





#### WELCOME

Driving change through cooperation: Financial Instruments and opportunity to capacity building through cooperation in developing regions.

Structural change in developing economies and structural renewal in more advanced regions require a combined effort underpinned by financial instruments (FI). In the specific case of developing regions, it is common to find an underdeveloped financial market with limited access and price.

Financial instruments are essential for funding the envisaged transformations and hence a myriad of policies have been structured around FI's. However, it is time to evaluate, understand the gaps and the overlaps and analyse what is necessary to boost the effectiveness of innovation policy delivered through FI.

The goal of Innova FI is to create a cooperative learning platform that aims to contribute to the conceptual architecture of FI, building on the diverse experiences of each partner and improving the design of FI's targeting innovation.

The partnership of 8 developing EU regions - Portugal (ANI), Spain (IVACE), Belgium (SERN), Lithuania (INVEGA), Poland (ARRSA), Slovenia (GODC), Italy (FI) and Greece (KEPA) - was forged with a strong motivation and belief in the added value of cooperation. With the support of Interreg Europe, we are fully committed to sharing, learning and improving together.

Alexandre Almeida, ANI Lead partner of Innova-FI





## PORTUGAL VENTURES - VENTURE CAPITAL MANAGEMENT COMPANY



THE FINANCIAL
INSTRUMENT
Venture Capital Fund

**Funding source**COMPETE2020 and OP
Alentejo

**Country** Portugal

#### Type of financial products Capital

#### **Financial size**

Total: 10.000.000,00€, of which 1.200.000€ are from OP Alentejo and 9.600.000€ are from COMPETE2020.

#### **Thematic focus**

SME competitiveness

#### **Timing**

2016-2020

#### **Partners involved**

Accelerators / Incubators, Associations, Technology Poles, Universities

#### **Absorption rate**

**TBD** 

#### **EU leverage\***

**TBD** 

#### Leverage of public resources\*\*

**TBD** 

#### **Re-investment**

**TBD** 

#### **Main results**

**TBD** 

- \*EU leverage is calculated as the total amount of finance to eligible final recipients, i.e. EUR 39.3 million (in this case made up of the Innovation Fund's EUR 13.64 million and the investment it triggered from private actors of EUR 25.66 million), divided by the total amount of ERDF allocation to this financial instrument, i.e. EUR 6.14 million. It does not include the reuse of resources returned to the instrument.
- \*\*Leverage of public resources is calculated as the total amount of finance to eligible final recipients, i.e. EUR 39.3 million, divided by the total amount of programme allocated to the financial instrument, i.e. 13.64 million. It does not include the reuse of resources returned to the instrument.



#### **SUMMARY**

Portugal has undergone significant structural changes to reshape the competitiveness of its economy. During this process, manufacturing industries reformed through technology gained a better position on the value chain. The footwear and textile industry can be considered as a particularly successful case. These changes boosted the development of a competitive network of suppliers in advanced manufacturing systems, which alongside with increased activity in tourism industry explains the growth tendencies in Portugal in recent years. At the same time, a strong emphasis is put on talent, especially in creating and accumulating human capital and therefore setting the foundations for a more knowledge-intensive economy.

The significant research capabilities on health and ICT contrast with the slower pace of new technology-based firms (NTBFs) birth rate. And although the country capitalised on talent and delivered innovation policies to boost innovation, the emergence of a new strand of economic activities was happening at an unsatisfying rhythm. One market failure that hindered the transformation was finance. The Portuguese market depended too heavily on the traditional banking system, alongside a significant market failure in business angel and venture capital. The goal was to stimulate the creation of NTBFs, and so public efforts were concentrated on pre-seed and seed stages. Lacking a significant number of private players, the Portuguese Government created Portugal Ventures.

Portugal Ventures is a public company belonging to the State Business Sector and its responsible for the public investment type of Venture Capital. Developing its activities under the same conditions and terms applied to all the private companies, it is subject to the general rules of competition, national and EU law. In 2012, the company took on the role of reference investor in Venture Capital at a national level, tackling market failures and being one of the main drivers of the national entrepreneurial ecosystem.

This case study explains how the venture capital funds managed by Portugal Ventures use the line of financing 'Venture Capital Funds', managed by the IFD (Development Finance Institution) and funded by the regional operational programmes and the operational program to support Portuguese competitiveness and internationalization (COMPETE2020), to address a market failure in the support of SMEs.

#### **Objectives**

Europe's financial system has developed unevenly, with debt instruments, guarantees and securities expanding fast through the traditional banking system, but when it comes to guarantees for innovation and equity-type financial instruments there are still market failures. Nonetheless, equity and (quasi-equity) financial instruments are increasingly being used by the Member States and regions to support economic and social development through European Structural and Investment Funds (ESIF) in the 2014-2020 programming period. By the end of 2016 more than €10 billion had been invested into financial instruments (providing loans, guarantees and equity).

Across Europe, Fls were implemented through common financial intermediaries, including national promotional banks and institutions (NPBIs). It is clear that promotional banks and private sector financial institutions play an important role in the implementation of such instruments across the EU. Their active involvement in the implementation of equity instruments contributes to the overall delivery of many of the Member States' investment priorities and ESIF Thematic Objectives (TO) outlined in the Operational Program (OP). Therefore, a strong collaboration between the financial intermediaries and the managing authorities is necessary at all stages of the design and implementation to deploy instruments that meet the demand of potential final recipients, but mostly to guarantee that the instruments are driven by the strategy and not vice versa.

#### DESIGN AND SET-UP

#### **Funding and Partners**

Through the financial instruments cofounding each regional operational programme and the national competitiveness programme (COMPETE2020), the wholesaler IFD injected financial resources in Portugal Ventures. In order to deliver a better strategy, build up effective scouting and considering the specific milieu of new technology-based firms, Portugal ventures formed a network of more than 70 partners, allowing them to connect with the main actors of the Portuguese entrepreneurial ecosystem. This network helps to materialize a program of regular interaction and close proximity to universities, interface institutes, R&D centres, incubators and accelerators, with the aim of detecting opportunities for the entrepreneurial ecosystem. In order to increase leverage, Portugal Ventures also addressed the market failure from the supply side, promoting a network of capital investors, with the aim of facilitating investment syndication operations, both for the companies that belong to its portfolio and for new investments, hence increasing leverage. Various international experts with know-how and expertise in relevant subjects and industries contributed to the process of evaluation and analysis of applications/ project candidates.

Selected projects receive funding from the fund as determined below:

#### Investment Priority 3.1 COMPETE2020 (North, Center or Alentejo)

- Business start-up and start-up, seed, early stages;
- Maximum of 3 years of activities;
- Preferably they fall within the thematic priorities of the Intelligent Specialization Strategy, national or regional, or in sectors of high and medium-high technology and in knowledge-intensive services, or in tradable sectors.

#### COMPETE2020 Investment Priority 3.1 COMPETE2020 (North, Center or Alentejo)

- Strengthening business capacity building of SMEs in the region for the development of new products and services;
- Innovative projects at the level of processes, products, organization or marketing;
- The supported projects should preferably be articulated with the RIS3 regional themes, both at the level of the differentiating domains and in the areas of interconnection/innovation platforms.

The Venture Fund Management Companies selected by IFD (including Portugal Ventures) will only be able to carry out investments supported by the Financing Line to Venture Capital Funds (IFD-FC & QC-FCR-01/16) in final beneficiaries (under Investment Priority 3.1, co-financed by the Operational Program COMPETE2020), in the Alentejo region (under Investment Priority 3.3, co-financed by the Alentejo Operational Program2020) and in the NUTS II regions of the Norte, Centro or Alentejo. In addition, the investments cannot exceed the amounts defined for each region, according to the table below:

REGIONAL ALLOCATION							
IP	Norte	Centro	Alentejo	Lisboa	Algarve	TOTAL	
IP 3.1	29.279.962,58€*					29.279.962,58€	
IP 3.3	21.622.837,55	29.485.687,56	10.025.133,78	5.917.710,02	1.965.712,52	69.017.081,43€	
TOTAL						98.297.044,01€	

<sup>\*</sup>Amount corresponds to the endowment of the operational program COMPETE2020 that will be applied in the Norte, Centro and Alentejo regions.

The maximum funding limit of the Fund for Risk Capital Funds (FC & QC) for risk capital operations/funds, cannot exceed € 10,000,000.00 (ten million euros). The contribution of the FC & QC cannot exceed the following percentages of the eligible expenses:

- OP COMPETE2020 (IP 3.1) 50%
- ROP Norte (IP 3.3) 50%
- ROP Centro (IP 3.3) 50%
- ROP Lisboa (IP 3.3) 40%
- ROP Alentejo (IP 3.3) 50%
- ROP Algarve (IP 3.3) 50%



This means that at least 50% of the investment made by Portugal Ventures in the Norte, Centro and Alentejo regions (under the Investment Priority 3.1) and in the Alentejo Region (under the Investment Priority 3.3) comes from private or similar financing.

#### **Investment Strategy**

Portugal Ventures' mission is to pro-actively invest in startups in the pre-seed and seed stages of investment. Their selection is based on a reference matrix that evaluates the quality of the projects in terms of coherence, rationality and innovative nature of the investment. As a public operator, the investment strategy follows clear objectives mostly linked to the systemic impact of projects - its externalities and risk-aversion - in order to fully address the identified market failure, targeting the topics of Digital, Engineering & Manufacturing, Life Science and Tourism.



#### Digital

Enterprise, SaaS, Security, Networks, AI, VR/AR, Marketplaces, Blockchain, IoT



#### **Engineering & Manufacturing**

New Materials, Electronics, Robotics, Cleantech, Agrotech, Seatech



#### Life Sciences

Therapeutics, Digital Health, Diagnostics, Med Tech



#### Tourism

Innovative Accommodation, Tourist Entertainment Companies, Tour Operators, Wine, Nautical and Equestrian Tourism, Theme Parks, VR/AR, Mobile, IoT, AI, Marketplaces, Electronics, Cleantech, Robotics

Figure 1. Investment focus (source: PV)

In practical terms, the investment strategy is focused on expanding the spectrum of NTBFs, hence reinforcing of the Portuguese innovation system and to create a strong innovative milieu. In line with this stance, the investment strategy privileges investments in high growth potential companies with a strong R&D DNA and in trend sectors of greater knowledge intensity, in the pre-seed and seed stages.



#### INVESTMENT STRATEGY



Tickets between 300k€ and 1.500€ depending on the sector and stage



We favour co-investment with Portuguese and international partners



Tranche payments made as each milestone is achieved



We hold a minority stake in the company's share capital



We have a seat on the company's Board of Directors

Figure 2. Portugal ventures investment strategy (source: PV)

In sum, this venture capital management company aims to establish itself as the reference partner in risk capital in Portugal by targeting projects in pre-seed and seed stages and high relative risk investments with strong technological intensity and high growth potential, whilst addressing the shallowness of the Portuguese equity market and its bias towards less risky investments.

#### **Governance**

The Management Authorities of the Competitiveness and Internationalization Thematic OP and the Regional OPs of the Continent, after approval by the Interministerial Coordination Committee of the Partnership Agreement (CIC Portugal 2020) of the Specific Regulation on Competitiveness and Internationalization, decided to address an invitation to the Development Finance Institution (IFD) for the initial implementation of two funds of funds, one of debt / guarantees and another of capital / quasi-capital.

This call covered the setting up of a fund for managing capital and quasi-equity FIs with the total subscribed initial capital of €146.9 million, which included the costs of managing the fund of funds and the IFD.

The Development Finance Institution (IFD) was initially created to improve the financing conditions for business investment. Nowadays, the institution, which has the legal nature of a financial company and exclusively public capital, aims at closing market failures at the level of SME financing. Their main objective is to reduce the costs of financing companies (by bringing them closer to the average value in the euro area) and increase the available liquidity in the economy. In accordance with Article 4 of its Statutory Agreement, IFD is also responsible for the management of financial instruments aimed at supporting the economy and stimulating business investment and job creation by becoming a wholesale operator with the market's

retail operators, bridging the existing market failures that are viable.

As such, IFD is responsible for opening competitions for the selection of financial intermediaries that will receive resources from the Capital and Near Capital Funds (fund of funds), within the scope of the Financial Instrument for Financing Venture Capital Funds. In this process, Portugal Ventures was one of the selected intermediaries and now responsible for managing a venture capital fund, which should be used in co-investment with national or international private partners. Smart Specialization Strategy is a preferable condition that further helps to align the deployment of the policy tools with the strategy.

#### **IMPLEMENTATION / ACHIEVEMENTS**

The applications submitted to the Venture Capital Management Company - Portugal Ventures - are initially analyzed by the respective Investment Directorates, taking into account their technological distribution: Digital, Engineering & Manufacturing, Life Science and Tourism. After the first analysis and screening, the selected applications move on to the second phase, where they are analyzed by a panel of national and international experts and the respective Investment Directorate. After this second analysis, the selected applications move to a third phase, where they must present a pitch to the Executive Board of Directors, for a subsequent decision to present an investment proposal.

Since 2012, but with a considerable acceleration after 2016, Portugal ventures has:

- i) Analysed 1811 projects;
- ii) Established a network of more than 70 ignition partners;
- iii) Invested more than 140M of euros;
- iv) Funded more than 110 start-ups.

#### In sum:



Figure 3. Investment portfolio (source: PV)



#### **Financial products and terms**

Since 2011 Portugal Ventures manages 7 funds (Venture Capital Fund Portugal Ventures ACTEC II, Venture Capital Fund Portugal Ventures Biocant, Venture Capital Fund Portugal Ventures Early Stage, Venture Capital Fund Portugal Ventures Creative Industries, Fund of Venture Capital Portugal Ventures Universitas, Venture Capital Fund Portugal Ventures Internationalization, Tourism Innovation - Venture Capital Fund), that in addition to private participants relies on the leverage of the Fund of Funds Finova, managed by PME-Investimentos (between 30% to 50% of the capital of the funds). FINOVA - Fund for Supporting Innovation Financing - was constituted through Decree-Law no. 175/2008, of August 26, as a privileged instrument for the achievement of the objectives established in SAFPRI (System of Support for Financing and Risk). This program created under the National Strategic Reference Framework (NSRF), aims to promote the dissemination of financing instruments that provide better financing conditions for Portuguese SMEs.

More recently, in April 2018, Portugal Ventures launched the Portugal Global Tech Competitiveness Venture Capital Fund, aimed at investing in technology-based Startups, as a result of the application to the IFD-FC & QC-FCR-01/16 Public Tender financed by the Competitiveness and Internationalization Thematic Operational Program (Compete 2020) and the Alentejo regional operational program (PO Alentejo). This €10.8 M Fund is leveraged up to 50% by the Capital and Near Capital Fund (FC & QC) and co-financed by Compete 2020 and PO Alentejo.

It should also be noted that Portugal Ventures does not manage funds leveraged by the European Investment Fund because Portugal Ventures is an operator of a public nature and "captive", for purposes of classification of ineligibility for co-financing of funds by the EIF.

#### Final recipients targeted

This specific notice was primarily intended to provide financial support for projects contributing to qualified and creative entrepreneurship. In particular, it facilitates support for the economic exploitation of new ideas and encourages the creation of new enterprises (Investment Priority 3.1 - Compete 2020) and projects for SME entrepreneurship and capacity building for the development of goods and services, through business investment in innovative and qualified activities that contribute to the progression of the value chain (Priority of investment 3.3 - ROP Norte, ROP Centro, ROP Lisboa, ROP Alentejo and ROP Algarve).

#### **Achievements**

Within Portugal 2020 there are currently three types of instruments for SMEs financed by Compete 2020 and the Regional Operational Programs of the Continent: Venture Capital Funds, Business Angels and the 200M Co-investment Fund. Regarding the typology of venture capital funds, 15 venture capital funds were set up with roughly 200 million euros to invest. 60 investments in SMEs have already been approved, with a total amount of 43 million euros and an expected increase of 724 new job vacancies available.

#### OUTLOOK

The Regional Innovation Scoreboard demonstrates the relevant progress made by Portugal, especially, in terms of firm-level innovation. At the same time, the Portuguese venture capital market is becoming more structured and the market failure, although still existent, has been reduced. Nevertheless, it is crucial to further promote economic transformation and the consolidation of start-ups in general. The challenge is now shifting from creating a recipient market based on NTBFs, towards helping these firms to scale-up and scale-out.





## TECHNOBIT VENTURE SEED CAPITAL FUND AND BESKID TECHNOLOGY ACCELERATOR



#### **Funding source**

ERDF, Operational Programme (OP) Innovative Economy 2007-2013 **Country** Poland

**Type of financial products** Equity instruments combined with advisory services free of charge 2013

#### Type of financial products

Equity instruments combined with advisory services free of charge 2013

#### **Financial size**

EUR 3.6 million OP resources + at least 50% from private co-investors at project level

#### **Thematic focus Timing**

SME support

#### **Timing**

May 2009 to December 2014

#### **Partners involved**

Regional Development Agency in Bielsko-Biała

#### **Absorption rate**

100% of OP resources

#### **EU leverage\***

**TBD** 

#### Leverage of public resources\*\*

**TBD** 

#### **Re-investment**

Based on re-investments the Beskid Technology Accelerator as a seed capital fund was created

#### Main results

15 companies supported with equity investment – creation of limited liability companies with TechnoBIT and 3 with BAT, an additional EUR 3 million in private investment was attracted and 83 new full-time equivalent jobs created as at May 2015.

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#### **SUMMARY**

This case study explains how the TechnoBIT Venture, co-funded by the European Regional Development Fund (ERDF) in the 2007-2013 programming period, addressed a regional market gap for access to finance for innovative ideas. Target recipients were both natural and legal persons as well as small and medium-sized enterprises (SMEs) in the information technology, medicine, metal industry, environmental protection, tourism, furniture, 3D printing, plastics, electronics and automation. Thematic scope of the investments was in line with the development strategies of the region as well as in line with the general direction of the European Union at that time. There was always a separate limited liability company created as the result of capital investment.

The fund manager, Regional Development Agency in Bielsko-Biała (ARRSA) provided equity instruments investments combined with non-financial and advisory support such as consulting the innovative idea, risk assessment and profitability and market analysis. The implementation of the project involved two components - the pre-incubation stage and the equity investment of the newly established entrepreneur. It was only when the results of measures taken in the field of pre-incubation have shown the economic viability of running a business based on an innovative solution and the probability of generating a profit. Only entities that have passed the pre-incubation were invested. The funds obtained after the completion of the investment (ie the exit from the investment) went to ARRSA for the purpose of continuing operations of the same nature.

On the base of that rule Beskid Technology Accelerator was established in 2014 as a seed capital fund made from capital exits from the companies created with the TechnoBIT Venture.

#### **Objectives**

According to the report of the Polish Agency for Enterprise Development (2011) the Śląskie Voivodeship in terms of expenditure on innovation in the company investing in innovation was above the average together with the Mazowieckie, Kujawsko-Pomorskie and Pomorskie provinces and is in the forefront of regions with a significant impact on national innovation potential.

The basis for the rapid and comprehensive development of the region is the knowledge based economy and innovation, hence there is strong need to improve the quality of research and development, support technology transfer, increase the level of innovative regional entrepreneurship, and promote activities aimed at building user-market relations. So-called innovators are an indispensable link in the process of creating and developing innovations that determine the progress and development of the economy.

As the financial instrument was designed in the time of mid-term review for the 2007-2013 perspective, the need of changing financial mechanisms was already recognised. Revolutionary mechanisms provide significantly higher efficiency of using public funds in relation to grant support. Thanks to the renewal of the instruments offered under this type of initiatives, it was possible and multiplied the benefits for SMEs and guarantee the continuity and stability of the support system.

TechnoBIT Venture project was designed to follow this trend and to show the opportunities that equity instruments give to the companies or to-be-entrepreneurs. As mentioned above, the investments made within the project were re-invested with the Beskid Technology Accelerator Seed Capital Fund that was established in 2014 and is still operating.

As stated in the Technology Development Program for the Silesia Voivodeship for years 2010-2020 the role of the region is to provide an "attractive" environment for creative entrepreneurs and innovators transferring knowledge and technologies for the development of new products and services. With the seed capital fund ARRSA was trying to fulfil this obligation and create an entrepreneur friendly environment.

#### DESIGN AND SET-UP

TechnoBIT Venture – knowledge and capital for innovation" – was designed as a EU co-financed project from European Regional Development Fund. It was implemented under the Operational Program "Innovative Economy" measure 3.1 "Initialization of innovative actions". Regional Development Agency applied for fund to Polish Agency for Enterprise Development, who was the operator of funds distributed by the Ministry of Regional Development and was approved for the project implementation in 2008. The main objective of the project was the creation of several new businesses based on innovative solutions in the following sectors: information technology, medicine, metal industry, environmental protection, tourism, furniture, printing, plastics, electronics and automation. Since 1st May 2009 till the end of the project implementation (December 2014) ARRSA has made 15 equity investments in companies on the base of innovative ideas for the total amount of around 2.9 M Euro.

#### **Funding and Partners**

Equity investment within the TechnoBIT Venture Fund was made by ARRSA in an amount of less than 50% of shares of the company to be developed. The maximum amount of support was €200,000, which constitute to de minimis regime. The rest of the investment should be made either by the innovator who is presenting the idea as type of guarantee, or by other private or public investor indicated by the innovator. The co-investment to the fund should be more than 50% on the level of the final recipient.

#### **Investment strategy**

The investment strategy of the fund was designed in the regulations of the project on the ARRSA level and was in line with the program objective and development strategies and other strategic documents on different levels: regional, national and European. The indication of the specific economic sectors was related to situation on the regional market and to the smart specialisation concept which was becoming more successful.

#### Governance

The Fund was created from scratch, with no existing governance or procedural structure before. ARRSA was the manager of the fund as an entity implementing the project designed a team of professionals. The project was implemented through the creation of a project team, consisting of 4 substantive employees of the ARRSA and a project manager. Moreover there was a need to add specialists to the project team that were covering more specific areas: financial and accounting, legal counsel, expert on industrial property rights research for innovative solutions, experts responsible for the initial analysis and selection of reported innovative ideas.

#### IMPLEMENTATION / ACHIEVEMENTS

#### Financial products and terms

TechnoBIT Venture offered two types of services related to the creation of new company: free of charge consultation services in a preincubation process and equity investment in the second stage:

#### Preincubation of business ideas

Support in this stage can last up to 12 months and is granted by providing free consulting services with the goal of identification of innovative ideas and investigation of its market potential. Analysis of the type of innovative solution takes following stages.

- studies of industrial property rights in regards to the proposed innovative solutions
- development of the business plan with market analysis and market potential;
- the provision of consultancy services in the field of research development;
- capital investment cost-effectiveness analysis;
- analysis of the business idea and recommendation of the profitability of possible capital investment by the TechnoBIT Venture Programme Council. After positive recommendation of the Programme Council, approval of the ARR S.A Board of Directors business idea is submitted to the PARP in Warsaw for final approval;
- starting of the new business based on approved innovative solution/idea.



After the completion of the project Beskid Technology Accelerator (BAT) was created, the idea of which is to support innovative undertakings. Beskid Technological Accelerator is a typical example of a regional seed fund enabling entrepreneurs to access capital in the early stages of project development. The Accelerator is powered by financial resources coming from capital exemptions from companies in which ARR S.A. has its shares. The procedures and products offered are the same as during the project lifetime.

#### **Equity Investment**

This stage is a final creation of a new capital company based on the incubated idea. Funds are used to cover ARRSA shares in the created company in an amount of less than 50% of the whole company capital. All tangible or intangible assets purchased during incubation process will be brought into the new venture as part of the capital investment. In total, in the second stage, the maximum amount of support is 200 000 euro, which constitute de minimis aid as referred in the Commission Regulation (EC) No 1998/2006 of 15 December 2006 on the application of Art. 87 and 88 of the Treaty to de minimis aid (OJ. EU L 379 of 28.12.2006).

#### Final recipients targeted

The project was targeted to individuals and entities that have an innovative idea in the identified industrial sectors with the intention of commercializing that idea and currently do not operate based on it. The innovator should be the owner of the idea and has all the rights to operate it.

Within the TechnoBIT Venture 42 innovation ideas out of more than to 138 where considered as relevant and got to the pre-incubation phase of the project and from that number – 15 new companies where created. Within the Beskid Technology Accelerator – seed capital fund reinvesting funds from capital exits of the companies – 3 equity investments were made from total 65 innovation ideas (38 preincubations).

#### OUTLOOK

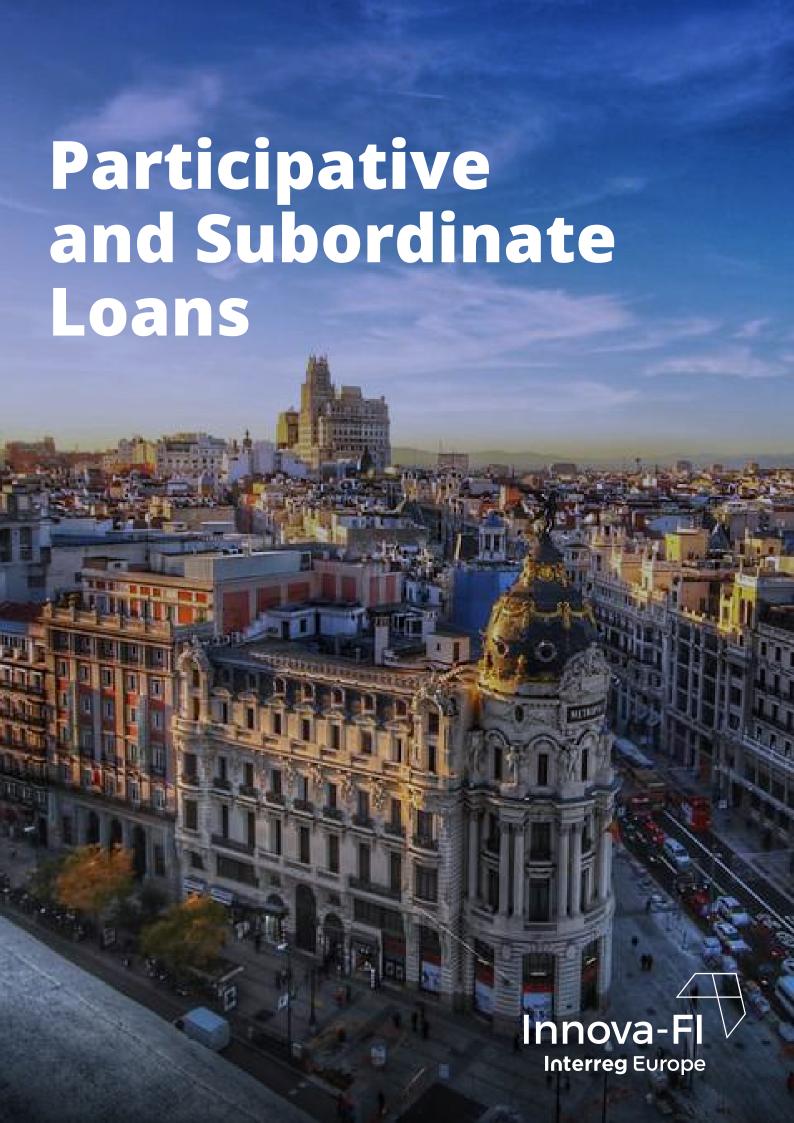
TechnoBIT Venture as a project itself has ended and all the indicator were fulfilled. Beskid Technology Accelerator is still operating with nearly 1 million EURO from reinvestments. Currently there are 4 pre-incubations in progress.

Support for innovative start-ups is an important direction of the country's development from the economic point of view. 96% of enterprises in Poland are microenterprises which are responsible for generating over 30% of national GDP (and over 40% in the group of enterprises). They employ 38.2% of employed persons. On the other hand, investment expenditures amount its only PLN 30 billion. Supporting innovative ideas, startup and seed companies, is a key action from the point of view of keeping creative people in the country, giving them the opportunity to pursue their own ideas, within enterprises with the originator's capital and VC funds.

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### PARTICIPATIVE AND SUBORDINATE LOANS



Funding sources
ERDF

**Country** Spain

Type of financial products
Loan

#### **Financial size**

EUR 76.88 million OP resources + EUR 0 million private resources = EUR 76.88 million (EUR 38.44 million from ERDF and EUR 38.44 million from national and regional public co-financing) + at least 50% from private co-investors at project level

#### **Thematic focus Timing**

Start-up and SMEs for growing

#### **Timing**

2014-2020

#### **Partners involved**

IVF - Generalitat Valenciana

#### **Absorption rate**

100

#### **EU leverage**\*

4 times

#### Leverage of public resources\*\*

2 times

#### **Re-investment**

Revolving funds (reusable by the Fund of Funds for new operations)

#### **Main results**

Instruments in the initial phase of execution

\*EU leverage is calculated as the total amount of finance to eligible final recipients, i.e. EUR 39.3 million (in this case made up of the Innovation Fund's EUR 13.64 million and the investment it triggered from private actors of EUR 25.66 million), divided by the total amount of ERDF allocation to this financial instrument, i.e. EUR 6.14 million. It does not include the reuse of resources returned to the instrument.

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#### **SUMMARY**

This case study explains how Participative and Subordinate Loans, co-funded by the European Regional Development Fund (ERDF) in the 2014-2020 programming period, addressed to promote the growth of newly created or growing companies, prioritizing innovation, through co-investment with other private investors in projects in the Valencia Region. For the Participatory Loan Financial Instrument, Financial intermediaries will be selected; it may be Private Investor Networks or Private Investment Companies or Companies.

#### **Objectives**

#### **Participative loans**

Promote the growth of newly created companies, prioritizing innovation, through co-investment with other private investors in projects in the Valencia Region. The financing provided by the ERDF financial instrument through the IVF will be in the form of a participative loan, and the investment opportunities must come from the financial intermediaries selected by the IVF, in accordance with the call for expressions of interest dated June 28. of 2018, within the framework of the 2014-2020 ERDF Operational Program.

#### Subordinated loans

Finance business projects of small and medium-sized companies whose head office, establishment or branch of production or activity development is located in the Valencia Region.

#### DESIGN AND SET-UP

#### **Funding and Partners**

The financial instruments (participative loans and subordinated loans) are financed with ERDF resources and those of the GVA, through a Fund of Funds set up for this purpose and managed by the IVF. The loans are managed directly by the IVF, with the financial intermediaries selected for this purpose, collaborators and co-investors, in the case of participative loans. In the case of subordinated loans, the Project requires additional financing from a third party. IVF is the only partner of the instrument. Financial intermediaries participate in the deployment.

In the case of participative loans, the accredited Financial Intermediaries will be responsible for the identification and selection of investments according to the following general principles:

- The quality and economic-financial viability of the project or company.
- The professionalism of the management, the knowledge of the sector and the technical



training of the team.

- Scalability of the projects.
- The coherence between existing (technical, human and financial) media and planned with the objectives.
- Consistency of the dimensioning proposed with reality and the needs of the activity sector, suppliers and customers.
- Technical viability of the project or investment, level of risk and definition of objectives proposed.
- Innovative business projects of products, services or processes that they represent an improvement in comparison with their sector and that by their characteristics they entail a higher level of risk, that is to say, they imply a risk of technological, industrial or market failure.

#### **Investment strategy**

Financial instruments are under the direct management of the IVF, and additional financing will be required to the project. For the participative loans, beneficiaries must be micro, small and medium enterprises (SMEs) with headquarters in the Valencian Region, have a minimum age of 4 months counted from the date of inscription in the Mercantile Registry and until the date of receipt of the financing request, and have operated in any market less than seven years after its first commercial sale. In the case of subordinated loans, the beneficiaries are SMEs consolidated in phases of growth, diversification or internationalization, which have at least three years of activity.

In the case of subordinated loans, the obtaining of the financing will be linked to the obtaining by the applicant company of an additional external financing and / or new own funds for the company, which in general must be for an amount of at least 50% of the financing provided for the financial instrument of the ERDF. When the project to be financed is described as disruptive, the amount of the additional financing described in the previous paragraph must represent at least 300% of the financing provided by the ERDF financial instrument. In the case of participative loans, the percentage of co-financing by the IVF will be between 50% and 150% of private investment, depending on the typology of the Project, being the projects with a greater component of innovation those that obtain greater percentage of public financing.

#### **Governance**

The Fund of Funds is an entity constituted for that purpose by the GVA and financed with its own resources and of the ERDF ROP 2014-2020. The management of the Fund of Funds has been entrusted to the IVF. The IVF manages the different financial instruments of the Fund of Funds either directly (debt instruments) or through financial intermediaries (equity instruments). In the case of the participative loans, the IVF has selected financial intermediaries that collaborate with the IVF in the

# PARTICIPATIVE LOANS

identification and valuation of the financial projects and in the co-investment of the same.

In the case of subordinated loans, the IVF directly manages the operations, but requires the co-financing of third parties in the chosen projects. Financial intermediaries may be Private Investor Networks or Private Investment Companies or Companies:

- Networks of Private Investors are understood as organizations that, under different legal forms, have as their object to connect entrepreneurs or entrepreneurs seeking venture capital or quasi-equity investments with private investors or "business angels".
- The Private Investment Companies or Companies may be accelerators, venture capital entities and limited liability or anonymous companies that serve as investment instruments for investors, which in addition to acting as financial intermediaries, may co-invest with the IVF in the final recipients. in the terms established in this call. Likewise, the IVF may accredit within this category individuals who act as private investors through investment vehicles, which demonstrate adequate professional and financial solvency.

Through this line of financing, the IVF will co-invest with private investors belonging to the selected business angels' networks, and with companies or investment vehicles that are also accredited.

#### IMPLEMENTATION / ACHIEVEMENTS

Open. Without additional guarantees to those provided by the business project itself.

#### Financial products and terms

#### Amount between

between 25,000 and 300,000 euros per financed SME, subject to the amount of the co-investment by private investors (see section Limits on the amount of financing)

#### Term

maximum of 7 years

#### Lack of capital amortization

up to 3 years

#### Interest rate

the interest accruing on the loan will be made up of a fixed part and, if applicable, a variable part:

#### Fixed part

the loan will accrue the interest rate established by the EURO INTERBANK OFFERED RATE (Euribor) for twelvemonth deposits plus a differential of 3.5 percentage points. A 1.75% subsidy will be applied to this differential.

#### Variable part

the variable part will be determined based on compliance with certain ratios and / or magnitudes that reflect the economic evolution of the company.

The total resulting rate may not exceed 9%.



# SUBORDINATED LOANS

#### Amount

The nominal value of the loan will be between 200,000 and 2,000,000 euros.

#### Term

The term of amortization of the subordinated financing will be of up to ten years, with the possibility of a period of lack of amortization of capital of up to five years for disruptive projects and up to two for non-disruptive ones.

#### Commissions

No commissions

#### Liquidation

Loans will be amortized for terms that are due.

#### Types of interest

The loan will accrue the interest rate established by the EURO INTERBANK OFFERED RATE (Euribor) for twelvemonth deposits, with a minimum value of 0.00%, plus a differential of 6.50%

For non-disruptive projects, a bonus of 2 percentage points of interest will be applied to the 6.5% differential. For those projects to be financed that qualify as disruptive, a bonus between 1.5 and 3.5 percentage points of interest will be applied to the 6.5% differential, based on compliance with some of the basic criteria for prioritizing Operations of the ERDF Operational Program of the Valencian Region 2014-2020 for financial instruments, which are specified below:

Initiatives aligned with the Smart Specialization Strategy for Research and Innovation in the Valencian Region RIS-CV and, especially, in the projects focused on their sectoral areas and transversal facilitating technologies, according to Annex IX. Innovative projects with high potential for growth and internationalization due to having products or services with an advantageous position over the competition and / or which are oriented towards markets with significant current growth and long-term growth. Proposals that contribute to a greater extent to the creation of employment, and especially in those that manage to generate and maintain highly qualified employment.

Projects that arise from collaboration with knowledge generating agents or that help to deepen the collaboration between the R + D + I development centers and the Universities with the business world, promoting the transfer of knowledge.

The interest rate subsidy will be determined as follows:

• A subsidy of 1.5 percentage points will be applied to all approved operations.

For each basic criterion of prioritization of operations of the ERDF Operational Program of the Valencian Region 2014-2020 that is fulfilled for the financed project, as indicated above, the interest rate will be rewarded with an additional percentage point, up to a maximum of 2 points percentage.



#### Final recipients targeted

Business projects that meet the following characteristics:

- of innovative character for the commercialization of a product that includes significant improvements of technical specifications, of components and materials, of integrated computer programs, of the design, of the ease of use or other functional characteristics, with special attention on the Valencia companies that have Seal of Excellence (Horizon 2020), and / or;
- that contemplates investments destined to the expansion and / or reinforcement of the general activities of a company or to the realization of new projects, the penetration in new markets or new activities.

#### **Achievements**

Financial instruments designed based on an "ex ante" evaluation in which a series of market failures and financing needs of SMEs in the Valencia Region were identified, with special emphasis on the initial phases of the companies and the processes of innovation of the same, and the first phases of growth and consolidation of the same, as well as the processes of growth, diversification and internationalization of the SMEs.

For the first time in Valencia Region, financial instruments have been designed and implemented with ERDF resources, mobilizing a total amount of 125 million euros to address the identified market failure, providing financing through capital and debt instruments to meet the financial needs of SMEs in the Region, with special emphasis on the initial phases of the companies and their innovation processes, as well as the first phases of their growth and consolidation, including the growth processes, diversification and internationalization of SMEs.

As a result of all this, the participation of the IVF in 12 venture capital entities with an investment commitment of approximately 25 million euros has been approved, and the participatory and subordinated loans with a total endowment of 76.8 million of euros have been launched.

For the execution of participatory loans, seven financial intermediaries have been selected, which are identifying and proposing investment projects to the IVF.



Figure 4. IVF Institut Valencià de Finances - Financial Instruments FEDER

#### OUTLOOK

The instruments are in a very early stage of their execution, being the prospects of use very positive due to the very favorable reception by the different agents of the Market both for the part of the demand for financing and for investors specialized in this type of projects.

In this initial phase of execution, 13 applications for participatory loans for a total amount of 3.2 million euros, and 6 requests for suborid loans for an amount of 5.4 million euros have been processed.







Funding sources
ERDF

**Country** Lithuania

Type of financial products
Equity or quasi-equity

#### **Financial size**

EUR 9.28 million from ERDF + EUR 7.2 million from private co-investors at project level

#### Thematic focus

Micro, small and medium-sized enterprises

#### **Timing**

June 2017-December 2023

#### **Partners involved**

The Ministry of Finance (MoF, Managing Authority), the Ministry of Economy and Innovation (MoEI), Investment and Business Guarantees (INVEGA) (the financial intermediary), Kofinansavimas Ltd (fund manager of *Koinvesticinis fondas*) and private investors

#### **Absorption rate**

20% (end Q1 2019)

#### **EU leverage\***

At least 1.1 times

#### **Main results**

- Number of enterprises 28 (out of which 16 – implementing R&D&I projects under Smart Specialization Strategy);
- Number of new enterprises 4;
- Private investments EUR 7.2 million (out of which EUR 3.6 million attracted at the level of enterprises implementing R&D&I projects under Smart Specialization Strategy)



<sup>\*</sup> EU leverage is calculated as the total amount of finance to eligible final recipients, i.e. EUR 39.3 million (in this case made up of the Innovation Fund's EUR 13.64 million and the investment it triggered from private actors of EUR 25.66 million), divided by the total amount of ERDF allocation to this financial instrument, i.e. EUR 6.14 million. It does not include the reuse of resources returned to the inwstrument.

#### **SUMMARY**

This case study describes financial instrument "Co-investment Fund II" (Co-investment Fund II) that was established under the Lithuanian Operational Programme for the European Union funds' investments in 2014–2020. The financial instrument aims to stimulate the development of Lithuanian risk capital market, appearance of new participants on this market, thereby increasing capital availability to new prospective Lithuanian companies that have limited access to business financing offered by banks.

The Co-investment Fund II is an equity instrument of the Ministry of Economy and Innovation, managed through the limited partnership "Koinvesticinis fondas" (Koinvesticinis fondas), which was established by INVEGA together with its subsidiary Kofinansavimas Ltd in 2017. The financial instrument Co-investment Fund II is financed from the fund of funds Business Financing Fund, funded by the European Regional Development Fund. The Ministry of Economy and Innovation marked EUR 9.28 million for the investments under Co-investment Fund II.

Koinvesticinis fondas through its separate sub-funds (one of which is dedicated to the implementation of the Co-investment Fund II) together with private investors invests on a deal-by-deal basis into micro, small and medium-sized enterprises (SMEs), which have not yet distributed profits. Investments are made into potentially viable projects that are able to generate the expected investment returns.

Private investors, including risk capital funds or teams of business angels, are considered as investment initiators able to keep a regular flow of proposals to invest into prospective companies. *Koinvesticinis fondas* always participates as a "silent investor" in companies, i. e. its shareholder's rights are transferred to the private investors that invested together in the respective company.

As of the end of Q1 2019:

- 102 business angels and risk capital fund management companies were selected as eligible for investing together with *Koinvesticinis fondas*;
- 4 enterprises received investments of €1.76 million invested from the Co-investment Fund II as well as €0.92 million from private investors.

#### **Objectives**

The risk capital market in Lithuania is still emerging but developing rapidly due to the various initiatives that were implemented since the 2007–2013 programming period. Therefore, more



efforts are still needed to further stimulate equity investments into Lithuanian enterprises, especially start-ups. The main objectives of the Co-investment Fund II are:

- Increase private sector activity in research and experimental development and innovation under Smart Specialization Strategy, entrepreneurship and productivity of SMEs;
- Develop the risk capital investment environment in the country as well as stimulate investments in businesses and jobs in the regions;
- Increase the level of investments from business angels;
- Promote the development of the Alternative Market (First North), creating conditions for the companies to prepare for entering the regulated securities market.

The objective of the Co-investment Fund II is not only to facilitate funding for companies, but also to: (a) assist them in their development in order to increase their growth possibilities and to evolve successfully; and (b) to attract and leverage additional private resources, e. g. private risk capital funds and business angels.

The Co-investment Fund II aims to fill the existing funding market gap and invest as much as possible in the earliest stage companies since those fall within the highest risk investment group. These companies have a high probability of going bankrupt, and therefore face the limited access to the equity investments financed by private investors.

#### DESIGN AND SET-UP

The Co-investment Fund II is an equity instrument implemented through *Koinvesticinis fondas*, which was established by INVEGA together with Kofinansavimas Ltd in 2017. INVEGA is a national promotional institution established by the Government of Lithuania in 2001 with the aim to facilitate access to finance for business through the design and implementation of various financial instruments and global grant measures, mainly linked with the financial instruments.

Kofinansavimas Ltd – the subsidiary of INVEGA, which participates in the activities of *Koinvesticinis fondas* as a general partner and INVEGA is a limited partner and a sole investor of *Koinvesticinis fondas*. INVEGA's contribution is financed from the Business Financing Fund (fund of fund), funded by the European Regional Development Fund, under the Operational Programme for the European Union funds' investments in 2014–2020. *Koinvesticinis fondas* is an umbrella fund implementing the investment strategies of 4 equity instruments through separate sub-funds. One of those sub-funds is dedicated for the implementation of the Co-investment Fund II).

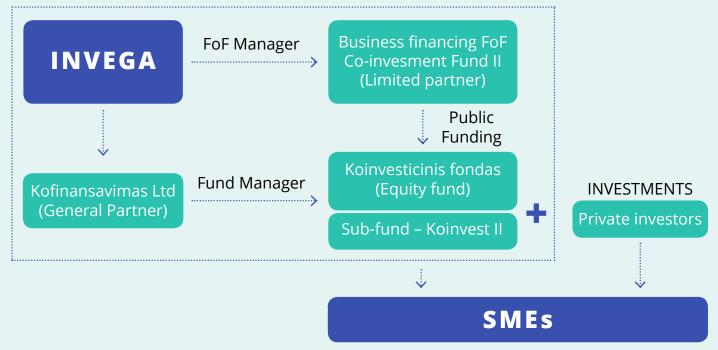


Figure 5 - Simplified scheme of the Co-investment Fund II implementation structure

#### **Funding and Partners**

MoEI earmarked €9.28 million from the Business Financing Fund (fund of fund), funded by the European Regional Development Fund, for the investments under Co-investment Fund II.

The main partners in case of this financial instrument are MoF (Managing Authority), MoEl, INVEGA (the financial intermediary), Kofinansavimas Ltd (fund manager of Koinvesticinis fondas) and private investors.

Koinvesticinis fondas invests the funds allocated for the implementation of Co-investment Fund II together (simultaneously) with risk capital funds and groups of business angels into Lithuanian SMEs. The selection of private investors and their inclusion on the List of Private Investors is carried out according to the Terms of selection of private investors. The potential private investor has to submit an application. The decision to include the private investor on the List of Private Investors is taken by the Investment Committee of Koinvesticinis fondas, if the potential private investor meets the eligibility requirements.

Eligible private investors, including risk capital funds or teams of business angels, are initiators of investments. When submitting request for the investment, private investors have to justify the viability and potential profitability of the investment. In addition, private investors must also submit the main terms of investment agreed with the company (term sheet). **Koinvesticinis fondas**' Investment Committee analyses the submitted request and, if necessary, conducts an additional due diligence. Three main aspects of the proposal that are assessed by the **Koinvesticinis fondas**' Investment Committee are:

- Company`s team;
- Business idea and model;
- Team of private investors, its independence and pro-activity.



# SELECTION OF PRIVATE INVESTORS ASSESSMENT OF REQUEST INVESTION AND INVESTING Private Investors idea and model Investing NEGOTIATION AND INVESTING

Figure 6 - Investment process of Koinvesticinis fondas

According to the investment strategy of the Co-investment Fund II, an additional private co-investment between 10-50% of each investment should be attracted at the level of final recipients (enterprises).

#### **Investment strategy**

Koinvesticinis fondas together with private investors invests on a deal-by-deal basis in SMEs, which have not yet distributed profits. Investments are made into potentially viable projects that are able to generate the expected investment returns and ensure rather easily predictable exits. Koinvesticinis fondas can invest in companies operating in the Republic of Lithuania or another EU Member State, but for the benefit of the Republic of Lithuania. Such investment in companies operating in another EU Member State cannot exceed 15% of the Co-investment Fund II.

At least 50% of the Co-investment Fund II has to be invested in companies implementing or intending to undertake R&D&I projects in the areas of Smart Specialisation Strategy.

#### The main investment conditions under Co-investment Fund II:

- Koinvesticinis fondas acts as a "silent investor" Koinvesticinis fondas transfers majority of its non-material rights to private investors who represent the interests of this fund.
- Koinvesticinis fondas invests in target company`s equity through new equity issue or in convertible bonds of up to 70-90% of joint investment.
- Koinvesticinis fondas expects to exit the investment after 5-7 years.
- Koinvesticinis fondas exits (sale or other disposal of investment) from the company not later than private investors with whom it has co-invested.
- When Koinvesticinis fondas exits the investment simultaneously with private investors, the terms of investment disposal must be at least as favourable as those offered to private investors.
- In case of disposal of investments, Koinvesticinis fondas cannot undertake any investment



impairment risks or commitments with respect to the company's relevant operating results or return on investments towards new investors.

• If the target company meets State Aid requirements, Koinvesticinis fondas' annual return is limited to 4% or 6% of annually compounded interest. The remaining return from Koinvesticinis fondas investment is distributed to private investors who co-invested with this fund.

#### Governance

INVEGA and its subsidiary Kofinansavimas Ltd have different functions in the implementation of Co-investment Fund II. INVEGA is responsible for the control and reporting to MoF and MoEI as well as registration of State Aid in the official register. Kofinansavimas Ltd selects private investors, implements the investment strategy of the Co-investment Fund II. Both INVEGA and Kofinansavimas Ltd, are responsible for the marketing and publicity activities of the Co-investment Fund II.

#### IMPLEMANTATION / ACHIEVEMENTS

#### Financial products: terms and final recipients targeted

#### Criteria for the companies

Koinvesticinis fondas in case of Co-investment Fund II can invest in:

- companies, which meet all of the State Aid requirements at the time of investment. In the case of these investments, the rules on the allocation of income with a limited maximum Koinvesticinis fondas return apply.
- SMEs which fail to comply with the State Aid requirements at the time of investment. In case of such investments, the rules on the pari passu allocation of income between the private investor and Koinvesticinis fondas apply.

#### The largest share of Koinvesticinis fondas under Co-investment Fund II in the new company's capital

- If an investment is made in a micro/small enterprise which meets all of the State Aid requirements, the contribution to the specific investment can be up to 90% depending on whether an enterprise operates in the area of smart specialization and (or) is registered in the region.
- If an investment is made in SMEs, which fail to comply with the State Aid requirements, the contribution to the specific investment must not exceed 50%.

#### The maximum investment amount per company



- maximum €0,8 million investment in one micro or small enterprise which meets all of the State Aid requirements
- maximum €1.6 million investment in one innovative micro or small enterprise, which meets all of the State Aid requirements. The definition of innovative company is provided in Article 2(80) of Commission Regulation (EU) No 651/2014.
- maximum €1.6 million investment in one medium-sized or micro/small enterprise, which fails to comply with the State Aid requirements.

#### **Achievements**

Koinvesticinis fondas started its activities in 2017. The first years were inessential and dedicated to the creation of a track record and promotion of the fund to the other potential private investors and to targeted final recipients (companies). As of the end of Q1 2019:

- 102 business angels and risk capital fund management companies were selected as eligible for investing together with Koinvesticinis fondas;
- 4 enterprises received investments for the amount of EUR 1.76 million invested from the Co-investment Fund II as well as EUR 0.92 million from private investors.

TABLE 1 – ACHIEVEMENTS AGAINST TARGETS						
INDICATOR	TARGET UNTIL 31/12/2023	ACHIEVEMENT UNTIL 31/03/2019				
Number of SMEs supported (out of which implementing R&D&I projects under Smart Specialization Strategy)	28 (16)	4 (2)				
Number of new enterprises	4	1				
Private investments attracted	€ 7.2 M	€ 0.92 M				



#### OUTLOOK

The beginning of the implementation of the financial instrument Co-investment Fund II showed the strong need to strengthen the cooperation between business angels. Until 2018 business angels in Lithuania were operating either individually or were occasionally partnering up for private initiatives only. Lithuania was the only Baltic country that did not have a network of business angels.

The highly anticipated Lithuanian Business Angel Network – LitBAN was launched on the 14th of March 2018. LitBAN was initiated by a group of business angels operating in Lithuania and was strongly supported by INVEGA and Kofinansavimas Ltd.

The main task of LitBAN at the beginning of its activity is to publicize the possibility to attract investments from business angels and investment syndication. It is expected that LitBAN will further strengthen the local start-up ecosystem and enable new business ideas to mature and will genarate the pipeline of investments into start-ups for Koinvesticinis fondas.





Governments justify intervention in the VC market with two basic arguments: first, market failures are responsible for unsatisfactory low levels of funding and second, VC markets produce positive spill-over effects for the economy as a whole due to their beneficial impact on employment and innovation. Public policies to promote VC investments have an important multi-level governance component. In the EU, industrial policy (such as public VC funds), as well as taxation, are, to a large extent, competences of the member states. Nevertheless, the limited integration of the European VC industry calls for coordination and even pooling of these activities at European level.

In Europe, government agencies are the most significant investor group in the VC market. In their role as investors, public agents enjoy a substantial degree of discretion as they are directly involved in the allocation of financial resources. This can help to promote strategic sectors that are not yet competitive, but it also carries the risk of inefficient favouritism. Despite mixed evidence of the efficiency of government, VC funding and the theoretical question as to whether public actors are as suitable as private investors to select the most promising portfolio companies, public money is undoubtedly an important stabilizer in times of crisis. The key goal of public investments in the development of a profitable and self-sustaining private market. To achieve this, public agents have to be careful not to replace or discourage private VC funding (crowding-out) but to leverage additional private investment (crowding-in). Furthermore, public agents may become so dominant that private actors start to rely on their "seal of approval" with regard to filtration and due diligence of portfolio companies rather than building up these capacities themselves.

However, there remain some challenges. First, crowding-in of private investors only works to a limited extent. Despite the significant leverage of public VC investments up to a factor of four, the overall size of the VC market still lags behind pre-crisis levels and has shown signs of recovery only since 2015. Furthermore, the dominant role of some public players may become problematic. One way to work against this challenging dependency would be to adopt a policy of "progressive withdrawal" from more mature funds. This recommendation is, however, at odds with the goal of many new public funds to promote growth-stage financing by supporting particularly successful private funds.

The second challenge is the limited cooperation and use of synergies between National Promotional Institutions (NPIs) and the European Investment Fund (EIF), particularly in southern European countries. Both, NPIs and the EIF, can contribute valuable capacities: NPIs have an in-depth knowledge of the local market and can be in a better position to identify suitable projects; the EIF gathers market insights across Europe and has the largest VC investor advanced operational and analytical capacities.

In recent years, more and more countries have adopted tax schemes targeted on VC investments. A comparison of capital gains taxes (CGTs) in the three largest European VC markets (Germany France and the UK) reveals significant differences in the attractiveness of tax schemes. CGTs are important for VC investors as the tax usually applies when investors or founders exit the portfolio company to realise a return on investment. A high CGT was found to be associated with fewer VC-backed companies. European governments have adopted numerous tax incentive schemes to make VC investments more attractive. However, the heterogeneity between national tax systems creates competition and also imposes transaction and information costs on international investors. This is why member states should adopt a single tax framework for VC investments in order to ensure transparent and non-discriminatory tax treatment of cross-border investments. The new framework should render the permanent establishment of VC funds and tax declaration in multiple member states obsolete.

The venture capital industry is an important catalyst for a thriving start-up ecosystem. National equity instruments and tax incentive schemes are well suited to address country-specific challenges and reduce risks for private investors, but they are less successful in stimulating cross-border investment. To the contrary, many national policies promote a local investment focus and create barriers by raising transaction costs for international investors. Market fragmentation, however, one of the key reasons why the European VC market performs below potential.

On the basis of these factors, we can identify two key policy instruments through which the EU and its Member States can promote risk capital: public VC funds and tax incentives for VC investors. While in both areas policymakers have been busy improving their toolboxes,

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