the grant. One may of course question whether three years are the right time period to address this concern.

The shares may also be acquired through the conversion of convertible loans. In this case, the acquisition grant will only be awarded if the contract provides for the subsequent conversion of the loan into shares.

Since the 2017 revision of the program, follow-on investments have also been eligible for funding, provided that the purchase of shares already held by the investor was previously supported by the INVEST programme.

Exit grants are lump-sum refunds of capital gains that may be granted to beneficiaries selling their shares within ten years, provided the sales agreement exclusively includes normal market provisions. The exit grant amounts to 25% of the profit resulting from the sale of the shares for which an acquisition grant was awarded. The total amount of exit grants must not exceed 80% of the initial value of the acquired shares. According to the German authorities, the exit grant should stimulate investors to choose the best investments and increase the efficiency of the measure. The exit grant is essentially a lump-sum compensation for a tax on profit upon disposal of shares, and the Commission considered it equivalent to an exemption from the capital gains tax.

The combined total of the investment and exit grants must not exceed the original amount invested.

Beneficiaries

Eligible investors are natural persons with a main residence in the European Economic Area who do not already hold, either directly or indirectly, shares in the target company, who are not related to the investee company (for a five-year period starting two years preceding the investment), and did not conclude any forward agreements which would oblige a third party to re-purchase the investors' equity shares at a later stage. The investor can also choose to subscribe for shares in the relevant company via an equity investment company or *Unternehmergesellschaft* (“UG” or limited liability entrepreneurial company) with up to six shareholders.[91] The exit grant may instead only be issued to natural persons.

Target undertakings must meet certain requirements:

- be a small enterprise;
- be not older than seven years;
- be established in the EEA, with at least one branch or one production site in Germany;
- not be an undertaking in difficulty according to the EU definition[92];

[91] This is parallel scheme in application of the de minimis Regulation 2013 (OJ L 352 of 24.12.2013).

[92] As contained in Commission Communication 2014/C249/01 respectively Commission Regulation No 651/2014.

- not be listed on a stock exchange or a regulated market, or be preparing an initial public offering;
- not be subject to an agreement specifying that it is to become a subsidiary of another company which does not fulfil these conditions;
- use the financial resources obtained for a business activity in an innovative sector; and
- receive fresh funds via the new shares, e.g. the funding cannot be used to repay a loan by the investor to the company.

In addition, investors and investee companies that are subject to a recovery order are excluded from the measure.

It is worth noting that companies in sectors that are not defined as innovative can also apply. What matters is that the firm can prove to have an innovative capacity. This can also be the case if the company owns a patent or has claimed public funding for a research or innovation project in the two years before applying. Proof of innovative capacity can also be supplied in the form of a separate brief expert opinion compiled by an independent expert, paid by the Ministry.

B.5.2. Experience with Risk Finance Guidelines

Eligibility criteria, thresholds, and conditions

One of the issues raised by the granting authorities, and in particular by the BAFA, with respect to the conditions of this scheme is the **innovation criterion**. As explained above, the field of activity of eligible undertakings must be an innovative one, as defined by a static list of areas of economic activity. The definition of innovativeness based on a static list has of course the advantage of being easy to implement, because in principle it should be straightforward to assess whether this eligibility condition is met by simply looking at the sector of activity. In practice, however, this criterion seems to present some shortcomings. First, establishing the area of economic activity is not always straightforward, and therefore requires an assessment to be made by the granting authority. Secondly, it often happens that the BAFA has to go through the burden of evaluating each company anyway, as there might be innovative companies in sectors that are not included in the list. This was for instance the case for sub-sectors such as the e-commerce and fin-tech: given that commerce and the financial sector are not included in the list, the authorities had to make an exception to include firms operating in the former sub-sectors, which are typically innovative. Of course, it may also be the case that companies are active in an innovative sector (or one that is deemed as such based on the static list) but actually do something that is not innovative at all. In order to overcome these issues, the Ministry introduced the possibility of separate brief expert opinions (see above) as proof of innovativeness. It seems therefore that the original rationale effectiveness of the innovation criterion based on a static list of sectors was limited by some practical issues that emerged in its implementation. This suggests therefore caution in evaluating a wider use of this criterion.

The restriction on the **7-years age limit** introduced by the 2014 Risk Finance Guidelines has not created major problems for the implementation of the scheme, as there were very few companies that were excluded because of this criterion. The concept of “first commercial sale” on which the age limit is defined proved to be somehow problematic because its interpretation is not straightforward. The granting authorities therefore consider the first entry in the public register as the relevant date.

The provision whereby eligible investors must be capital companies, i.e. UG or **limited liability** entrepreneurial companies, excludes non-limited-liability companies, which are relatively rare. However, investors sometimes choose the latter form for tax reasons, and this criterion may therefore lead to the exclusion of potentially interested investors.

Regarding the **quantitative restrictions**, it appears that the limit of EUR 3 mln per year lately has become increasingly binding, especially for firms receiving follow-on investments (allowed since 2017).

One final remark concerns the provision contained in the RFG whereby the **investor must not be connected** to the company. According to some stakeholders, while the rationale of this rule is understandable and reasonable, the provision is sometimes difficult to interpret and would need further regulation.

Awareness and burdensomeness

According to the 2016 evaluation, the implementation of the program by the Ministry and the BAFA turned out to be efficient. Both investors and companies consider the bureaucratic burden involved in the INVEST program to be low and were satisfied with the services of the BAFA.

Given that the financial instrument chosen is not covered by the GBER (because it consists of direct grants instead of tax incentives), the measure had to be notified. The notification process was quite lengthy (more than six months) and complex and put some burden on the procedure to get the scheme implemented.

From the point of view of beneficiaries, the application phase of the scheme is quite accessible and easy to deal with. Following stages, related to the verification of eligibility criteria and awarding of the grants, entail some administrative burden for the BAFA, which must look into the contracts between financial intermediaries and start-ups.

The burdensomeness of complying with the RFG seems to be related more to the difficulties of interpretation of certain concepts (such as the first commercial sale and the absence of relation between investor and investee) than to the procedural burden, which appears to be reasonable.

The 2016 evaluation identified an area for improvement in the visibility of the program. BAs, who are typically organized in networks, usually know about the programme. However, non-organised investors apparently do not: only 20% of the non-subsidised investors who took part in the online survey knew about the INVEST programme.

According to the granting authorities, however, the visibility of the program has improved since then. This clearly emerges from the increase in the number of investors that obtained the grant that has taken place in recent years (see section B.5.3 for details).

B.5.3. Impact of the scheme

The program was subject to an external evaluation in 2016 and is currently undergoing a second evaluation round that will be concluded at the end of 2019. Therefore, some of the quantitative analyses on the effects of the program are only available for its early stage (May 2013-November 2015). The Study Team obtained additional data from the Ministry on the period 2016-2019. Both types of information are reported below.

Table B.11 reports the number of investors and investees, as well as the amount of funds, for the period 2013 to 2019. Since the start of the programme, 4,670 investors received an INVEST grant. According to the 2016 Evaluation report, almost a quarter of them is a BA. These financial intermediaries invested in 2,045 start-up companies, for a total amount of investments of EUR 419.35 mln supported by the INVEST scheme over the period May 2013-July 2019.

Table B.11: Number of investors and of investee companies and amount of investments supported by the INVEST scheme

Year	Number of investors	N. of investee companies	Amount of funds (EUR mln)	Average amount of funds per investee (EUR mln)	Average amount of funds per investor (EUR mln)	Average amount of investors per investee
2013 (from 15 May)	79	47	5.05	0.11	0.06	1.68
2014	416	204	31.80	0.16	0.08	2.04
2015	581	275	45.00	0.16	0.08	2.11
2016	851	385	73.05	0.19	0.09	2.21
2017	901	373	82.70	0.22	0.09	2.42
2018	1,070	441	107.45	0.24	0.10	2.43
2019 (until 31 July)	772	320	74.30	0.23	0.10	2.41
Total	**4670**	**2045**	**419.35**	**0.19**	**0.08**	**2.19**

Source: Study Team based on data from Federal Ministry of Economy and Energy

The program figures have grown over time, as Table B.11 reports. In particular, the growth in the number of investors and in the amount of funds seems to be more pronounced since 2017, when the scheme was reformed and extended. The average amount of investment per investee company has more than doubled since the introduction of the program. In parallel, also the average amount of funds per investor increased from EUR 60,000 to EUR 100,000. While, in the early years of the scheme, less than half of the companies could find at least two assisted investors, in recent years they find on average 2.5 investors each. All these figures suggest that the investments supported by the program have scaled up. Several factors might have contributed to this increase in the amount of investments and in the number of investors per company. On the one hand, the scheme has been in place for six years, and its visibility has improved since its early days. The increase in the number of investors per company might partly be a result of the INVEST database, which increased the visibility of eligible firms. Hopefully, the evaluation of the INVEST scheme that is currently taking place will provide insights on the effectiveness of this tool. Moreover, the 2017 reform of the scheme, entailing, among other things, an increase of the maximum annual investment amount per investor and per target undertaking, and the eligibility for follow-on investments might have contributed to the sharp increase in the amount of investments in the last two years.

The majority of the companies supported are in the early stages of their development. Table B.12 shows that, in 2018, almost a half of the companies are younger than one year of age, and almost two thirds of them are younger than two years of age. The last column of Table B.12 shows that the younger the company, the smaller the amount of the investment. This is consistent with the fact that as the companies grow, their funding needs increase, as does their ability to attract investments of a bigger size.

Table B.12: Number of investee companies and amount of funds by age of the company (2018)

Age	Number of investee companies	Amount of funds raised (EUR Mln)	Average amount of funds raised (EUR Mln)
< 1 year	190	37.25	0.20
1-2 years	90	23.45	0.26
2-3 years	62	16.05	0.26
3-4 years	47	14.10	0.30
4-5 years	30	10.15	0.34
5-6 years	14	4.70	0.34
6-7 years	8	1.95	0.24
2018	441	107.45	0.24

Source: Federal Ministry of Economy and Energy

According to the most recent available data (2018, see Table B.13), almost one half of the companies that obtained investments supported by the INVEST program are active in the information and communication services (ICT). High-tech manufacturing companies also attract a relevant amount of investments, followed by publishing and advertising services. With respect to an average amount of EUR 240,000, manufacture and mechanical engineering sectors tend to attract on average larger investments, consistently with the finding of the main report (except for manufacture of data and optical products, where investments are below the average).

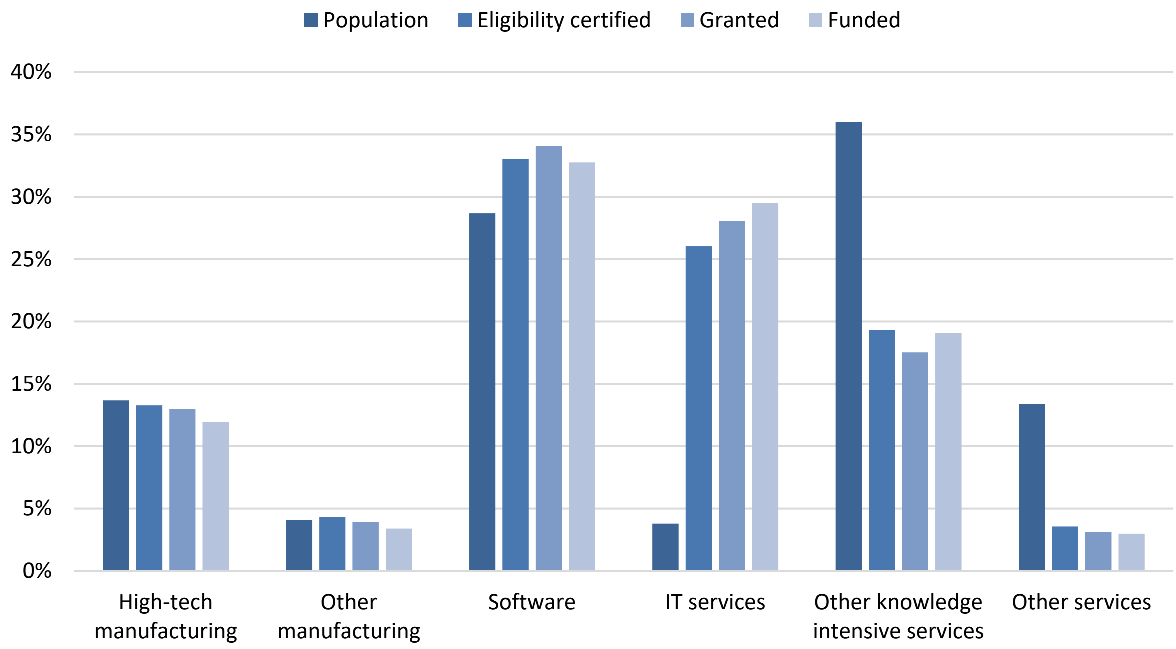
Table B.13: Number of investee companies and amount of funds by sector of activity (2018)

Industry	Number of investee companies	Amount of funds raised (EUR mln)	Average amount of fund raised (EUR mln)
Provision of information technology services (62)	128	28.30	0.22
Information services (63)	85	20.95	0.25
R&D (72)	24	5.35	0.22
Manufacture of data processing equipment, electronic and optical products (26)	29	5.55	0.19
Manufacture of chemical products (20)	10	2.95	0.30
Publishing (58)	14	1.90	0.14
Advertising and market research (73)	11	3.50	0.32
Manufacture of other goods (32)	21	5.65	0.27
Mechanical engineering (28)	15	4.30	0.29
Manufacture of electrical equipment (27)	10	1.20	0.12
Telecommunications (61)	4	2.20	0.55
Other freelance, scientific and technical activities (74)	4	0.75	0.19
Wholesale (without trade in motor vehicles) (46)	8	2.55	0.32
Manufacture of rubber and plastic goods (22)	7	1.75	0.25
Other	71	20.60	0.29
2018	**441**	**107.45**	**0.24**

Source: Federal Ministry of Economy and Energy

It might also be interesting to compare the sector of activity of the companies who obtained the grant with that of the full population of young innovative companies which would in principle fulfil the INVEST criteria. This comparison, shown in Figure B.17 below, is performed in the 2016 evaluation report and therefore only refers to the 2013-2015 period. The figure clearly suggests that start-ups providing software programming and other information and communication services (ICT) are over-represented in the group of beneficiaries. Firms active in IT services, in particular, represent less than 5% of the full population, but almost 30% of the firms who obtain funding via the INVEST scheme. It appears that ICT start-ups are a focus of the INVEST program.

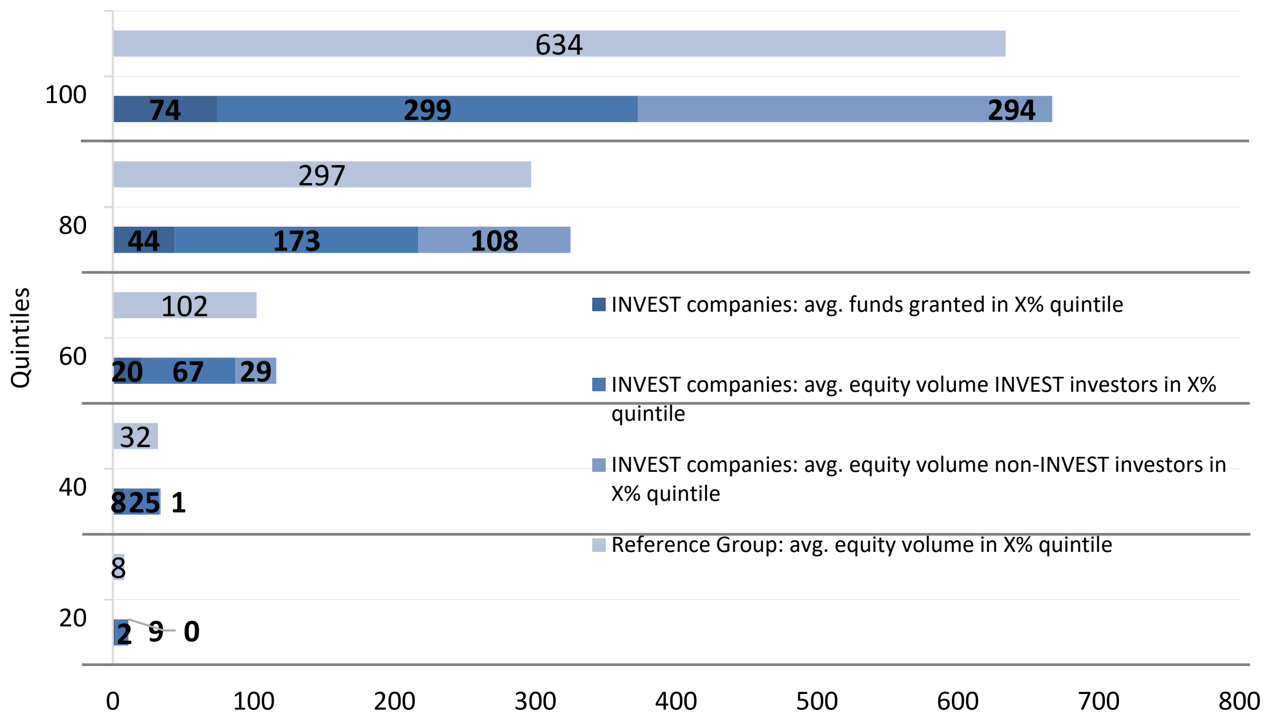
Figure B.17: Eligible companies by sector



Source: Data on INVEST participants, BAFA; Mannheim Enterprise Panel, ZEW (ZEW, VDI, and Verband Vereine Creditreform calculations)

According to the 2016 evaluation, the companies that obtained funds via the INVEST scheme have founders with a higher level of education with respect to comparable firms. The companies are more growth-oriented and develop more frequently new techniques or products based on own R&D efforts than other comparable innovative companies. Given this combination of growth orientation and R&D activities, companies that took part in the INVEST scheme have a higher need of external funding and are more often financed by equity (excluding INVEST). They generally receive more funds than other innovative companies, as Figure B.18 below shows.

Figure B.18: Average investment sums in EUR 1,000 by quintiles



Source: Mannheim Start-up Panel 2015, ZEW-Befragung der INVEST-Unternehmen, Teilnehmerda-ten des INVEST-Forderprogramms, BAFA; Berechnungen des ZEW

According to the 2016 evaluation, the INVEST scheme contributes to reducing the negative effects of asymmetric information, which are more pronounced during the early phase of financing than in other financing phases. One channel whereby the program reduces the market failure is the reduction of the risks for investors. In addition, the 2016 evaluation report claims that the signalling effect of INVEST can also help reduce the market failure.

The 2016 evaluation shows that, already in its early years, the INVEST scheme has stimulated the venture capital market, albeit to a small extent. The program stimulated investments not only by established investors, but also by investors that made their first investment, the so-called *virgin angels*. The INVEST scheme mobilizes additional venture capital through two channels. First, new investors are encouraged to invest in start-ups. Investors that make their first investment are called *virgin angels*. In the first two years of implementation, 21% of investors were virgin angels. According to the information contained in the 2016 evaluation (see Table B.14 below), EUR 14.25 mln were invested by virgin angels supported by INVEST. Much of them invested together with other experienced investors. The availability of the INVEST scheme is therefore likely to have mobilized additional equity.

Secondly, experienced investors may invest more equity capital. These additional investments amount to EUR 14.49 mln, which is however less than the total amount of grants received by these investors from INVEST (EUR 16.47 mln). Nevertheless, 16% of the total investment of experienced investors (EUR 90 mln) is mobilized by the program. The total net effect resulting from investments by virgin angels and by experienced investors is positive: Each granted EURO induced an additional private investment in start-up companies of 50 cent, resulting in an overall investment of EUR 1.5.

Table B.14: Total effects of the INVEST programme

Effect	Amount
Additional capital provided by experienced investors induced by INVEST	EUR 14,487,000
Sum of granted funds to experienced investors	EUR 16,470,000
Sum of net effects of experienced investors	EUR -1,983,000
Share of sum net effects in sum of granted funds to experienced investors	-12%
Additional capital provided by virgin angels induced by INVEST	EUR 14,251,000
Sum of granted funds to virgin angels	EUR 2,708,000
Sum of net effects of virgin angels	EUR 11,544,000
Total additional capital provided induced by INVEST	EUR 28,738,000
Total sum of net effects	EUR 9,560,000
Share of sum net effects in sum total granted funds	50%

Source: Data on INVEST participants, BAFA; Investor Online-Survey, ZEW

The evidence described above about the program's ability to activate PE is only limited to the period covered by the 2016 evaluation, i.e. its first two years of existence. In the absence of updated figures, it is difficult to make an assessment of its achievements in later years. The figures discussed early in this section however show that the program experienced a rapid growth both in terms of number of beneficiaries and of amount of induced investments. The evaluation exercise that is currently taking place will allow a more precise understanding of the success of the scheme in mobilizing PE funds during its development phase.

B.5.4. Conclusions

- The scheme entails a grant for the purchase of company shares, amounting to 20% of the equity investment, which must be between EUR 10,000 and EUR 500,000 annually per investor. Lump-sum refunds of capital gains may be granted to beneficiaries selling their shares within ten years. This exit grant amounts to 25% of the profit resulting from the sale of the shares.
- The objective of the scheme is to increase the provision of private risk capital for small, young, innovative companies in Germany.
- The measure aims in particular at strengthening the activity of BAs.
- A revision of the scheme at the end of 2016 entailed an increase of the maximum annual investment amount per investor and per target undertaking, the introduction of an exit grant, the provision that shares can be acquired via convertible loans and that follow-on investments

are allowed, a broadening of the innovation criteria for the target undertakings and modifications regarding the types of legal entities through which investors can invest.

- An online database of eligible undertakings was implemented in 2017, in order to increase the visibility of target firms and to improve their matching opportunities with investors. Although the available information does not yet allow to make an evaluation of its effectiveness, this tool could be useful and could potentially be extended to other programs.
- The 2014 revision of the Risk Finance Guidelines did not create major problems for the implementation of the scheme.
- There seem to be only minor issues of interpretation with some concepts such as the "first commercial sale" or the provision whereby the investor must not be connected to the company. As for the former concept, granting authorities use the first entry in the public register as the relevant date for the 7-year eligibility criterion. It would be interesting to assess whether the same practice could be applied in other Member States, compatibly with national legislations and with the EU State aid Rules.
- Both investors and companies consider the bureaucratic burden involved in the INVEST program to be low.
- The administrative burden on the BAFA mainly consists in the necessary procedures to check the eligibility criteria but is not seen as excessive. The objective to set a straightforward criterion for innovation based on a static list of sectors does not seem to be fully achieved, as the BAFA has to make a case-by-case assessment in some cases.
- The impact of the scheme seems to be positive, with a more pronounced increase in the size and number of investments in recent years, after the scheme was extended in terms of amounts of investments and follow-on investments.

Annex B.6. Conclusions on case studies

The analysis of case studies suggests that relevant stakeholders are generally satisfied with the Rules, as they are flexible enough to allow targeting the design of schemes to the financial needs of each specific Member State or region. The changes introduced with the 2014 revision of the Rules do not seem to have negatively affected the effectiveness of the schemes.

B.6.1. Experience with the Rules

The range of instruments covered by the GBER seems to be sufficiently broad to address the financial needs of target beneficiaries. Of the three case studies falling under the GBER, two entailed equity and quasi-equity investments (the Finnish and the Italian schemes), and one loans (the Dutch scheme). In all cases, the financial intermediaries interviewed seem to appreciate the fact that the public intervention is made through an investment in funds, either direct or through a loan, because this allows them to choose the best investment opportunities, thereby reducing the interference with market forces. This is particularly true for the Dutch Seed scheme, where the choice among the investment opportunities is entirely left to the investment funds that co-finance the projects. The advantage of such system is that the investment decision is delegated to professional operators that are typically very specialized in specific sectors, and therefore have the knowledge to identify the best investment opportunities in each market. Equity or quasi-equity investments seem to entail a somewhat greater involvement of the granting authorities in the investment decisions, but still preserving the private investors' ability to choose among alternative investment opportunities.

Thanks to the flexibility of the Rules, in most of the analyzed schemes the granting authorities introduced some specific provisions in order to better suit the financial needs of their target beneficiaries. For instance, in the Dutch Seed scheme, which is targeted to very early-stage companies, only firms without a professional investor already onboard are eligible.[93] The Finnish Tekes scheme, instead, allows up to 40% of the target fund's capital to be invested in foreign countries, in order to facilitate the emergence of internationally strong early-stage equity funds that are anchored to Finland.

Schemes that are notified under the RFG benefit of an even higher flexibility in the choice of financial instruments. Both the UK EIS/VCT scheme (described in Annex B.4) and the German Invest scheme (described in Annex B.5) used this flexibility to extend the pool of target beneficiaries both in terms of quantitative thresholds and in terms of eligibility criteria.

In this respect, it might be interesting to compare the different ways in which these two schemes have designed their eligibility criteria in order to focus on innovative companies. On the one hand, the German Invest scheme introduced a static list of economic sectors that are deemed as innovative. The UK authorities, on the other hand, adopted a knowledge intensive criterion that

[93] It should be noted, however, that some stakeholders expressed concerns about this provision, on the basis that the definition of professional investor is not straightforward and that firms with a professional investor may still experience an equity gap.

corresponds to the definition of 'innovative company' set up in the RFG. The evidence collected in the case studies does not allow to draw implications on the effectiveness of the latter criterion, which has been in place only for less than four years. We gathered, however, some (limited) evidence on the former criterion suggesting that the static list of economic sectors poses some burden in the implementation phase, since the assessment has to be made on a case-by-case basis. It would therefore be premature at this stage to draw implications on the relative effectiveness of these two criteria, but it is worth monitoring their implementation in the coming years in order to consider whether they could be applied to other schemes or Member States.

The case studies also show that the financial instruments of the schemes under consideration are generally complementary to those of other support measures available in each Member State, such as regional programs, loans or tax measures. This complementarity was highlighted as a positive factor by the beneficiaries and the fund managers interviewed for the Dutch Seed scheme and for the Finnish Tekes scheme. With respect to other national support programs, the instruments chosen in these schemes are more specifically directed towards the objective of fostering investments by venture capitalists and BAs.

As regards the eligibility criteria, stakeholders interviewed for the case studies share a general consensus on the rationale behind them. Some concerns were expressed regarding difficulties in the interpretation of some concepts rather than on substantial issues. In particular, several stakeholders reported problems in the implementation of the eligibility criterion based on the "first commercial sale" as the relevant date for the seven-year age limit. The problem has not been caused by the age limit itself, which stakeholders generally do not see as restrictive since their focus is on early-stage firms, but on the relevant date. In this respect, it is worth noting that in the German Invest scheme the granting authorities use the first entry in the public register as the relevant date for the 7-year eligibility criterion.

Also the concepts of "new product market" and "new geographic market" seem to create some ambiguities, as they imply a discretional judgement on the market definition. Indeed, it appears that, for instance, the Finnish Tekes scheme does not include this criterion in its eligibility requirements.

Some stakeholders expressed concerns about the replacement rule, whereby the risk finance measure may provide support for replacement capital only if the latter is combined with new capital (provided by private investors) representing at least 50% of each investment round. With respect to this issue, it is necessary to balance private investors' interests, which would call for more flexibility in the possibility of buying shares from existing shareholders, and the primary objective of State support, which is to solve a market failure. It seems to be premature, based on the evidence available so far, to think of an amendment of this provision in the direction of an increased flexibility.

Regarding the quantitative criteria, it seems that the thresholds set up in the Rules are generally appropriate. In particular, the GBER investment threshold of EUR 15 mln is not perceived as restrictive in the schemes under consideration, because average investments are typically lower that this threshold. Indeed, in Table A.5 we summarized the actual thresholds set up by each of the five schemes. They are significantly lower than the GBER threshold, although they have been extended over time for most schemes in order to meet the beneficiaries' need for larger investments.[94] This may clearly be motivated by the objective of targeting small and early-stage start-ups, but also by budget constraints at the national level. Anyway, the evidence collected in these schemes does not suggest, at the moment, a need to reconsider the level of the GBER threshold.

Table B.15: Comparison among national schemes regarding the maximum investment per company

National scheme	GBER/RFG	Maximum investment per company
SEED (Netherland)	GBER	€ 3.5 mln
Tekes (Finland)	GBER	€ 15 mln
POR (Italy)	GBER	€ 2.5 mln
EIS/VCT (UK)	RFG	GBP 5 mln per year
INVEST (Germany)	RFG	€ 3 mln per year
GBER	-	**€ 15 mln**

Source: Study Team

B.6.2. Awareness and burdensomeness

Evidence collected through case studies shows that financial intermediaries are generally aware of older and more established schemes, such as the Finnish and the British ones. The knowledge of newer and smaller schemes, such as the Dutch scheme and the German one, is not as widespread yet. Indeed, the visibility of the scheme seems to be an area for improvement in the German INVEST scheme. BAs, who are typically organized in networks, usually know about these schemes. However, awareness among non-organised investors is apparently lower. Final beneficiaries, instead, may not know the schemes directly, because they typically approach funds to search for financing and they do not necessarily know that they are partly funded by a State aid program. Although for some schemes there is still a lack of knowledge about available funding opportunities among entrepreneurs, overall there seem to be an increased access to funds that are supported by State aid schemes.

According to the evidence collected in the case studies, the burden of the Rules is generally not perceived as excessive by the stakeholders. The burdensomeness of complying with the Rules seems to be related more to the difficulties of interpretation of certain concepts than to the procedural burden, which appears to be reasonable. Fund managers generally consider that the amount of reporting that they have to do for these schemes is similar to the one they have to do for their other investments. Evidence available on the Dutch Seed scheme, for instance, shows

[94] Moreover, some schemes (for instance the Dutch Seed one) modified their original design in order to allow for follow-on investments.

that administrative burdens, including the efforts that applicants must make to apply and the reporting obligations that Seed fund managers must meet, are not perceived as excessive by the surveyed fund managers. In some cases, it actually appears that the high-quality due diligence required by the scheme improves the beneficiaries’ ability to eventually reach other non-professional investors. Indeed, the high due diligence is very valuable from the perspective of potential private investors, because it significantly reduces the uncertainty about the investment capability of the fund project and, at the very least, reduces their own workload once they decide to invest in the company.

B.6.3. Impact

The schemes considered in the case studies are generally characterized by a trend of steady growth, both in terms of number of investors and of amount of funds. Younger schemes, such as the Dutch Seed scheme, have a sharp pattern of growth, whereas more established schemes, such as the UK EIS/VCT scheme, have a steadier growth. For the German Invest scheme, the growth pattern seems to be more pronounced since 2017, when the scheme was reformed and extended. It is also interesting to notice that, for this scheme, the number of investors per company has increased in recent years. This might partly be a result of a recent experience of the Invest scheme, which implemented an online database of eligible undertakings in order to increase the visibility of target firms and to improve their matching opportunities with investors. Although the available information does not yet allow to make a full evaluation of its effectiveness, it seems that this tool could potentially constitute a good practice that could be extended to other schemes.

One dimension on which it might be interesting to draw a comparison between the different schemes is the size of investment per sector.[95] Evidence on this aspect is available for only some of the schemes. For the Dutch Seed scheme, for instance, it appears that the average investment amount for the Advice, research and other business services sector is EUR 0.96 mln, for Industry EUR 0.75 mln and for Information and communication EUR 0.7 mln. The fact that “Advice, research and other business services” has higher average investments than Industry may look counterintuitive, as start-ups in manufacturing typically require higher investment costs in machinery etc. This, however, may be due to the fact that the former category might include very capital-intensive activities. It is instead not surprising that Information and communication companies have slightly lower average investments, given that ICT start-ups generally require lower capitals for their set-up. The latter finding is also confirmed in the evidence from the UK EIS/VCT scheme, for which the information and communication sector, and in general services sectors, have lower amounts of investments than sectors such as Electricity, gas, steam and air conditioning, Transport and storage, and Construction. Finally, evidence from the German Invest scheme shows that Manufacture and mechanical engineering sectors tend to attract on average larger investments. This evidence seems to be consistent with the findings of the main report.

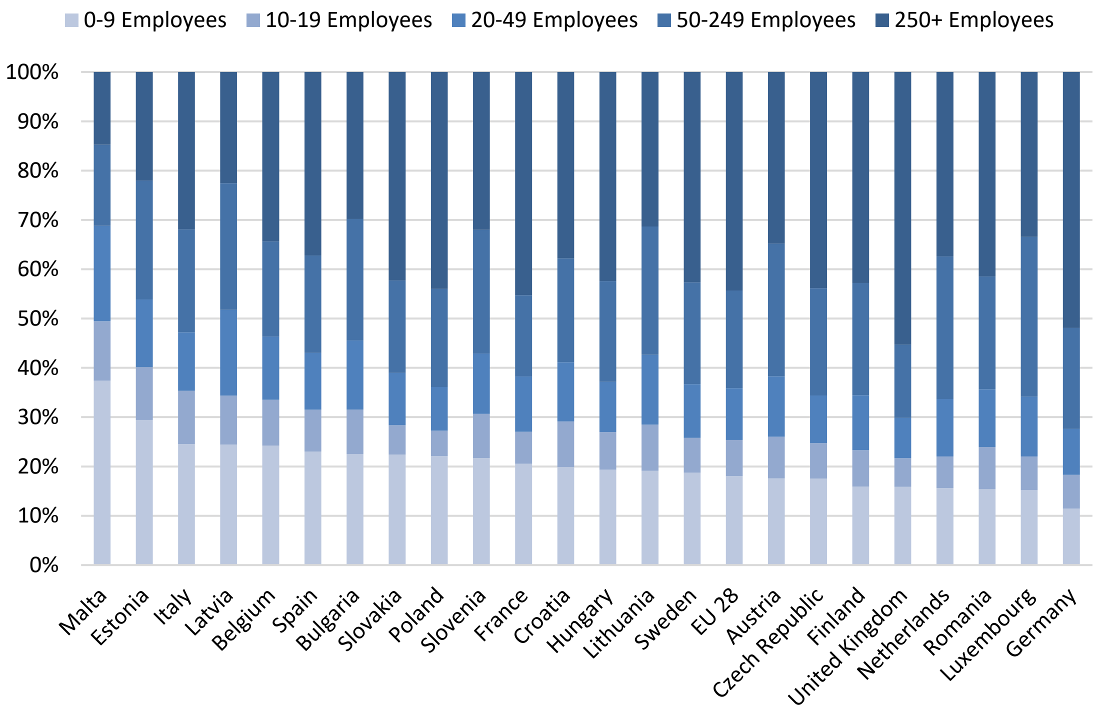
[95] It should be noted that in this respect comparisons across schemes in different Member States are difficult because of the different ways in which economic sectors are classified.

Overall, the evidence collected in the case studies suggests that the analysed schemes have been successful in fostering the development of the venture capital market and in addressing the equity gap faced by start-ups.

There seem to be two channels whereby these schemes have an impact on final beneficiaries. First, they allow them to attract funds that are particularly difficult to find for early-stage companies. Secondly, they allow beneficiaries to get a professional investor onboard, who typically bring high levels of experience and expertise. Moreover, professional investors belong to larger networks of investors, which facilitate the companies’ ability to obtain further private investments.

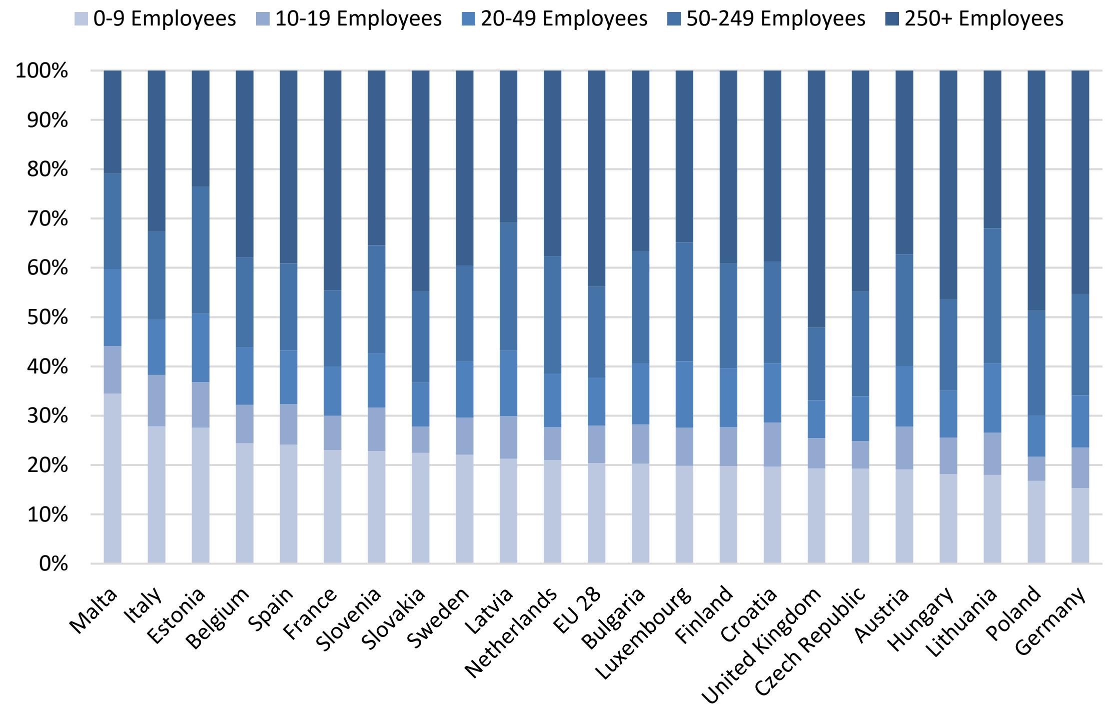
Annex C. ADDITIONAL EVIDENCE FROM PUBLICLY AVAILABLE DATA

Figure C.1: Relevance of SMEs in the EU (SMEs as % of total turnover, 2016)



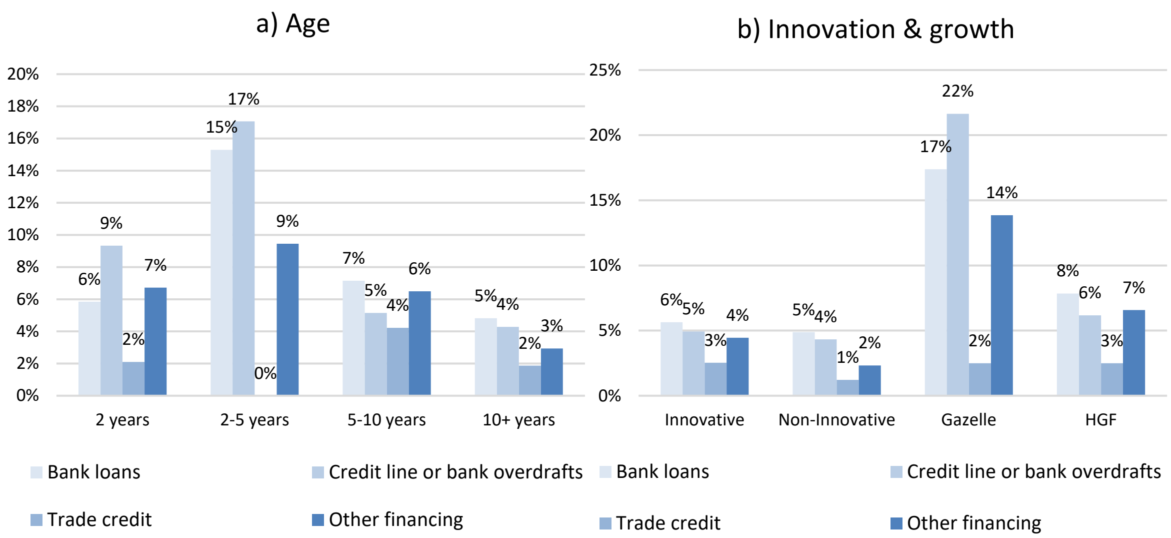
Source: Study Team based on Eurostat. Notes: EU28

Figure C.2: Relevance of SMEs in the EU (SMEs as % of total value added at factor cost, 2016)



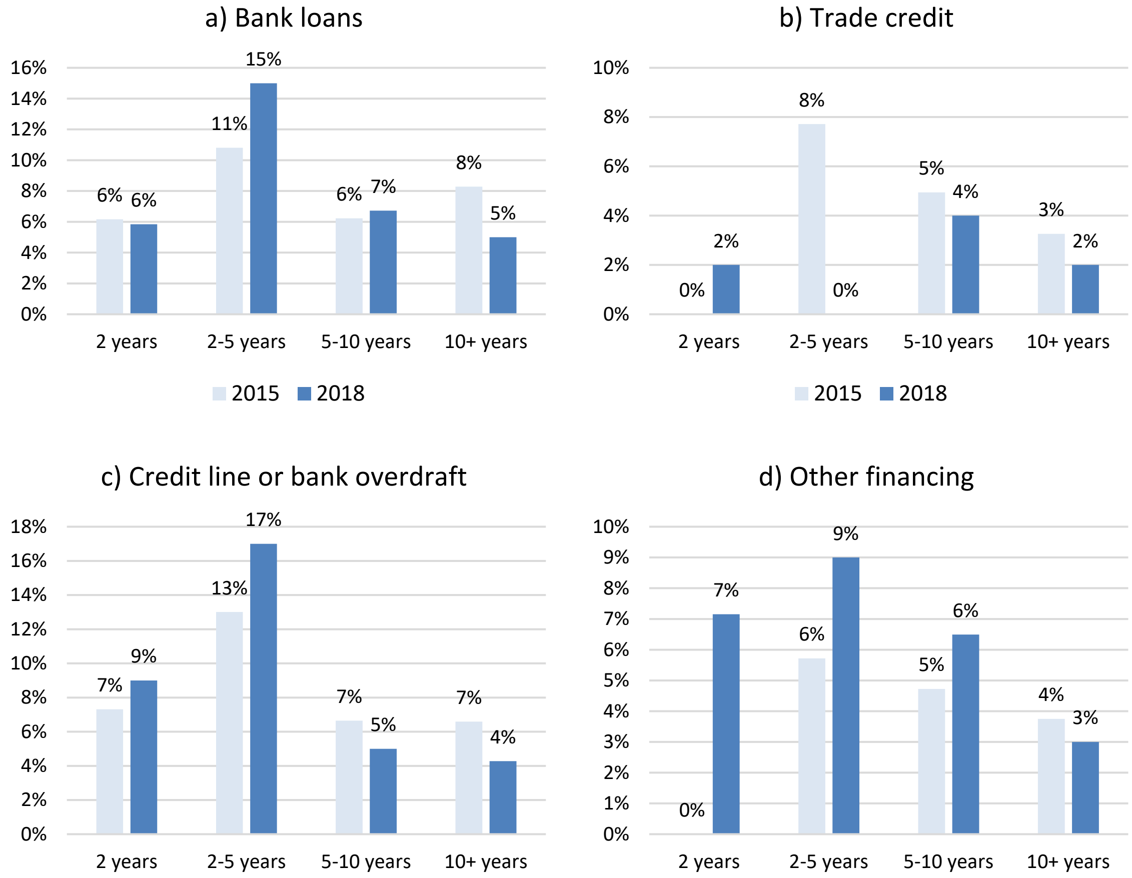
Source: Study Team based on Eurostat. Notes: EU28

Figure C.3: Percentage of rejected applications: breakdown by firm age, innovation and growth and source of external financing (2018)



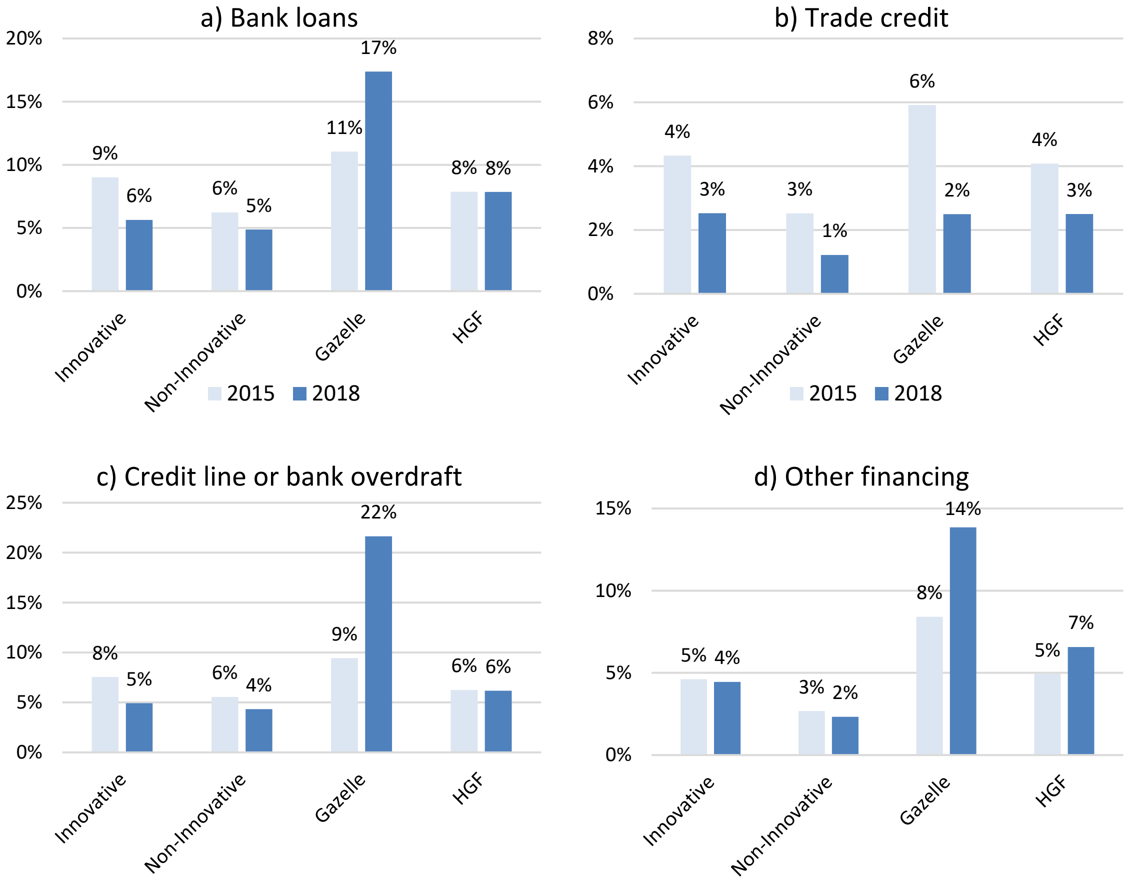
Source: Study Team based on Commission/ECB SAFE. Notes: EU28.

Figure C.4: Percentage of rejected applications: breakdown by firm age and source of external financing (2015 vs. 2018)



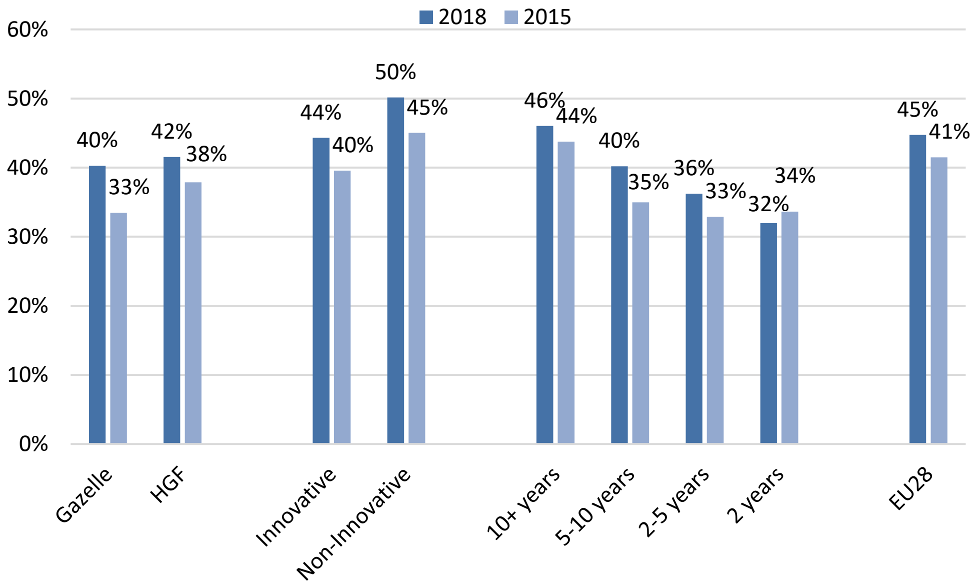
Source: Study Team based on Commission/ECB SAFE. Notes: EU28.

Figure C.5: Percentage of rejected applications: breakdown by firm innovation and growth and source of external financing (2015 vs. 2018)



Source: Study Team based on Commission/ECB SAFE. Notes: EU28.

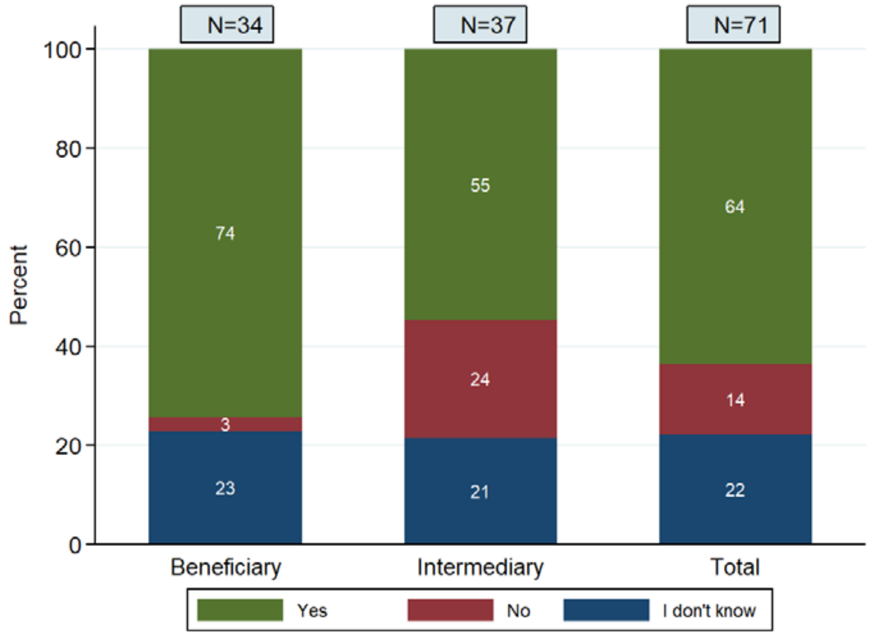
Figure C.6: Percentage of European SMEs reporting "no obstacles" to get external financing: breakdown by firm age, innovation and growth (2015 vs. 2018)



Source: Study Team based on Commission/ECB SAFE. Notes: EU28.

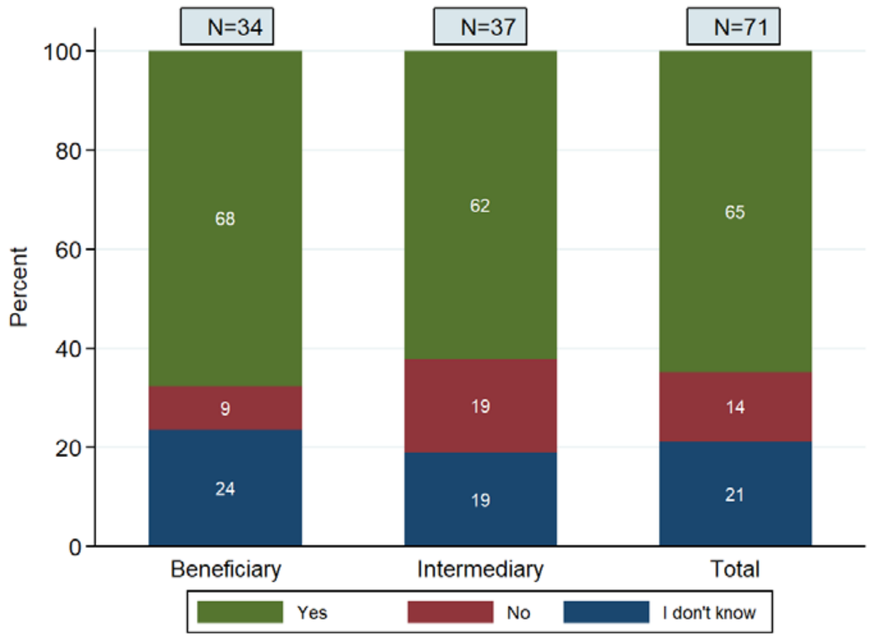
Annex D. Aggregated responses to questionnaires

Figure D.1: In your experience, are the limitations in the GBER justified and do you see any need to include additional types of companies in the GBER with regard to the need to access to risk finance?



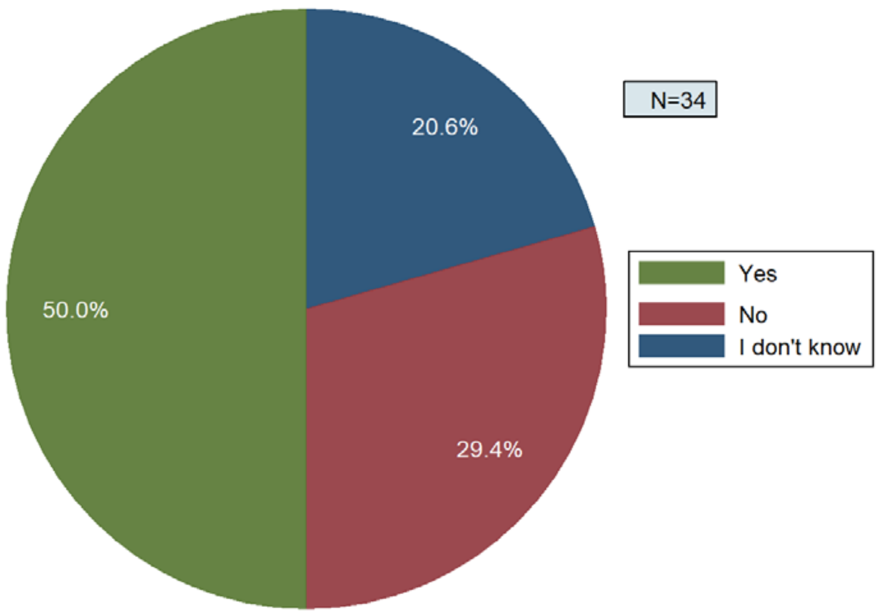
Source: Study Team based on Stakeholder Interviews. ID: F_B1a_B_B1a

Figure D.2: In your experience, are the eligibility criteria under the GBER well defined?



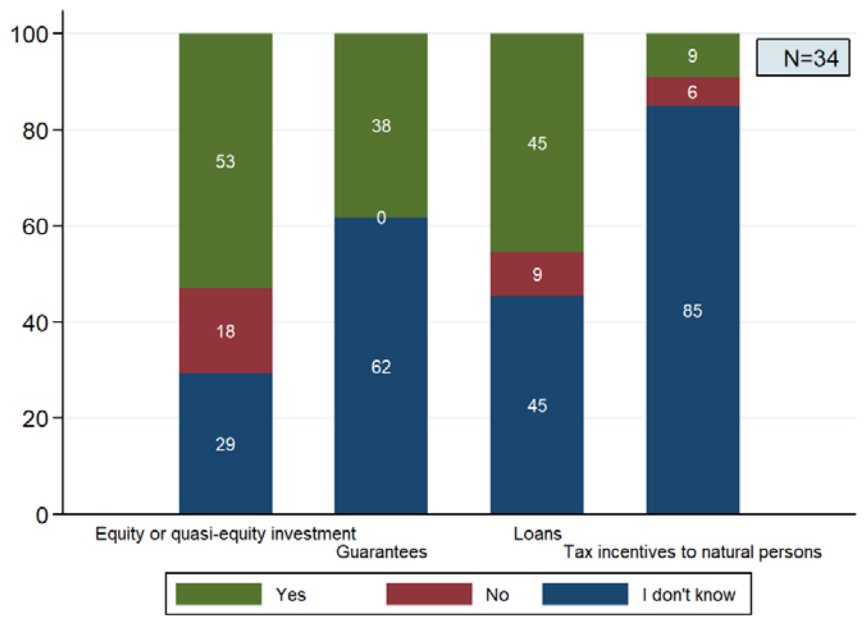
Source: Study Team based on Stakeholder Interviews. ID: F_B1b_B_B1b

Figure D.3: The GBER requires a minimum participation of private investors. In your experience, has it been difficult to attract the private capital in the required amount (i.e. is the requirement too strict)?



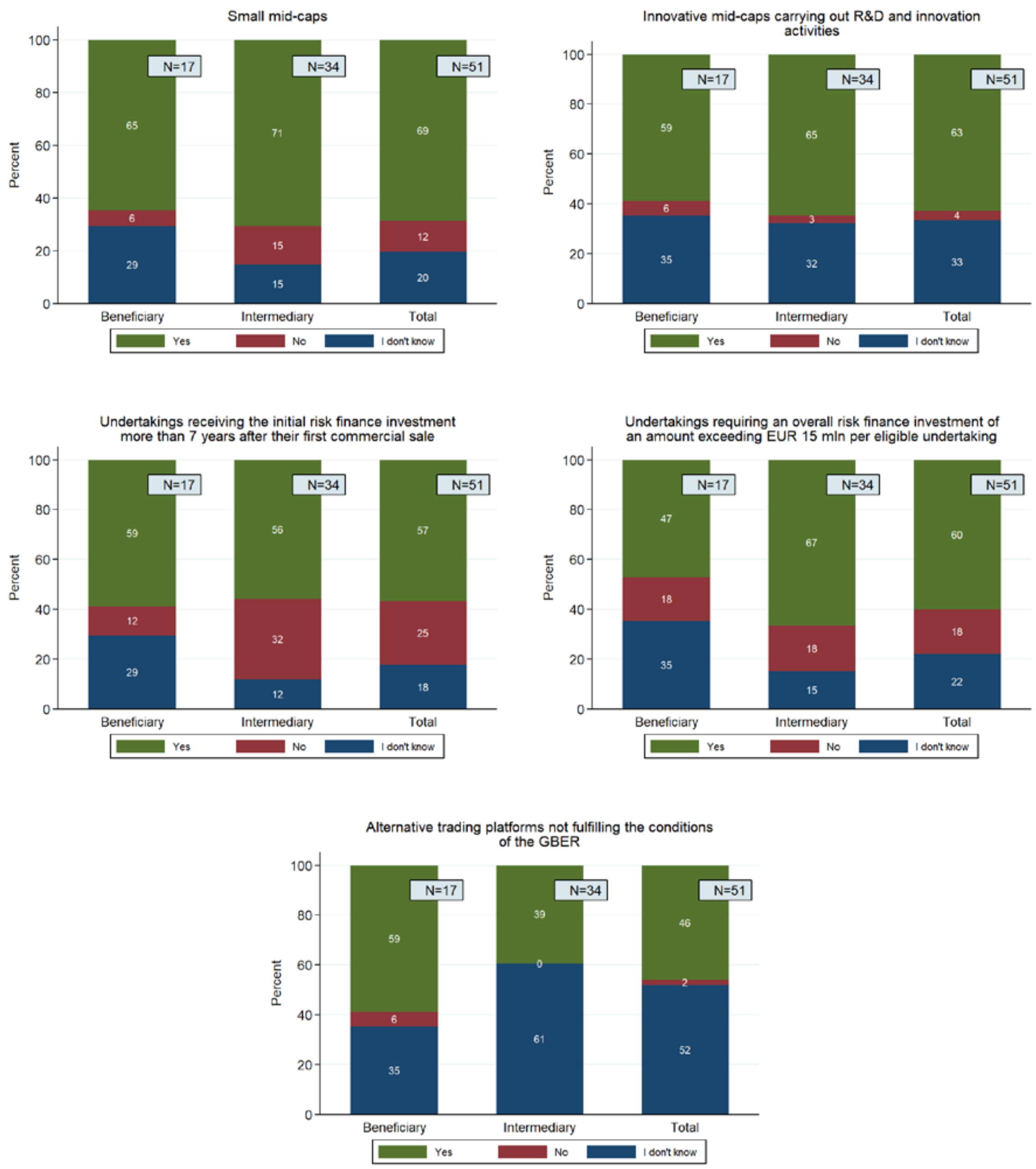
Source: Study Team based on Stakeholder Interviews. ID: B_B2a

Figure D.4: The GBER requires a minimum participation of private investors. Are the forms of risk finance measures sufficiently attractive for investors?



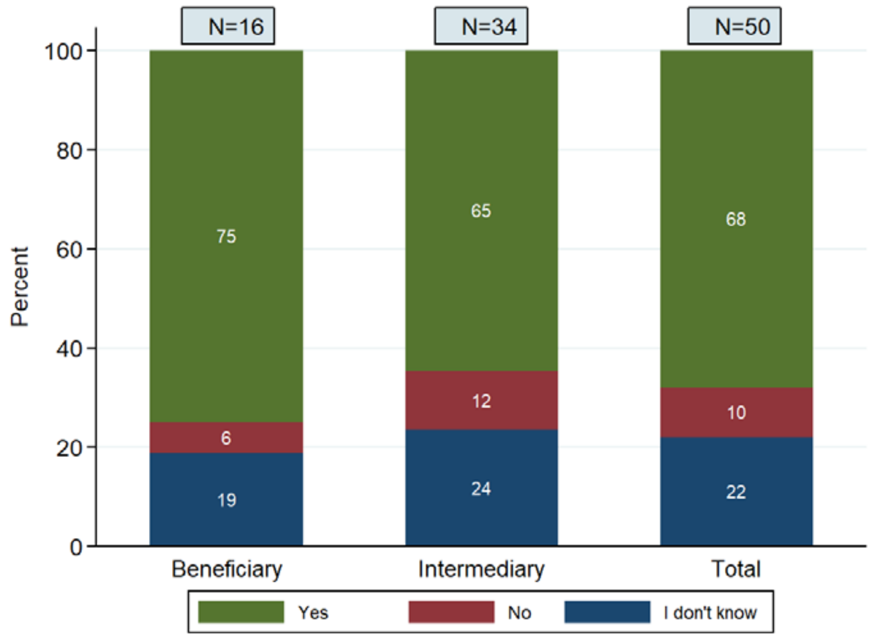
Source: Study Team based on Stakeholder Interviews. ID: F_B3a

Figure D.5: In your experience, do the limitations in the Risk Finance Guidelines to the following types of companies reflect the type of companies affected by the need to access to finance?



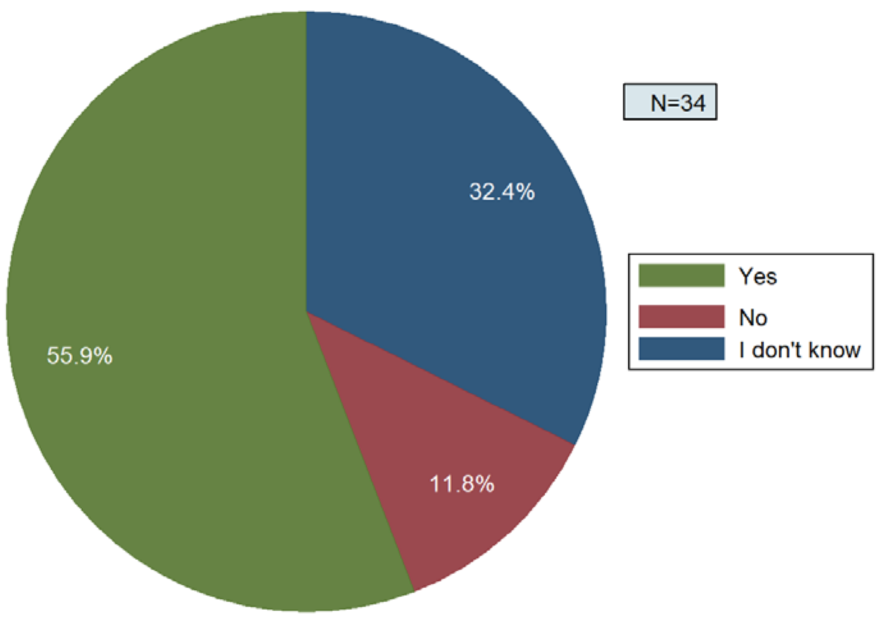
Source: Study Team based on Stakeholder Interviews. ID: F_C1a_B_C1a

Figure D.6: In your experience, are the eligibility criteria under the Risk Finance Guidelines sufficiently clear?



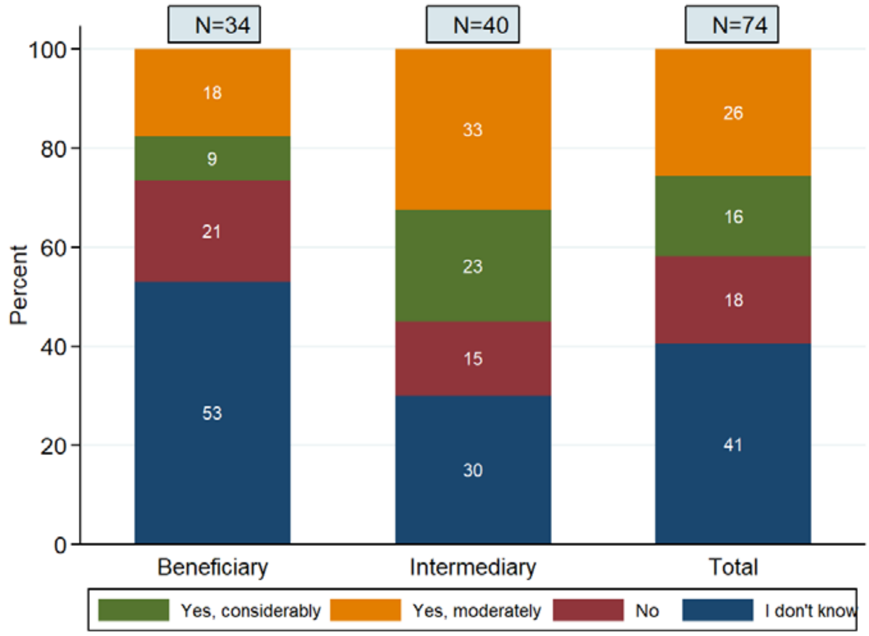
Source: Study Team based on Stakeholder Interviews. ID: F_C1b_B_C1b

Figure D.7: The Risk Finance Guidelines require a minimum participation of private investors. Are the forms of risk finance measures sufficiently attractive for investors?



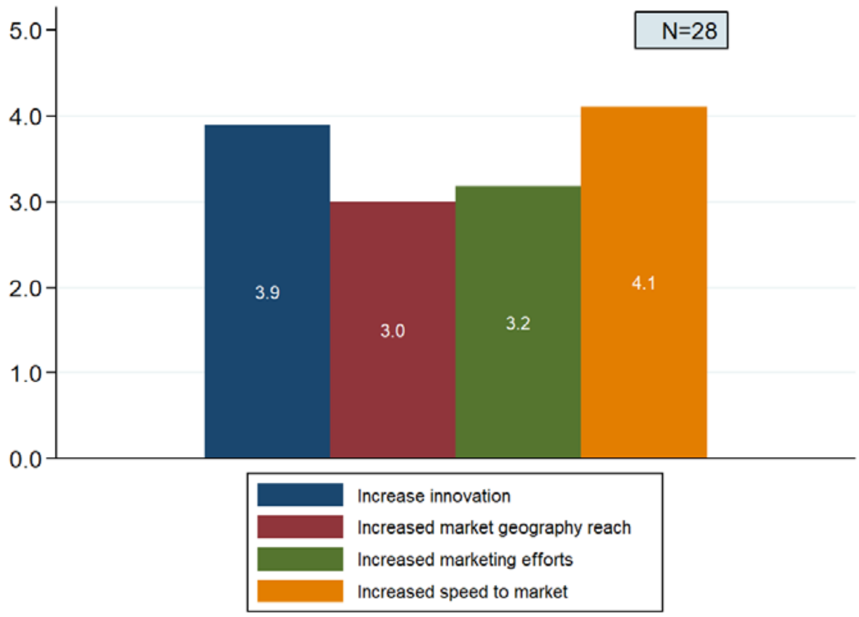
Source: Study Team based on Stakeholder Interviews. ID: F_C3a

Figure D.8: In your experience, has access to risk finance under the GBER/Risk Finance Guidelines become easier after 2014?



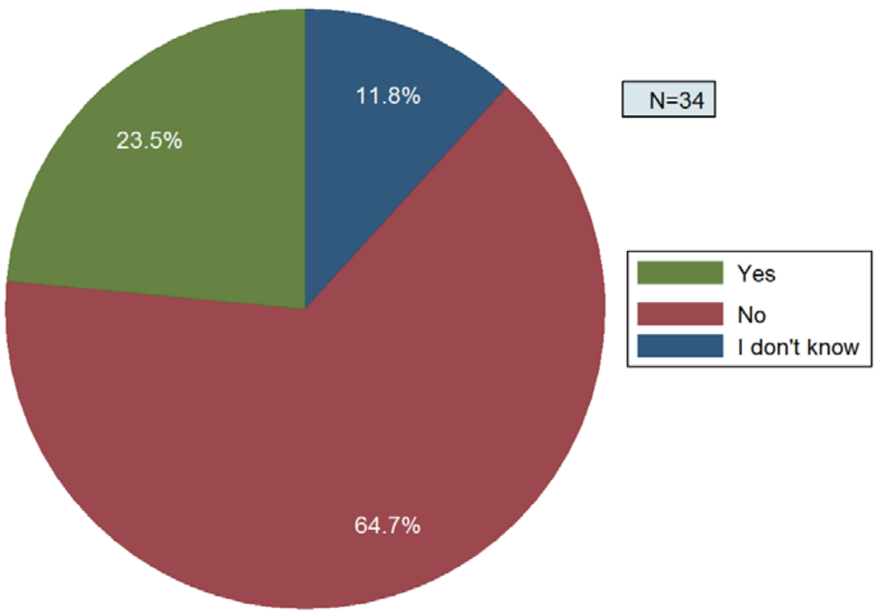
Source: Study Team based on Stakeholder Interviews. ID: F_A1c_B_A1c

Figure D.9: How did the funds help you develop your product and bring it to the market with regard to the following factors? *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*



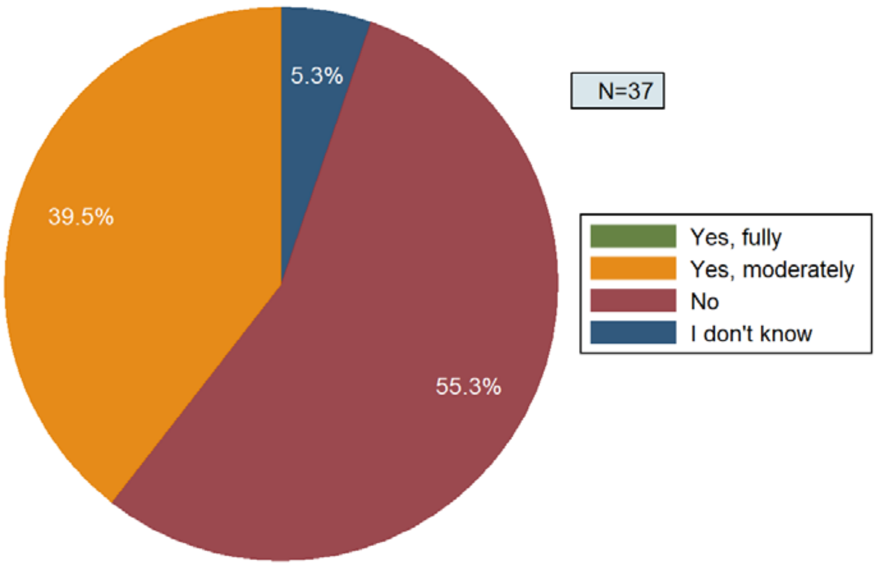
Source: Study Team based on Stakeholder Interviews. ID: B_D1c

Figure D.10: Were you able to gain any competitive advantage over your competitors as a result of your participation in the aid scheme?



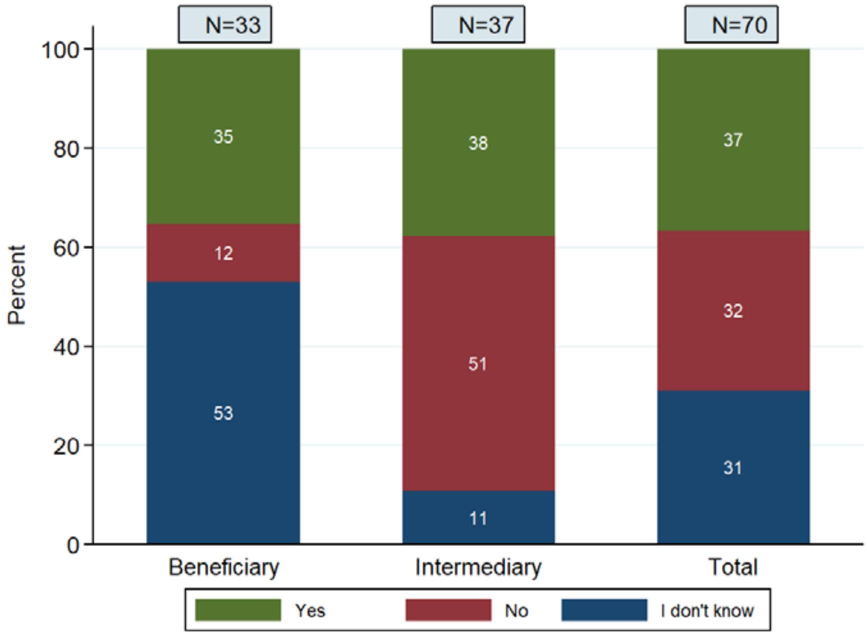
Source: Study Team based on Stakeholder Interviews. ID: F_D2a

Figure D.11: In your view, are beneficiaries aware of the GBER and the Risk Finance Guidelines?



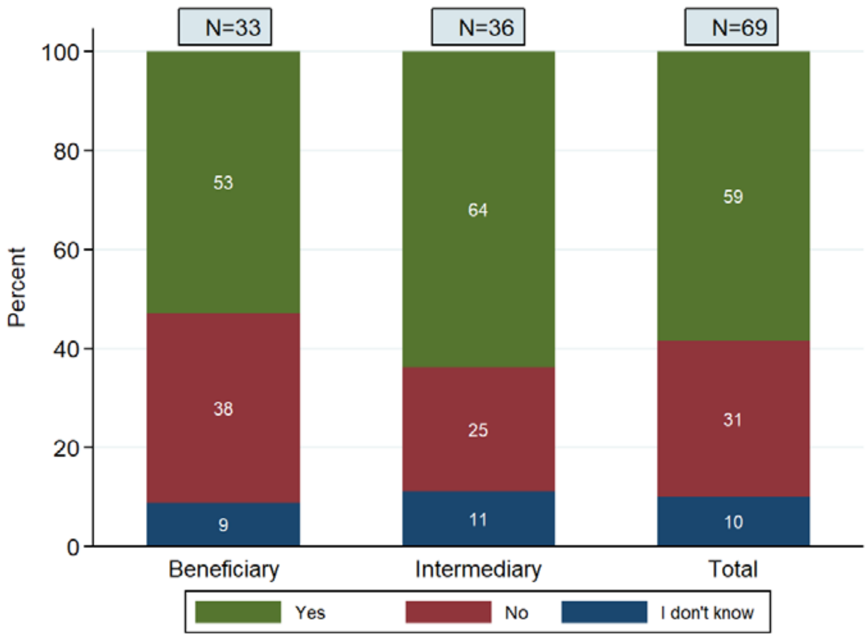
Source: Study Team based on Stakeholder Interviews. ID: F_Eb

Figure D.12: Are the GBER rules and the Risk Finance Guidelines sufficiently clear and transparent?



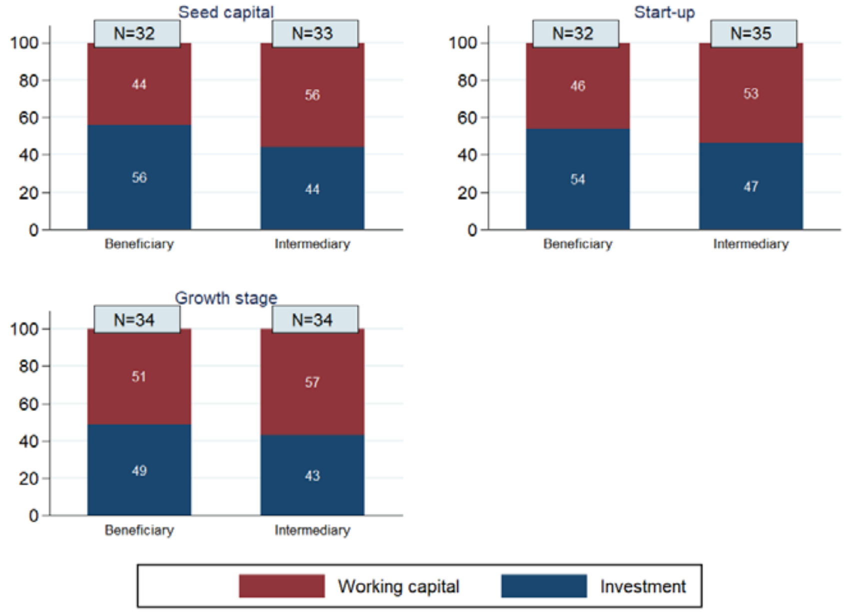
Source: Study Team based on Stakeholder Interviews. ID: F_Ec_B_Eb

Figure D.13: In your experience, is it an excessive administrative burden to apply and comply with for finance measures?



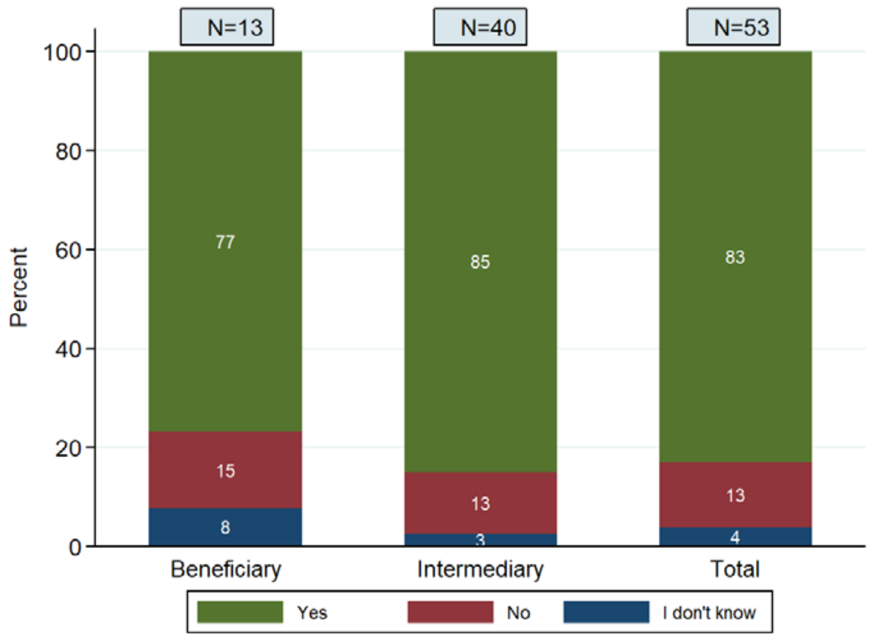
Source: Study Team based on Stakeholder Interviews. ID: F_Ee_B_Ed

Figure D.14: In your experience, what are SMEs' financing needs in their seed, start-up, early expansion and growth stages: is financing sought mainly for investment purposes or working capital or both?



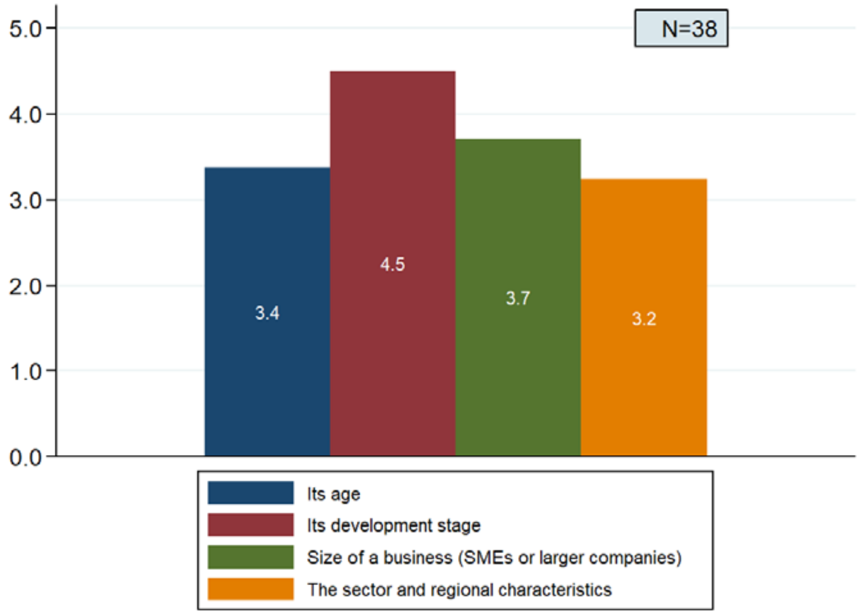
Source: Study Team based on Stakeholder Interviews. ID: F_A1a_B_A1a

Figure D.15: In your experience, is there a (equity /debt) financing gap that might constrain the supply of external (equity/debt) financing for businesses that have valuable business models and fulfil all standard investment criteria?



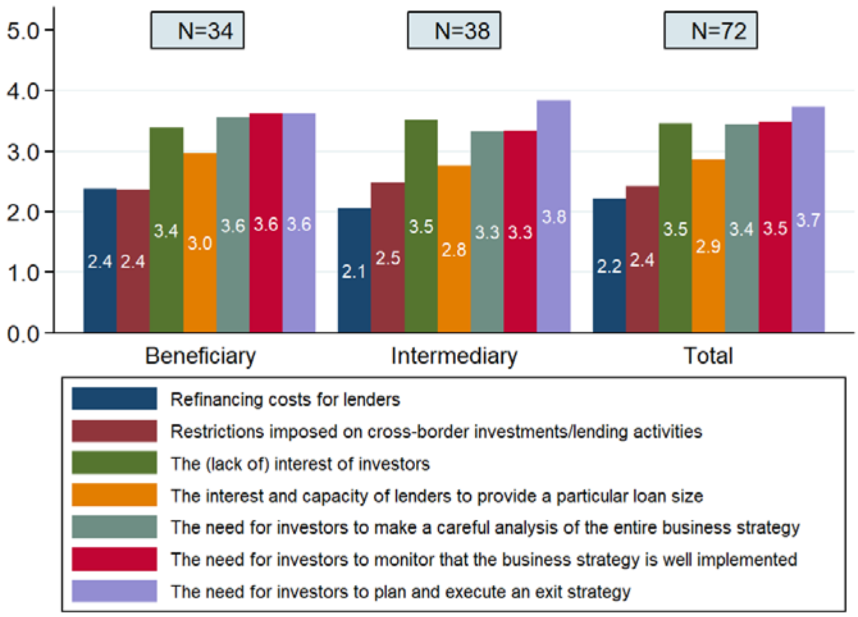
Source: Study Team based on Stakeholder Interviews. ID: F_A2a_B_A2b

Figure D.16: In your experience, how does the equity/debt gap depend on the following factors. ***Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)***



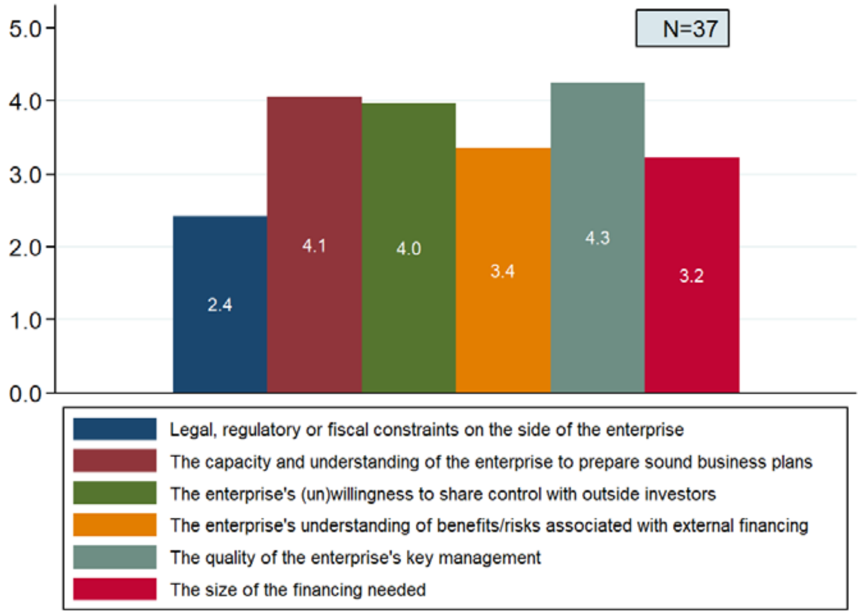
Source: Study Team based on Stakeholder Interviews. ID: F_A2c

Figure D.17: Please consider the following challenges faced by investors willing to provide equity/debt financing to SMEs in early development and growth stages. ***Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)***



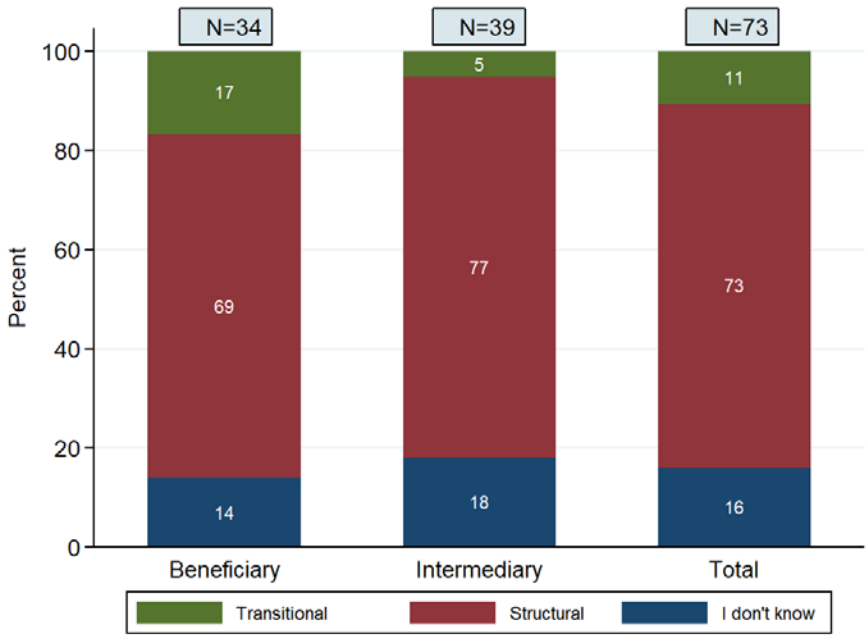
Source: Study Team based on Stakeholder Interviews. ID: F_A3.2a_B_A3a

Figure D.18: In your experience, to what extent can the financing gap be attributed to demand-side problems? In your answer please consider the following challenges faced by enterprises looking for equity/debt financing. *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*



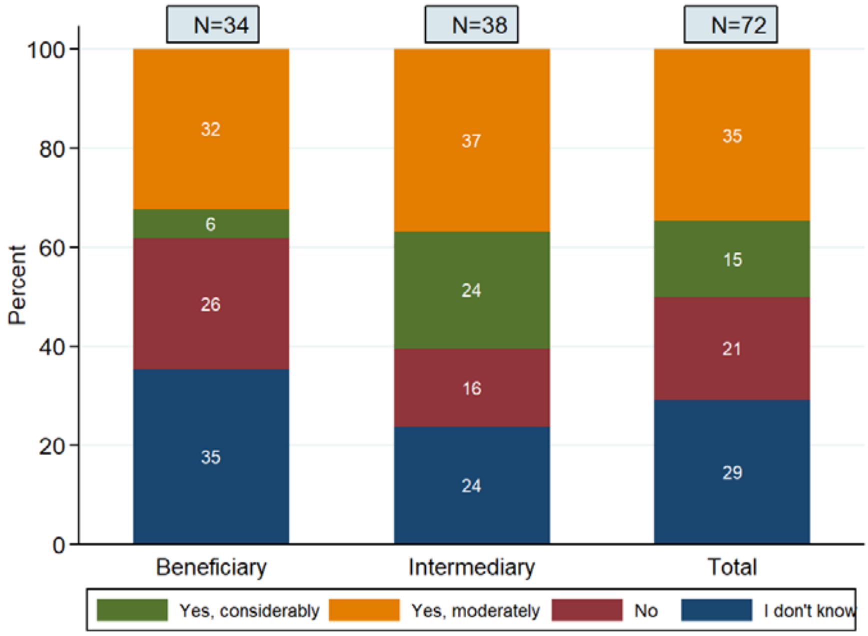
Source: Study Team based on Stakeholder Interviews. ID: F_A3.1a

Figure D.19: In your experience, do the supply-side constraints reflect structural or rather transitional factors (due to the financial crisis)?



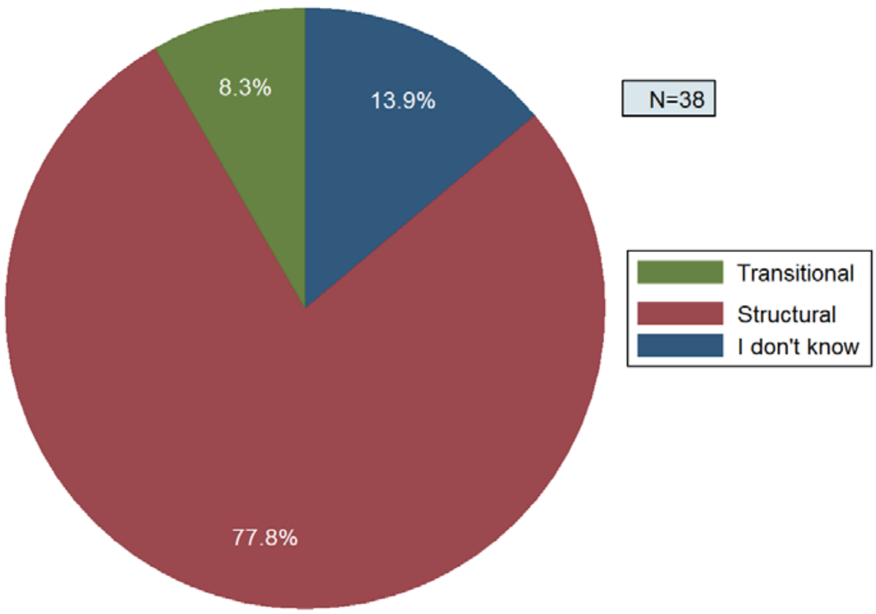
Source: Study Team based on Stakeholder Interviews. ID: F_A3.2b_B_A3b

Figure D.20: To what extent have the supply-side constraints improved since 2014?



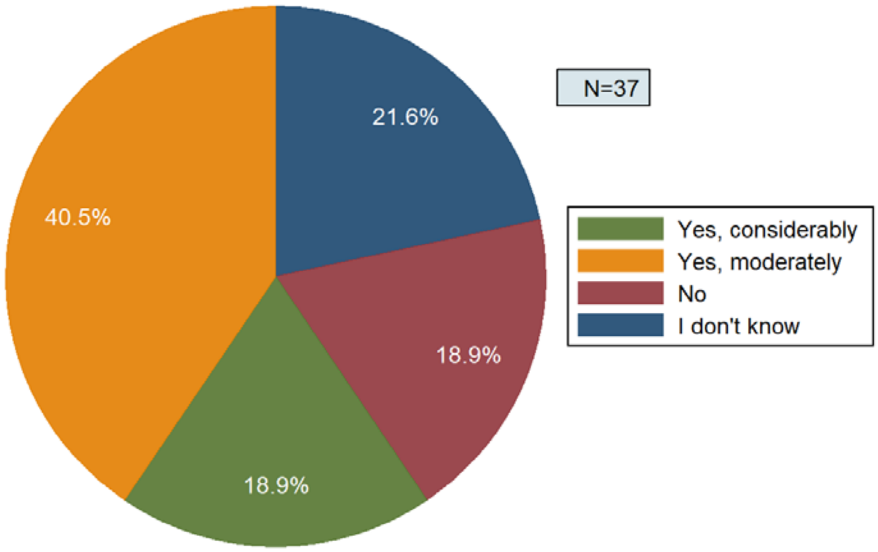
Source: Study Team based on Stakeholder Interviews. ID: F_A3.2c_B_A3c

Figure D.21: In your experience, do the demand-side constraints reflect structural or rather transitional factors (due to the financial crisis)?



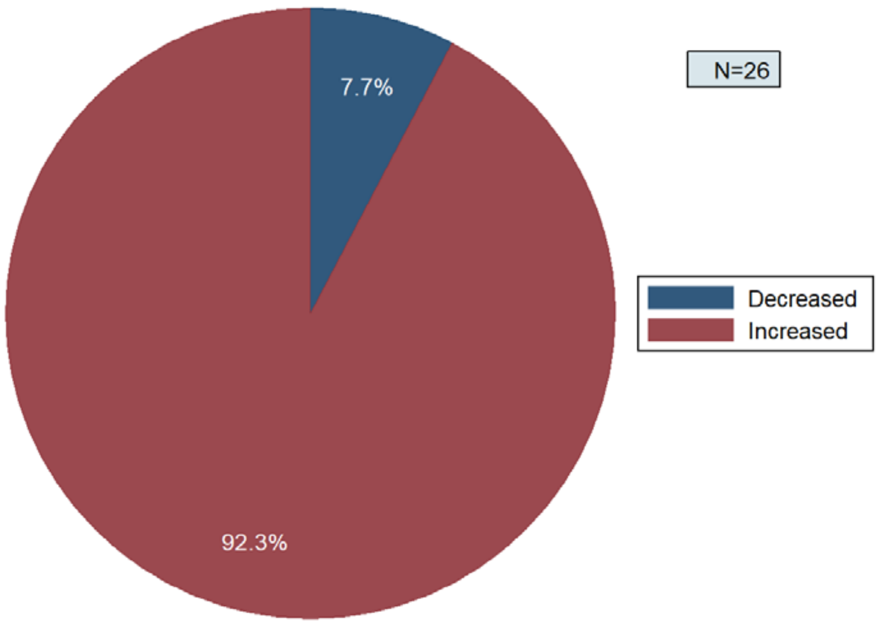
Source: Study Team based on Stakeholder Interviews. ID: F_A3.1b

Figure D.22: To what extent have the demand-side constraints improved since 2014?



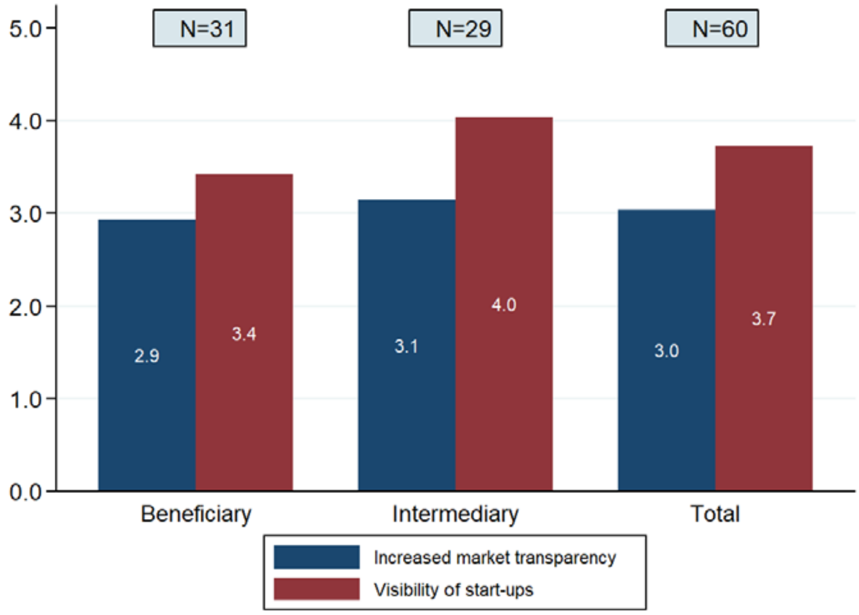
Source: Study Team based on Stakeholder Interviews. ID: F_A3.1c

Figure D.23: In your experience, has the number of SME alternative trading platforms and the number or SMEs listed on these platforms increased or decreased since 2014?



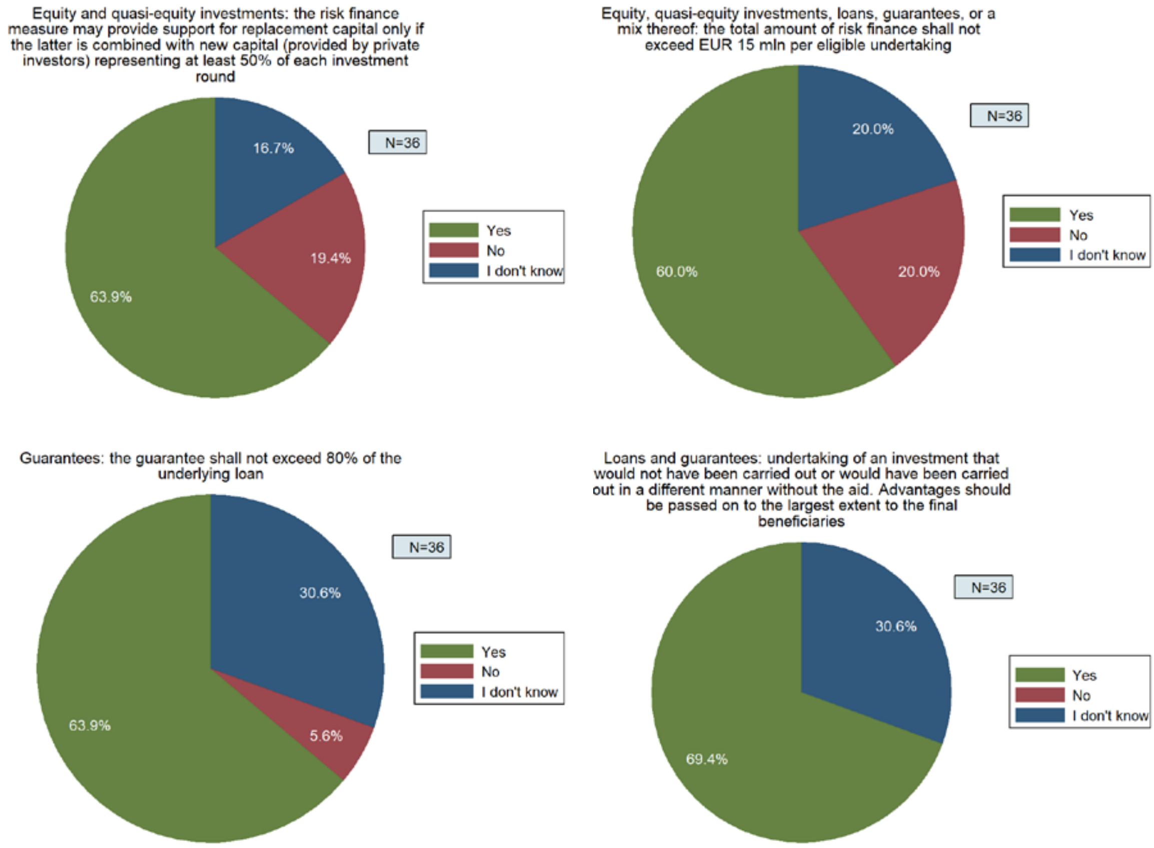
Source: Study Team based on Stakeholder Interviews. ID: F_A5b

Figure D.24: In your experience, do alternative trading platforms have other positive impacts?



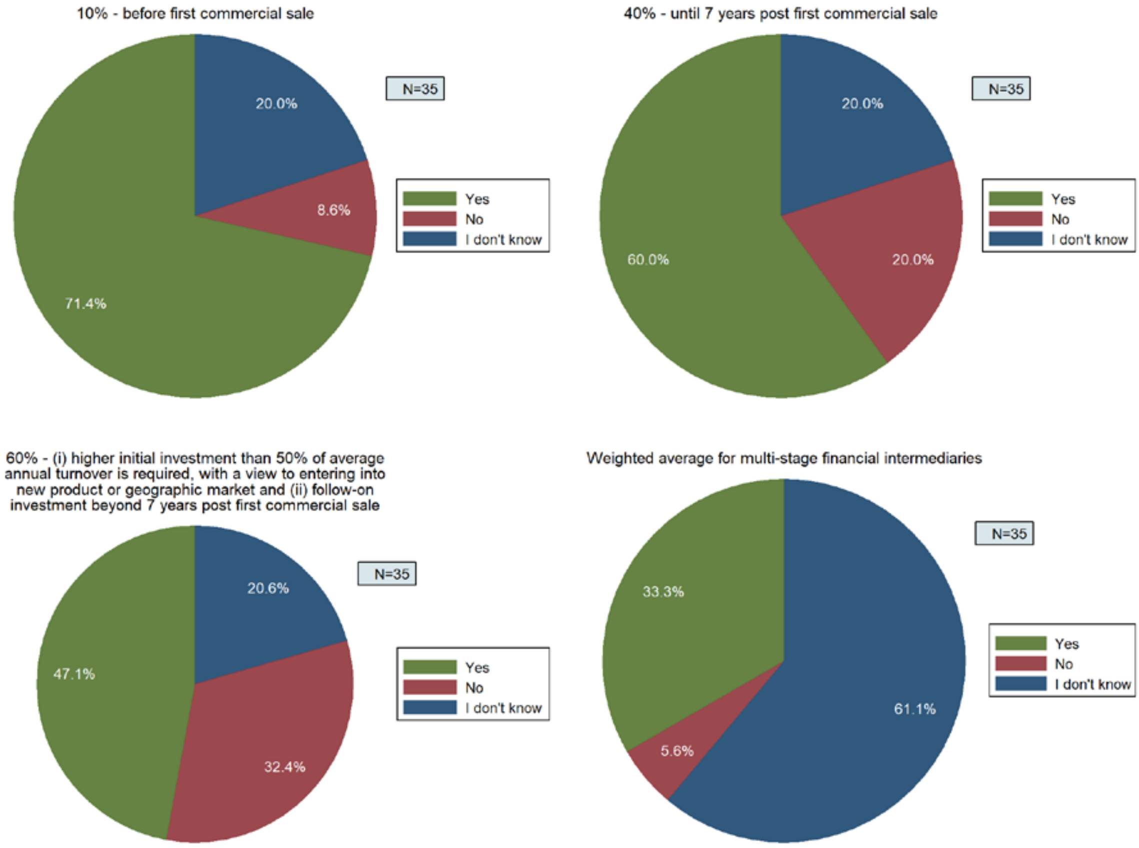
Source: Study Team based on Stakeholder Interviews. ID: F_A5c_B_A4c

Figure D.25: In your experience, are the following quantitative restrictions justified to address a finance gap?



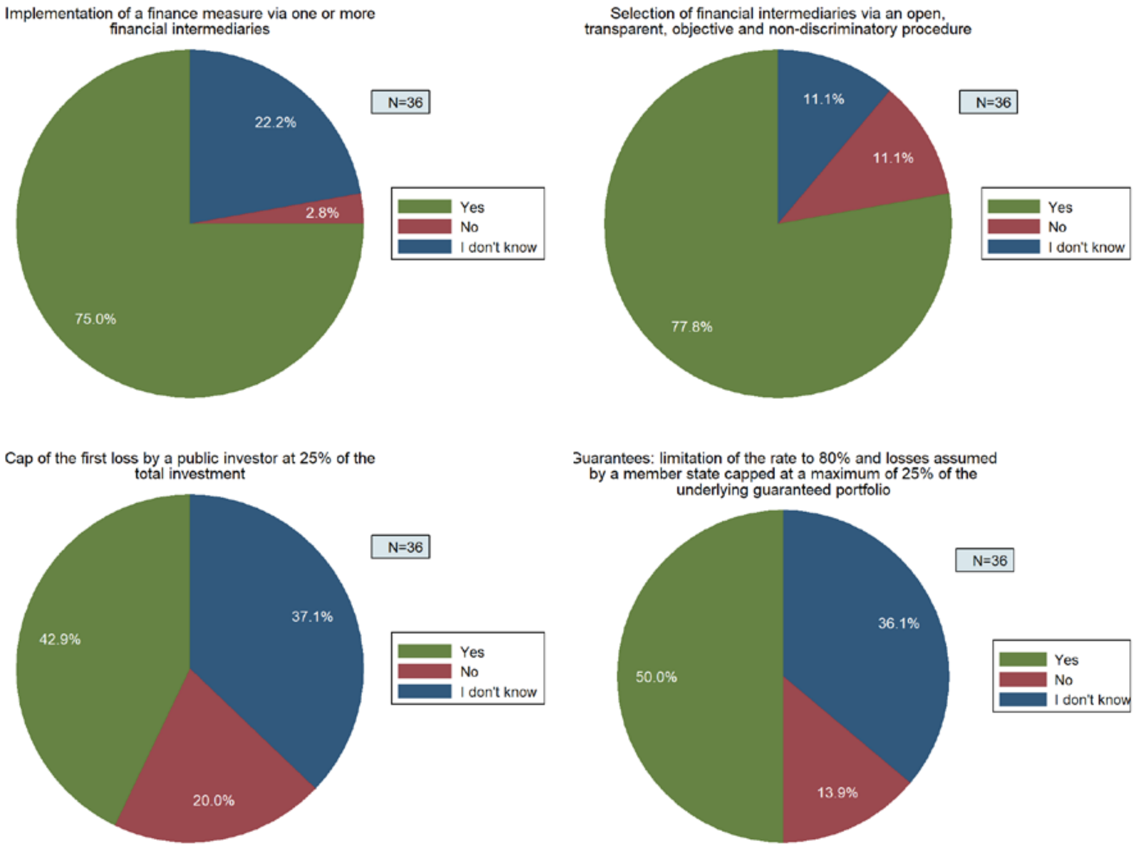
Source: Study Team based on Stakeholder Interviews. ID: F_B2a

Figure D.26: In your experience, are the following minimum private participation rates for investments necessary and do they reflect the risk of the development stages of the beneficiaries?



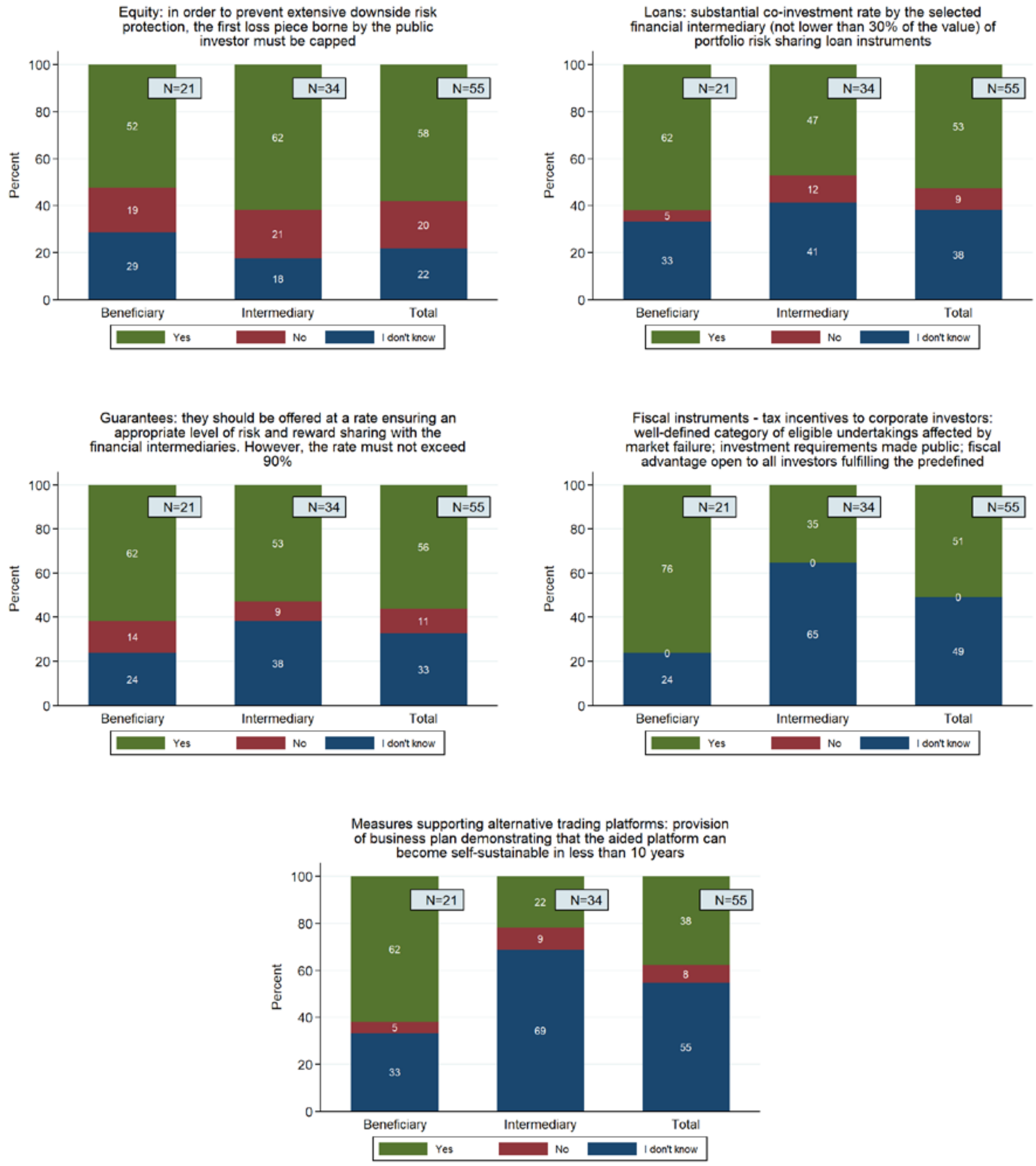
Source: Study Team based on Stakeholder Interviews. ID: F_B3d

Figure D.27: In your experience, are the following conditions necessary with regard to a risk finance measure under the current market situation?



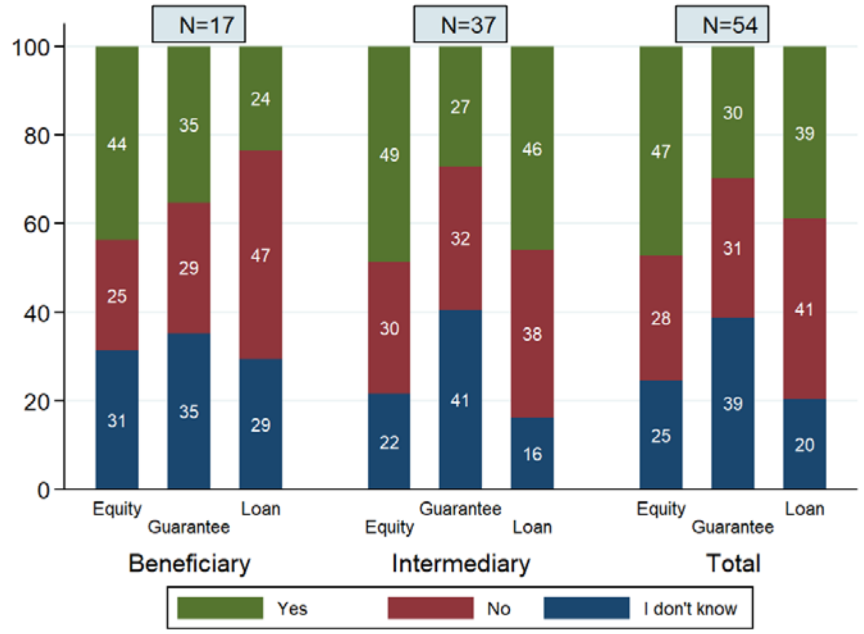
Source: Study Team based on Stakeholder Interviews. ID: F_B4a

Figure D.28: In your experience, are the following conditions for the financial instruments still justified under the current market situation?



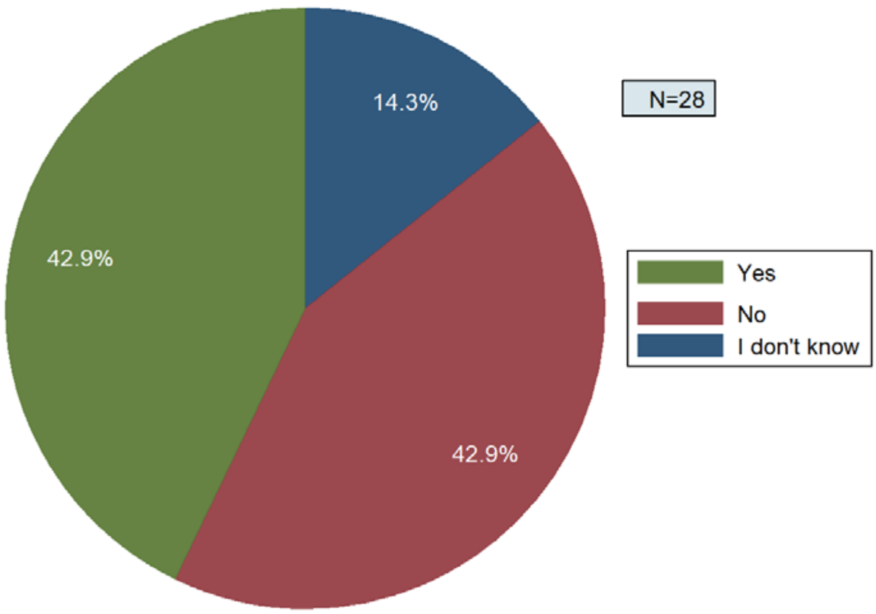
Source: Study Team based on Stakeholder Interviews. ID: F_C2a_B_C2a

Figure D.29: In your experience, was the finance measure (equity, loan, guarantee) sufficient to address the financing gap?



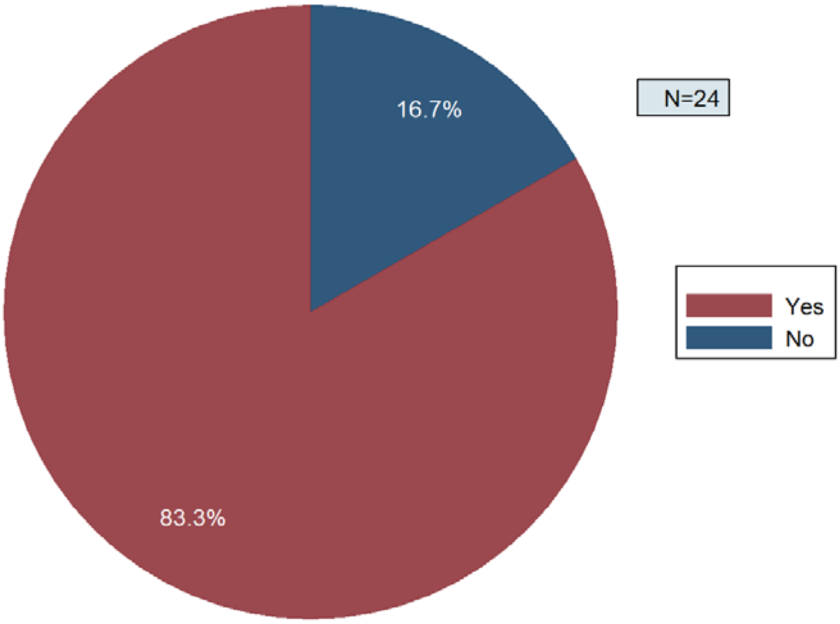
Source: Study Team based on Stakeholder Interviews. ID: F_A2d_B_A2a2

Figure D.30: Due to the finance measures, did you get access to bigger scale funds?



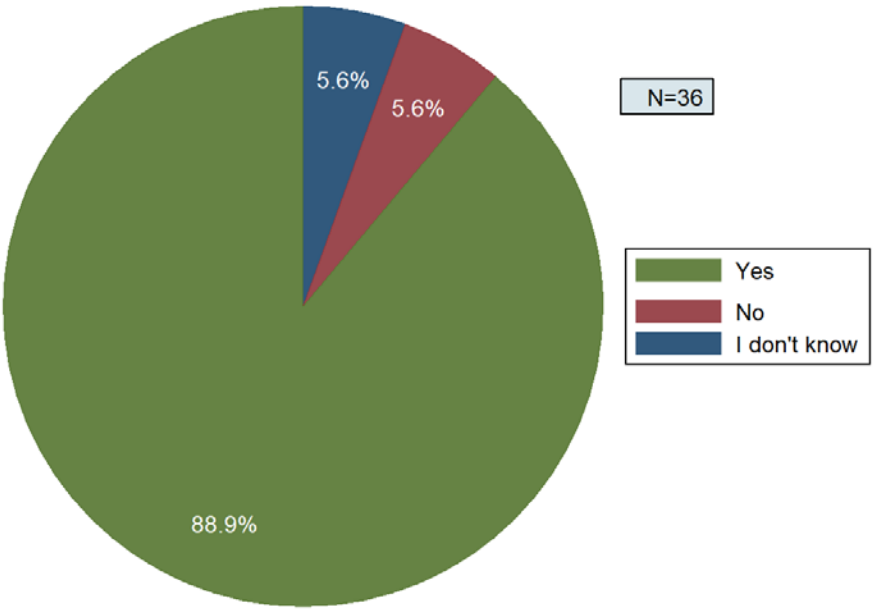
Source: Study Team based on Stakeholder Interviews. ID: B_D1b

Figure D.31: In your experience, have you been successful in attracting private capital in addition to the aid instruments?



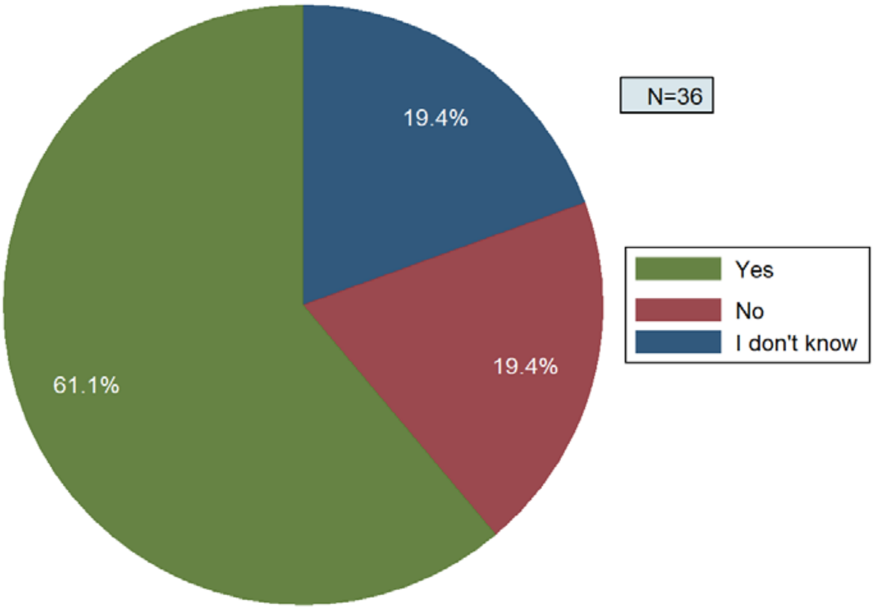
Source: Study Team based on Stakeholder Interviews. ID: B_D1a1

Figure D.32: In your experience, have commercial financial providers in the SME finance market continued to invest alongside the measures implemented?



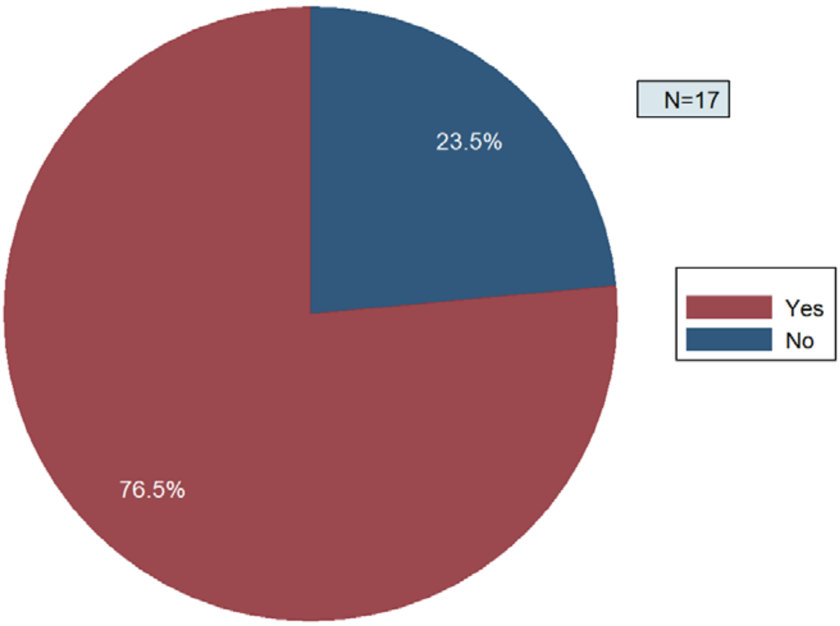
Source: Study Team based on Stakeholder Interviews. ID: F_D1d

Figure D.33: Have the GBER/Risk Finance Guidelines contributed to the development of the SME lending market through banking and non-banking lenders?



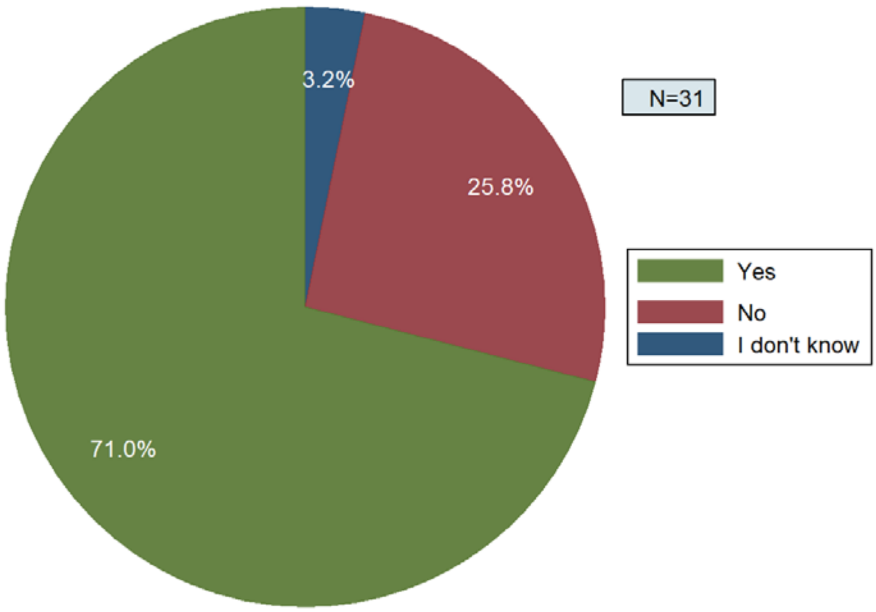
Source: Study Team based on Stakeholder Interviews. ID: F_D1c

Figure D.34: In your experience, have the GBER/Risk Finance Guidelines contributed to the development of a product and its establishment on the market?



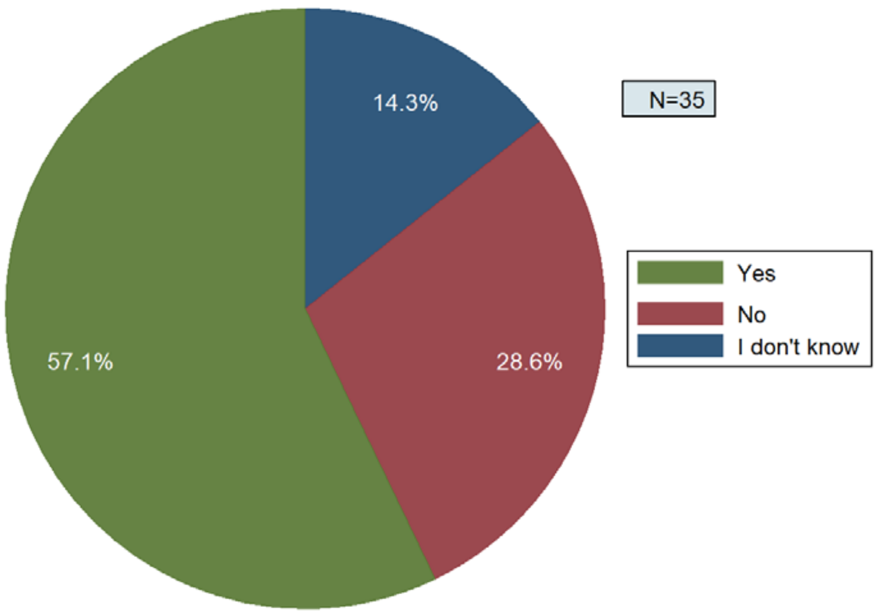
Source: Study Team based on Stakeholder Interviews. ID: F_D1a

Figure D.35: In your view, did you gain any competitive advantage as a result of your improved access to finance?



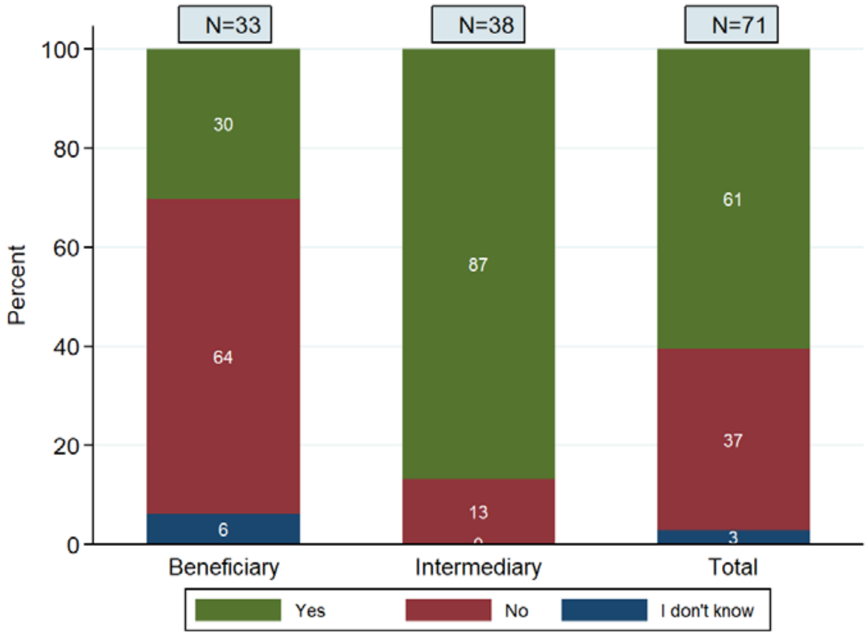
Source: Study Team based on Stakeholder Interviews. ID: B_D2a

Figure D.36: In your view, due to access to risk finance has there been any advantages for beneficiaries over their competitors?



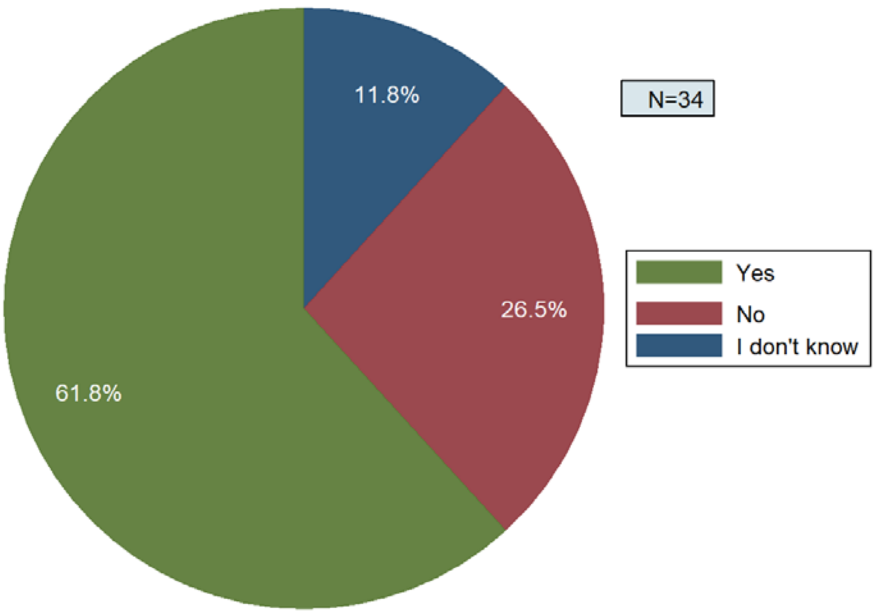
Source: Study Team based on Stakeholder Interviews. ID: F_D2b

Figure D.37: Are you generally aware of the GBER rules and the Risk Finance Guidelines?



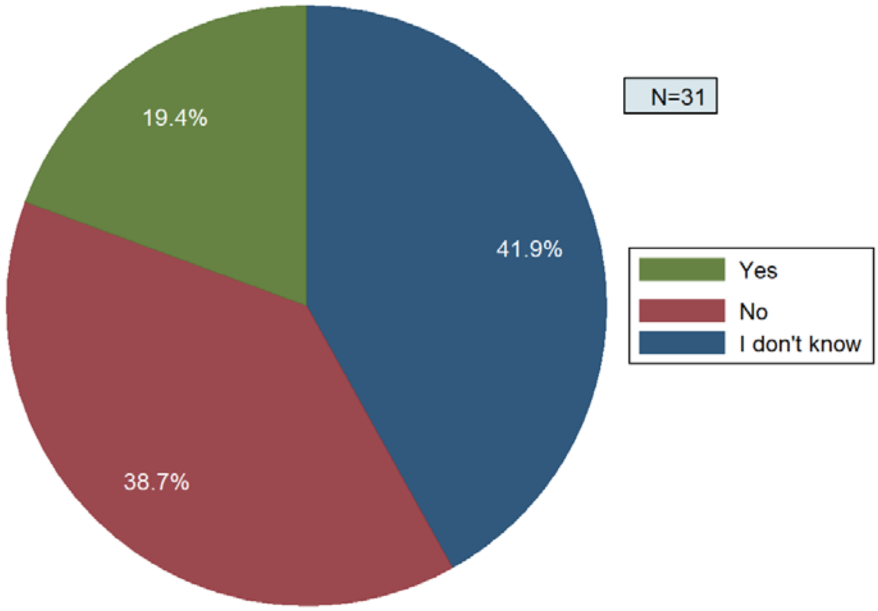
Source: Study Team based on Stakeholder Interviews. ID: F_Ea_B_Ea

Figure D.38: In your experience, have you been mainly provided with sufficiently elaborated viable business plans by beneficiaries in order to ensure a profit-driven financing decision?



Source: Study Team based on Stakeholder Interviews. ID: F_B5a

Figure D.39: Would your exit strategy have looked differently without a risk finance measure?



Source: Study Team based on Stakeholder Interviews. ID: F_B5c

Annex E. Interview guidelines: Financial intermediaries

Questionnaire for a survey on access to finance of EU SMEs

for Financial Intermediaries, Investors, and Associations

The purpose of this questionnaire is to invite financial intermediaries, investors and SMEs associations to a telephone interview in order to provide comments on the application of the guidelines on State aid to promote risk finance investments (Risk Finance Guidelines) and on SME access to finance regarding the general block exemption regulation (GBER).

A. General questions

A.1. SME financing needs

a. In your experience, what are SMEs' financing needs in their seed, start-up, early expansion and growth stages: is financing sought mainly for investment purposes or working capital or both?

- Seed capital: ☐ % investment: ☐ % working capital
- Start up: ☐ % investment: ☐ % working capital
- Growth stage: ☐ % investment: ☐ % working capital

b. In your experience, to what extent do SMEs in their early development and growth stages need external financing and what types of financial instruments would fit better their needs:

- equity financing
- debt financing or
- a mixture of equity and debt financing
- guarantees
- tax incentives

c. In your experience, has access to risk finance under the GBER/Risk Finance Guidelines become easier after 2014?

Yes, considerably ☐ Yes, moderately ☐ No ☐ I do not know ☐

Please explain

A.2. SME financing gap

a. In your experience, is there a (equity/debt) financing gap that might constrain the supply of external (equity/debt) financing for businesses that have valuable business models and fulfil all standard investment criteria?

Yes ☐ No ☐ I do not know ☐
Please explain

b. What is, in your experience, the size of the (equity/debt) financing gap (relative to the total assets size of the company)?

c. In your experience, how does the equity/debt gap depend on the following factors: *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*

- size of a business (SMEs or larger companies)
- its development stage (seed, start-up, early expansion or growth stage)
- its "age" (for example, number of years since the start-up, the first commercialisation of a product or service)
- the sector and regional characteristics
- other (please specify)?

d. In your experience, was the finance measure (equity, loan, guarantee) granted to the beneficiary sufficient to address the financing gap?

- Equity: Yes ☐ No ☐ I do not know ☐
- Loan: Yes ☐ No ☐ I do not know ☐
- Guarantee: Yes ☐ No ☐ I do not know ☐

If no, please describe the insufficiencies.

A.3. Underlying reasons for the SME financing gap

A.3.1. Demand-side constraints

a. In your experience, to what extent can the financing gap be attributed to demand-side problems? In your answer please consider the following challenges faced by enterprises looking for equity/debt financing: *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*

- The enterprise's understanding of the benefits and risks associated with external financing

- The capacity and understanding of the enterprise to prepare sound business plans, including the enterprise's ability to present itself as an investment opportunity to investors
- The quality of the enterprise's key management
- The enterprise's (un)willingness to share control with outside investors who usually have an influence over company decisions in addition to providing funding
- The size of the financing needed
- Legal, regulatory or fiscal constraints on the side of the enterprise
- Any other challenges? Please specify.

b. In your experience, do these demand-side constraints reflect structural or rather transitional factors (due to the financial crisis)?

Yes ☐ No ☐ I do not know ☐

Please explain

c. To what extent have these factors improved since 2014?

Yes, considerably ☐ Yes, moderately ☐ No ☐ I do not know ☐

Please explain

A.3.2 Supply-side constraints

a. In your experience, to what extent can the financing gap be attributed to supply-side problems? In your answer please consider the following challenges faced by investors willing to provide equity/debt financing to SMEs in early development and growth stages: *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*

- The (un)attractiveness of investments in risk capital compared to other asset classes
- The (lack of) interest of investors to invest in a particular investment size or participation ratio
- Restrictions imposed on cross-border investments/lending activities
- The need for investors to make a careful analysis of the entire business strategy in order to estimate the possibilities of making a profit on the investment and the risks associated with it
- The need for investors to be able to monitor that the business strategy is well implemented by the enterprise's managers

- The need for investors to plan and execute an exit strategy, in order to generate a risk-adjusted return on investment from selling its equity stake in the company in which the investment is made

- The interest and capacity of lenders to provide a particular loan size

- Refinancing costs for lenders

- Other. Please specify

b. In your experience, do these supply-side constraints reflect structural or rather transitional factors (due to the financial crisis)?

Yes ☐ No ☐ I do not know ☐

Please explain

c. To what extent have these factors improved since 2014?

Yes, considerably ☐ Yes, moderately ☐ No ☐ I do not know ☐

Please explain

A.4. European venture capital

a. In your experience, what has the performance of the European VC industry been, since 2014, in terms of: *Please give a rate to each factor from 1 (no performance) to 5 (extremely good performance)*
   - profitability compared to other asset classes,
   - the minimum/average value of deals and
   - the type of capital investment (early stage, expansion or growth capital)?

b. To what extent have these factors improved since 2014?

Yes, considerably ☐ Yes, moderately ☐ No ☐ I do not know ☐

Please explain

A.5. Alternative Trading platforms

a. In your experience, do you consider alternative trading platforms as an important tool in providing capital to SMEs? *Please give a rate of the importance from 1 (not important) to 5 (extremely important)*

b. In your experience, has the number of SME alternative trading platforms and the number or SMEs listed on these platforms increased or decreased since 2014?

c. In your experience, do such alternative trading platforms have other positive impacts, *e.g.*: *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*

- increased market transparency
- visibility of start-ups
- any other positive impacts? Please specify

B. Experience with GBER

B.1. Scope of GBER

a. In your experience, are the limitations in the GBER to the following types of companies justified and do you see any need to include additional types of companies in the GBER with regard to the need to access to risk finance:

- SMEs which have not been operating in any market
- SMEs which have been operating in any market for less than 7 years following their first commercial sale
- SMEs requiring higher initial investment than 50% of average annual turnover, with a view to entering into new product or geographic market

Yes ☐ No ☐ I do not know ☐
Please explain (*e.g.* what other criteria might better identify companies mostly affected by the need to access to finance)

b. In your experience, are the criteria as set out under B.1.a. well defined?

Yes ☐ No ☐ I do not know ☐
If no, please explain what criteria is not clear?

B.2. Quantitative restrictions

a. In your experience, are the following quantitative restrictions justified to address a finance gap:

- Equity and quasi-equity investments: The risk finance measure may provide support for replacement capital only if the latter is combined with new capital (provided by private investors) representing at least 50% of each investment round.

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Equity, quasi-equity investments, loans, guarantees, or a mix thereof: The total amount of risk finance shall not exceed EUR 15 million per eligible undertaking.

Yes ☐ No ☐ I do not know ☐
Please explain

- Loans and guarantees: Undertaking of an investment that would not have been carried out or would have been carried out in a different manner without the aid. Advantages should be passed on to the largest extent to the final beneficiaries.

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Guarantees: The guarantee shall not exceed 80% of the underlying loan.

  Yes ☐ No ☐ I do not know ☐
  Please explain

B.3. Private investors

a. The GBER requires a minimum participation of private investors. Are the forms of risk finance measures sufficiently attractive for investors:

- Equity or quasi-equity investment

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Loans

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Guarantees

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Tax incentives to natural persons

  Yes ☐ No ☐ I do not know ☐
  Please explain

c. Has the requirements been sufficiently clear with regard to the nature of investors operating under the market economy investor principle?

Yes ☐ No ☐ I do not know ☐
Please explain

d. In your experience, are the minimum private participation rates for investments necessary and do they reflect the risk of the development stages of the beneficiaries:

- 10% - before first commercial sale

  Yes ☐ No ☐ I do not know ☐
  Please explain

- 40% - until 7 years post first commercial sale

  Yes ☐ No ☐ I do not know ☐
  Please explain

- 60% - (i) higher initial investment than 50% of average annual turnover is required, with a view to entering into new product or geographic market and (ii) follow-on investment beyond 7 years post first commercial sale

  Yes ☐ No ☐ I do not know ☐
  Please explain

- weighted average for multi-stage financial intermediaries

  Yes ☐ No ☐ I do not know ☐
  Please explain

B.4. Conditions for risk finance measures

a. In your experience, are the following conditions necessary with regard to a risk finance measure under the current market situation:

- Implementation of a finance measure via one or more financial intermediaries

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Selection of financial intermediaries via an open, transparent, objective and non-discriminatory procedure

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Cap of the first loss by a public investor at 25% of the total investment (in case of asymmetric loss-sharing between public and private investors)

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Guarantees: Limitation of the guarantee rate to 80% and total losses assumed by a Member State capped at a maximum of 25% of the underlying guaranteed portfolio

Yes ☐ No ☐ I do not know ☐
Please explain

B.5. Profit-driven financing decisions

a. In your experience, have you been mainly provided with sufficiently elaborated viable business plans by beneficiaries in order to ensure a profit-driven financing decision?

   Yes ☐ No ☐ I do not know ☐
   Please explain

b. What has been your experience with the design of a clear and realistic exit strategy for equity and quasi-equity investment?

   - Please rate the difficulty of conceiving an exit strategy at the time of the financing decision from 1 (not difficult at all) to 5 (extremely difficult).

   - Please give an estimate of the times the exit strategy devised at the time of the financing decision has proven helpful in reality.

c. Would your exit strategy have looked differently without a risk finance measure?

   Yes ☐ No ☐ I do not know ☐
   Please explain

C. Experience with Risk Finance Guidelines

C.1. Scope of Risk Finance Guidelines

a. In your experience, do the limitations in the Risk Finance Guidelines to the following types of companies reflect the type of companies affected by the need to access to finance:

   - Small mid-caps (*i.e.* number of employees does not exceed 499 and the annual turnover does not exceed EUR 100 million or the annual balance sheet does not exceed EUR 86 million)

     Yes ☐ No ☐ I do not know ☐
     Please explain

   - Innovative mid-caps carrying out R&D and innovation activities (*i.e.* undertakings with represent (a) at least 15% of its total operating costs in at least one of the three years preceding the first investment under the risk finance State aid measure, or (b) at least 10 % per year of its total operating costs in the 3 years preceding the first investment under the risk finance State aid measure)

     Yes ☐ No ☐ I do not know ☐

Please explain

- Undertakings receiving the initial risk finance investment more than 7 years after their first commercial sale

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Undertakings requiring an overall risk finance investment of an amount exceeding EUR 15 million per eligible undertaking

  Yes ☐ No ☐ I do not know ☐

  Please explain

- Alternative trading platforms not fulfilling the conditions of the GBER

  Yes ☐ No ☐ I do not know ☐

  Please explain

b. In your experience, are the criteria as set out under C.1.a. well defined?

   Yes ☐ No ☐ I do not know ☐
   If no, please explain what criteria is not clear.?

C.2. Conditions for risk finance measures

a. In your experience, are the conditions for the financial instruments still justified under the current market situation, *e.g.*:

- Equity: In order to prevent extensive downside risk protection, the first loss piece borne by the public investor must be capped.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

- Loans: Substantial co-investment rate by the selected financial intermediary (not lower than 30% of the value) of portfolio risk sharing loan instruments.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

- Guarantees: Guarantees should be offered at a rate ensuring an appropriate level of risk and reward sharing with the financial intermediaries. However, the guarantee rate must not exceed 90%.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

- Fiscal instruments - tax incentives to corporate investors:

  - Well-defined category of eligible undertakings affected by market failure
  - Investment requirements made public
  - Fiscal advantage open to all investors fulfilling the predefined criteria
  - Specific limits defining the maximum advantages
  - Scheme limited to 10 years

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

- Measures supporting alternative trading platforms: Provision of business plan demonstrating that the aided platform can become self-sustainable in less than 10 years.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

C.3. Private investors

a. The Risk Finance Guidelines require a minimum participation of private investors. Are the forms of risk finance measures sufficiently attractive for investors (see above question B.3.)?

   Yes ☐ No ☐ I do not know ☐
   Please explain

D. Impact of finance measure

D.1. Impact on (additional) financing

a. [*For equity investors only*] In your experience, have the GBER/Risk Finance Guidelines contributed to the development of a product and its establishment on the market?

b. With what probability would you have undertaken the investment also without a finance measure?

c. Have the GBER/Risk Finance Guidelines contributed to the development of the SME lending market through banking and non-banking lenders?

   Yes ☐ No ☐ I do not know ☐
   Please explain

d. In your experience, have commercial financial providers in the SME finance market continued to invest alongside the measures implemented?

   Yes ☐ No ☐ I do not know ☐
   Please explain

e. To what extent have commercial finance providers increased their overall provision of finance to SMEs as a consequence of the measures implemented? (*i.e.* there have been any substitution effect)

D.2. Negative impact

a. Were you able to gain any competitive advantage over your competitors as a result of your participation in the aid scheme?

Yes ☐ No ☐ I do not know ☐
If yes, please explain what kind of advantage

b. In your view, due to access to risk finance has there been any advantages for beneficiaries over their competitors?

Yes ☐ No ☐ I do not know ☐
Please explain

E. Application of rules

a. Are you generally aware of the GBER and the Risk Finance Guidelines?

Yes ☐ No ☐ I do not know ☐
Please explain

b. In your view, are beneficiaries aware of the GBER and the Risk Finance Guidelines?

Yes, fully aware ☐ Yes, moderate ☐ No ☐ I do not know ☐

Please explain

c. Are the GBER and the Risk Finance Guidelines sufficiently clear and transparent?

Yes ☐ No ☐ I do not know ☐
Please explain

d. If not, what suggestions do you have to improve clarity?

e. In your experience, is it an excessive administrative burden to apply and comply with for finance measures?

Yes ☐ No ☐ I do not know ☐
If yes, what are those administrative burdens?

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Annex F. Interview guidelines: Beneficiaries

Questionnaire for a survey on access to finance of EU SMEs

for Beneficiaries and Associations

The purpose of this questionnaire is to invite beneficiaries and SMEs associations to a telephone interview in order to provide comments on the application of the guidelines on State aid to promote risk finance investments (Risk Finance Guidelines) and on SME access to finance regarding the general block exemption regulation (GBER).

A. General questions

A.1. SME financing needs

a. In your experience, what are SMEs' financing needs in their seed, start-up, early expansion and growth stages: is financing sought mainly for investment purposes or working capital or both?

- Seed capital: ☐ % investment: ☐ % working capital
- Start up: ☐ % investment: ☐ % working capital
- Growth stage: ☐ % investment: ☐ % working capital

b. In your experience, to what extent do SMEs in their early development and growth stages need external financing and what types of financial instruments would fit better their needs:

- equity financing,
- debt financing or
- a mixture of equity and debt financing
- guarantees
- tax incentives

c. In your experience, has access to risk finance under the GBER/Risk Finance Guidelines become easier after 2014?

Yes, considerably ☐ Yes, moderately ☐ No ☐ I do not know ☐

Please explain

A.2. SME financing gap

a. [*For beneficiaries only*] In your experience, was the finance measure (equity, loan, guarantee) sufficient to address the financing gap? In your experience, was the finance measure (equity, loan, guarantee) sufficient to address the financing gap?

[*For associations only*] In your view, are the finance measures (equity, loan, guarantee) granted to the beneficiaries usually sufficient to address their financing gap?

- Equity: Yes ☐ No ☐ I do not know ☐
- Loan: Yes ☐ No ☐ I do not know ☐
- Guarantee: Yes ☐ No ☐ I do not know ☐

If no, please describe the insufficiencies.

b. [*For associations only*] In your experience, is there a (equity/debt) financing gap that might constrain the supply of external (equity/debt) financing for businesses that have valuable business models and fulfil all standard investment criteria?

Yes ☐ No ☐ I do not know ☐

Please explain

c. [For associations only] What is, in your experience, the size of the (equity/debt) financing gap (relative to the total assets size of the company)?

A.3. Underlying reasons for the SME financing gap

a. Please consider the following challenges faced by investors willing to provide equity/debt financing to SMEs in early development and growth stages: *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*

- The (un)attractiveness of investments in risk capital compared to other asset
- The (lack of) interest of investors to invest in a particular investment size or participation ratio
- Restrictions imposed on cross-border investments/lending activities
- The need for investors to make a careful analysis of the entire business strategy in order to estimate the possibilities of making a profit on the investment and the risks associated with it
- The need for investors to be able to monitor that the business strategy is well implemented by the enterprise's managers

- The need for investors to plan and execute an exit strategy, in order to generate a risk-adjusted return on investment from selling its equity stake in the company in which the investment is made

- The interest and capacity of lenders to provide a particular loan size

- Refinancing costs for lenders

- Any other challenges? Please specify.

b. In your experience, do these constraints reflect structural or rather transitional factors (due to the financial crisis)?

   Yes ☐ No ☐ I do not know ☐
   Please explain

c. To what extent have these factors improved since 2014?

   Yes, considerably ☐ Yes, moderately ☐ No ☐ I do not know ☐
   Please explain

A.4. Alternative trading platforms

a. What knowledge do you have of alternative trading platforms available to pursue additional financing? *Please give a rate of your knowledge from 1 (no knowledge) to 5 (extremely good knowledge)*

b. Do you consider such alternative trading platforms as an important tool in providing additional capital to SMEs? *Please give a rate of the importance from 1 (not important) to 5 (extremely important)Please give a rate of the importance from 1 (not important) to 5 (extremely important)*

c. In your experience, do such alternative trading platforms have other positive impacts, *e.g.*: *Please give a rate to each factor from 1 (not relevant at all) to 5 (extremely relevant)*

   - increased market transparency
   - visibility of start-ups
   - any other positive impacts? Please specify

B. Experience with GBER [*For beneficiaries of GBER schemes only (but all associations)*]

B.1. Scope of GBER

a. In your experience, are the limitations in the GBER to the following types of companies justified and do you see any need to include additional types of companies in the GBER with regard to the need to access to risk finance:

- SMEs which have not been operating in any market
- SMEs which have been operating in any market for less than 7 years following their first commercial sale
- SMEs requiring higher initial investment than 50% of average annual turnover, with a view to entering into new product or geographic market

  Yes ☐ No ☐ I do not know ☐

  If not, please explain (*e.g.* what other criteria might better identify companies mostly affected by the need to access to finance)

b. In your experience, are the criteria as set out under B.1.a. well defined?

Yes ☐ No ☐ I do not know ☐
If no, please explain what criteria is not clear.

B.2. Private investors

a. The GBER requires a minimum participation of private investors. In your experience, has it been difficult to attract the private capital in the required amount (*i.e.* is the requirement too strict)?

Yes ☐ No ☐ I do not know ☐
Please explain

b. If yes, please describe the difficulties encountered and explain whether meeting this requirement has proved to be more difficult depending on:

- the development stage of a business

  Yes ☐ No ☐ I do not know ☐
  Please explain

- associated risks:

  Yes ☐ No ☐ I do not know ☐
  Please explain

- other: please explain

c. Has the requirement been sufficiently clear with regard to the nature of investors operating under the market economy investor principle?

Yes ☐ No ☐ I do not know ☐
Please explain.

B.3. Profit-driven financing decisions

a. [*For beneficiaries only*] What has been your experience with the design of a viable business plan in order to ensure a profit-driven financing decision?

b. [*For beneficiaries only*] Would your business plan have looked differently if there had not been any support measures?

Yes ☐ No ☐ I do not know ☐
If yes, please explain.

C. Experience with Risk Finance Guidelines [*For beneficiaries of schemes under Risk Finance Guidelines only (but all associations)*]

C.1. Scope of Risk Finance Guidelines

a. [*For associations only*] In your experience, do the limitations in the Risk Finance Guidelines to the following types of companies reflect the type of companies affected by the need to access to finance:

- Small mid-caps (*i.e.* number of employees does not exceed 499 and the annual turnover does not exceed EUR 100 million or the annual balance sheet does not exceed EUR 86 million)

  Yes ☐ No ☐ I do not know ☐
  Please explain

- Innovative mid-caps carrying out R&D and innovation activities (*i.e.* undertakings with represent (a) at least 15% of its total operating costs in at least one of the three years preceding the first investment under the risk finance State aid measure, or (b) at least 10 % per year of its total operating costs in the 3 years preceding the first investment under the risk finance State aid measure)

  Yes ☐ No ☐ I do not know ☐

  Please explain

- Undertakings receiving the initial risk finance investment more than 7 years after their first commercial sale

Yes ☐ No ☐ I do not know ☐

Please explain

- Undertakings requiring an overall risk finance investment of an amount exceeding EUR 15 million per eligible undertaking

  Yes ☐ No ☐ I do not know ☐

  Please explain

- Alternative trading platforms not fulfilling the conditions of the GBER

  Yes ☐ No ☐ I do not know ☐

  Please explain

b. [*For associations only*] In your experience, are the criteria as set out under C.1.a. sufficiently clear?

   Yes ☐ No ☐ I do not know ☐
   If no, please explain what criteria is not clear.

C.2. Conditions for risk finance measures

a. In your experience, are the following conditions for the financial instruments still justified under the current market situation, *e.g.*:

- Equity: In order to prevent extensive downside risk protection, the first loss piece borne by the public investor must be capped.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

- Loans: Substantial co-investment rate by the selected financial intermediary (not lower than 30% of the value) of portfolio risk sharing loan instruments.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

- Guarantees: Guarantees should be offered at a rate ensuring an appropriate level of risk and reward sharing with the financial intermediaries. However, the guarantee rate must not exceed 90%.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

- Fiscal instruments - tax incentives to corporate investors:

  - Well-defined category of eligible undertakings affected by market failure

- Investment requirements made public
- Fiscal advantage open to all investors fulfilling the predefined criteria
- Specific limits defining the maximum advantages
- Scheme limited to 10 years

Yes ☐ No ☐ I do not know ☐
Please explain the reasons.

- Measures supporting alternative trading platforms: Provision of business plan demonstrating that the aided platform can become self-sustainable in less than 10 years.

  Yes ☐ No ☐ I do not know ☐
  Please explain the reasons.

C.3. Private investors

a. The Risk Finance Guidelines require a minimum participation of private investors. In your experience, has it been difficult to attract the private capital in the required amount (*i.e.* is the requirement too strict)?

   Yes ☐ No ☐ I do not know ☐
   Please explain

b. If yes, please describe the difficulties encountered and explain whether meeting this requirement has proved to be more difficult depending on:

   a. the development stage of a business

      Yes ☐ No ☐ I do not know ☐
      Please explain

   b. associated risks:

      Yes ☐ No ☐ I do not know ☐
      Please explain

   c. other: please explain

c. Has the requirement been sufficiently clear with regard to the nature of investors operating under the market economy investor principle?

   Yes ☐ No ☐ I do not know ☐
   Please explain

D. Impact of finance measures

D.1. Impact on (additional) financing

a. [*For beneficiaries only*] In your experience, have you been successful in attracting private capital in addition to the aid instruments?

   [*For associations only*] In your experience, for additional private capital flows, which aid instrument facilitated such additional capital flows to beneficiaries? *Please give a rate to each factor from 1 (not facilitating) to 5 (extremely facilitating)*

   a. Private capital in addition to equity investments

      Yes ☐ No ☐ I do not know ☐
      Please explain

   b. Private capital in addition to loans

      Yes ☐ No ☐ I do not know ☐
      Please explain

b. [*For beneficiaries only*] Due to finance measures, did you get access to bigger scale funds?

   Yes ☐ No ☐ I do not know ☐
   Please explain

c. How did the funds help you develop your product and bring it to the market with regard to: *Please give a rate to each factor from 1 (not helpful at all) to 5 (extremely helpful)*

   a. increased speed to market
   b. increase innovation
   c. increased market geography reach
   d. increased marketing efforts
   e. other?

d. What would you have done without the funds?

D.2. Negative impact

a. In your view, did you gain any competitive advantage as a result of your improved access to risk finance?

   Yes ☐ No ☐ I do not know ☐
   If yes, please explain what kind of advantage.

E. Application of rules

a. Are you generally aware of the GBER rules and the Risk Finance Guidelines?

Yes ☐ No ☐ I do not know ☐

Please explain

b. Are the GBER rules and the Risk Finance Guidelines sufficiently clear and transparent?

Yes ☐ No ☐ I do not know ☐

Please explain

c. If not, what suggestions do you have to improve awareness or clarity?

d. In your experience, is it an excessive administrative burden to apply and comply with for finance measures?

Yes ☐ No ☐ I do not know ☐

If yes, what are those administrative burdens?

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