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Creating a Better Business Environment for Financing Business, Innovation and Green Growth

by

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Modern economies are increasingly reliant on innovation to improve their competitiveness and generate growth. However, the financing of innovation in Europe exhibits weaknesses that have been exacerbated by the recent economic and financial crisis, and which could have a material adverse impact on economic growth if left unchecked.

This paper explains the European Investment Bank Group's role in creating a better environment for financing business, innovation and green growth. It briefly presents to the reader the current challenges, both in relation to the availability of equity financing for earlier-stage business, innovation and green growth, but also the stark evidence of a continuing gap in bank lending. Moreover, it provides examples of ways that the financing of innovation can be improved against the backdrop of a flexible, business-oriented EU framework.

JEL Classification: E2, G1, G2, G3, H44, H54, H81.

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I. Introduction

Innovation is essential for growth

Growth in modern economies is based on efforts to increase productivity through innovation, and innovation is an essential precondition for technological and structural changes, as well as a contributor to growth and competitiveness.

Innovation needs to be managed based on long-term decisions

Innovation management means not only the operational control of processes, but also the strategic management of a firm. A fundamental component of strategic innovation management is the long-term decision to innovate, which is accompanied by the need to establish structures and resources for the acquisition of technology.

Financing restrictions hamper innovation

The latest Community Innovation Survey shows that in the EU27, 52% of enterprises in industry and services reported innovation activity (between 2006 and 2008). The highest levels of reported innovation were in Germany (80%) and Luxembourg (65%), and the lowest in Latvia (24%) and Poland (28%). [1] Often, firms reported having ideas for technically feasible and customer-demanded innovation but that they lacked the resources to implement them; hence, financing restrictions are reducing innovation activities at the firm level.

This is also confirmed by empirical studies. For example, the European Commission (EC) in 2009 consulted more than 1,000 enterprises and 430 innovation intermediaries with the result that two main factors were seen as hampering innovation activities in enterprises: *(1)* lack of access to financing (70%); and *(2)* innovation costs that are too high (65%).[2] As a consequence, many firms have to rely on internal funding. The level and availability of internal funding, however, depends not only on the firm itself, but also on the business environment. Hence, policies aiming to boost growth must look beyond pure financial support to the entire business-enabling framework, including well-functioning labour, product and financial markets (in this context, aspects of the European Small Business Act are highly relevant).

In addition to internal funding, external finance (equity and debt) is also very important for companies seeking to commercially exploit new ideas, technologies, inventions or other scientific or market knowledge. However, the markets for external equity and debt financing are facing many challenges; in the following section, we take a general look at equity financing.[3]

II. A challenging environment – the VC market in Europe[4]

Lifecycle of innovative enterprises

A number of stages can be identified in the lifecycle of innovative enterprises:

- Pre-seed stage, encompassing initial research and development;
- Seed stage, covering the establishment of the enterprise;
- Start-up stage, covering development of the product;

- Early growth stage, covering small scale commercialisation and scalability studies;
- Expansion stage.

J-curve cash flow and business risk require seed-stage firms to rely on internal funds or venture capital

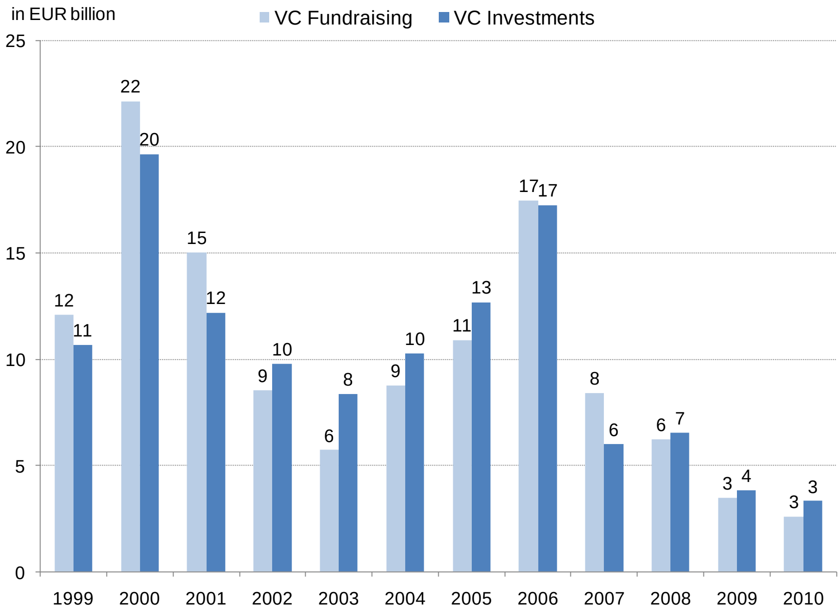
The cash flow of an innovative enterprise typically follows a so-called J-curve: negative cash flows during the seed and startup stages, with cash flows becoming positive at the early growth stage. Debt financing, which requires guaranteed regular repayments, is often not suitable for young, innovate enterprises, since they tend to have prolonged negative cash flows, a high risk level associated with their activities, and a preponderance of intangible assets.

Instead, such enterprises, at least in their early, "seed" stage, have tended to rely on financing from the founder's own funds, and funds from family and friends. However, the extensive pre-revenue costs associated with innovative products mean that this source of funding is quickly exhausted, if available at all. As a result, alternative financing is often sought, usually in the form of equity finance. This tends to be provided in the form of venture capital (VC) – either formally by seed funds or venture capital funds, or informally by business angels. As a rule of thumb, these three VC categories tend to invest in the following ranges:

- Business Angels: from EUR 15 000 to EUR 400 000;
- Seed capital funds: from EUR 200 000 to EUR 1m;
- Venture capital funds: traditionally EUR 1-5m.

Venture capital investment has always been characterised by a pattern of boom and bust, as Figure 1 demonstrates.

Figure 1. VC funds raised/invested in Europe



Source: EIF, based on data from EVCA/PEREP_Analytics.

Venture capital investment has been characterised by a pattern of boom and bust

Demonstrated good returns in the venture-capital industry throughout the 1990s (particularly in the US), combined with technological innovation (particularly in the IT sector) led to a flood of capital flowing into the venture capital industry in Europe. However, this resulted in many new, inexperienced VC funds being financed, and many poor investments being made at inflated prices. Nowhere is this more evident than in the spike during 2000, at the time of the dot.com boom; during the ensuing bust, the amount of funds raised fell dramatically, which clearly affected the ability of VC funds to invest. Similarly, there was a general buildup in funds raised and investment in the years preceding the 2008 financial crisis. This occurred in spite of the relatively poor returns achieved by the VC industry during that period.

The global financial crisis has tightened financing conditions

The global financial crisis affected both the supply and demand sides of the financing equation. On the demand side, the crisis has had a severe adverse impact on access to financing by small business, with access to credit tightening across the board. Survey evidence suggests that this has led to increased demand for equity financing by enterprises that would have used debt issuance in the past. This has resulted in even more competition for limited business angel and venture capital funds. On the supply side, rather than making new investments, funds and business angels have focused on maintaining the health of their existing portfolio companies and ensuring they have enough capital to do follow-up financing of existing investments.

The supply side has been further affected by the fact that there are fewer funds available. Venture capital funds have struggled to raise funds because their limited partnership (LP) investors have also been affected by the crisis.

The equity gap for riskier, early stage financing is being closed by public funds

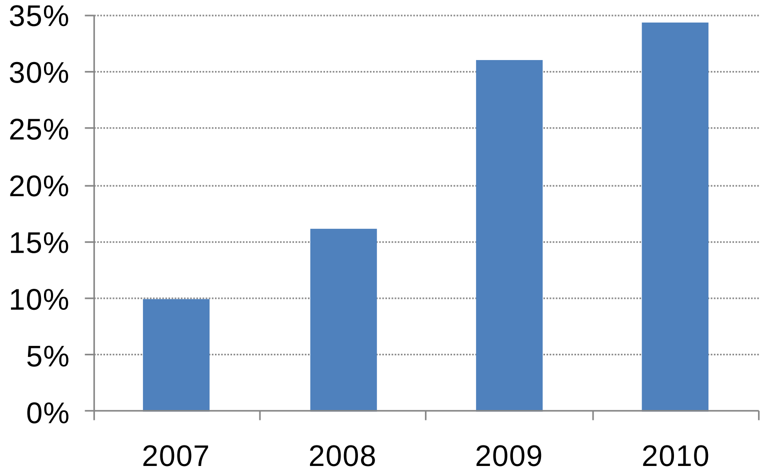
The crisis has also led to a structural change in the supply of VC funds. VC funds with money to invest have become less willing to take on the risk of early-stage innovative enterprises, being deterred in these uncertain economic times by the liability of having to supply the multiple rounds of financing often required by such enterprises. The bulk of venture capital (around 70%) is now allocated to early-growth or expansion-phase companies, which are less risky. As a consequence, venture investments have migrated towards the EUR 3m to EUR 5m range, giving rise to a growing equity gap in the EUR 1m-Eur 3m range, which policy makers are increasingly having to try to fill with public funds.

Public funds have assumed increased importance in the early-stage sector during the current economic climate. Government agencies (including the European Investment Fund) provided more than 30% of the funds raised by VC funds (from identifiable sources in Europe) during 2009 and 2010 (Figure 2). The overall increase is partly the result of declining overall fundraising; however, the absolute contribution of government agencies has increased by almost 80% over the past three years.[5]

Economic uncertainty has led to an impasse

As a result of these supply and demand factors, financing activity has been subdued. Economic uncertainty has also meant that the valuation of enterprises has become more difficult, and this has lead to an impasse between investors and entrepreneurs, unable to agree on valuations. Even those funds with money to invest have struggled to find appropriate new ventures.

Figure 2. Share of government agencies in total "known" VC funds raised



Source: EIF, based on data from EVCA/PEREP_Analytics.

III. The EIB Group and its efforts to create a better financing environment

The EIB and EIF play an important role in the financing of businesses, innovation and green growth

The European Investment Bank Group (EIB Group) is the European Union's financing institution; it plays an important role in the long-term financing of businesses, innovation and green growth. (Shareholders are the 27 Member States of the Union, whose Finance Ministers comprise the EIB's Board of Governors).

The EIB Group consists of the European Investment Bank (EIB) and the European Investment Fund (EIF), which joined forces in 2000 to mobilise financial support for European Union (EU) objectives. Founded in 1994, the EIF is the EIB Group's specialist provider of risk financing for small and medium-sized enterprises (SMEs) across Europe. The EIF is owned by the EIB, the EC and a wide range of public and private banks and financial institutions. The EIF does not provide financing to SMEs directly but via a wide range of financial institutions, banks and venture capital funds involved in SME funding. By providing support and guarantees for SME financing, the EIF promotes the implementation of European policies, notably in the field of entrepreneurship, technology, innovation, growth, employment and regional development.

The classic lifecycle graph (Figure 3) outlines the existing areas of intervention by the EIB Group in the financing of growth businesses, innovation and sustainability. Early stage SME financing is undertaken by the EIF (marked in light blue), while the EIB (marked in dark blue) is very active in funding later-stage companies and projects.

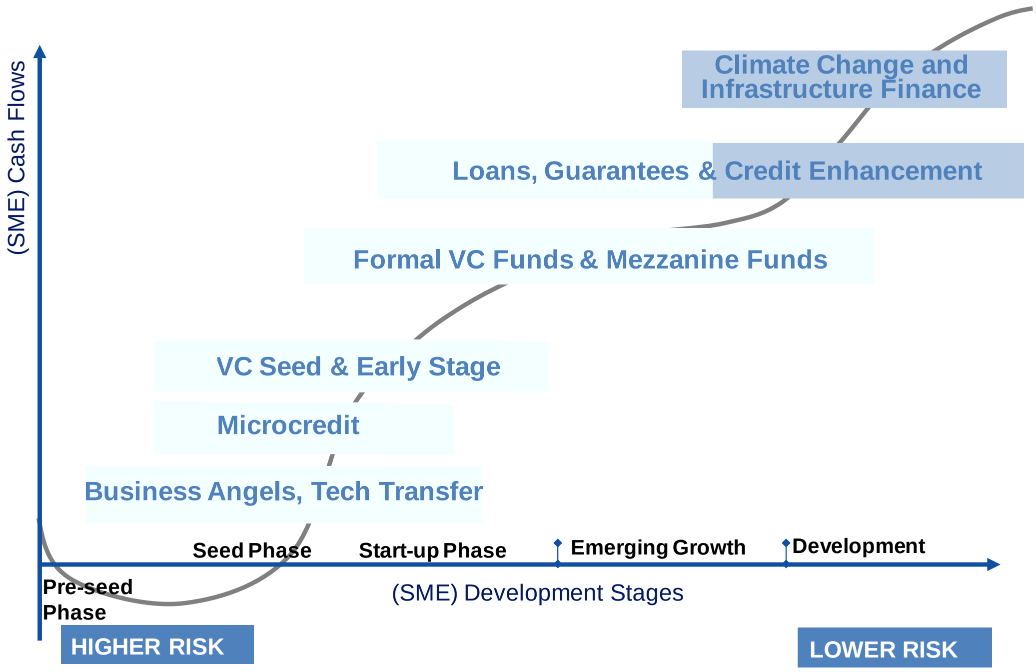
As guarantor and credit enhancer of loan and leasing portfolios, the EIF is a catalyst for

As a Fund of Funds and as guarantor and credit enhancer of loan and leasing portfolios, the EIF relies on a mix of European resources, own capital and Member state budgets to share risk and catalyse private sector funds and banks to increase their investments into high-growth and technology driven enterprises, providing a wide range of financing solutions. All of the EIF work

private sector funding

is done by a team of over 200 professionals (100% policy driven but 100% market oriented).[6]

Figure 3. The EIB Group's product range for financing business, innovation, and green growth



Source: EIF.

The public sector has an important role to play in improving the business environment

It is well-recognised that government and public institutions play a very important role in creating a better environment for financing business, innovation and green growth. In this context, the 2010 OECD study "What Government Can do to Make a Difference" makes it clear that the EIB Group needs to promote a wide range of financing options: "public initiatives to support SME growth and especially innovation are often centred on improving SMEs investment readiness (to access equity financing). It would be equally important, however, to encourage credit readiness."[7]

The EIB Group is developing the next generation of PPP models

The EIB Group, in very close collaboration with the European Commission and with a network of other International Financial Institutions, is working intensively on a new generation of financial instruments designed to meet the challenges that we have briefly summarised above. The work is ongoing and will be completed later in 2011, in line with the timing of the European Council's and European Parliament's decision-making sessions. Here, we outline our current thinking on this effort and some of the early proposals. The key ingredients for success are the following:

- The transformation of a significant percentage of national and EU budgets from grants and subsidies into revolving financial instruments, invested by market-oriented professionals. Future models of public financing intervention must also involve a better combination of grants, equity co-investments, loans, guarantees and fiscal incentives.

- The structuring of those financial interventions to reflect the risk profile and potential return – financial, social and environmental.

- Public budgets to stimulate growth should be used to catalyse private sector investment. This is the next generation of PPPs (Public Private Partnerships). It is worth noting the "State of the Union" speech by US President Barack Obama in January 2011, in which he specifically underscored the importance of catalysing national priorities via public funding and extensive PPP in order to out-innovate, out-educate and out-build the rest of the world.

To further illustrate these ingredients for success we show three concrete examples of initiatives that are in the early stage of their development but that show the path creating a better financing environment.

1. Project Bonds

Unprecedented investment will be needed in Europe's infrastructure

Over the next decade, unprecedented investment in Europe's transport, energy (both renewable and conventional), information and communication networks will be needed. Preliminary estimates point to investment needs of between EUR 1.5 trillion and EUR 2 trillion. From now until 2020, EUR 500bn is estimated to be needed for the implementation of the Trans-European Transport Network (TEN-T) programme. In the energy sector, public and private entities in the Member States will need to spend around EUR 400bn on distribution networks and smart grids, another EUR 200bn on transmission networks and storage, as well as EUR 500bn to upgrade and build new-generation capacity between now and 2020. Last, but not least, it is estimated that between EUR 38-58bn and EUR 181-268bn capital investments are required to achieve the Commission's broadband targets.

Tapping capital markets has become difficult after the financial crisis

Capital market issuance of long-term debt for the financing of greenfield infrastructure projects (Project Bonds) has come to a virtual halt as a result of the financial crisis. During the construction phase, in particular, such projects are considered low investment-grade at best. Only upon completion of construction and the confirmation of operating results, can the risk profile edge up into the higher investment-grade category. Long-term investors, notably pension funds and insurers, lack the appetite for low investment-grade risk, however. Most of them do not have the specialist expertise required to structure projects and carry out the resulting analytical and administrative follow-up. (In the past, such tasks were performed by monoline insurers; coupled with the credit enhancement of the underlying Project Bonds, this type of debt had become acceptable to institutional investors.) Long-term liquidity that used to be provided by banks has also declined significantly, as banks have become increasingly concerned about their own balance sheets and capital position. The EIB has stepped in to provide some of the missing liquidity. In order, however, to address the huge infrastructure needs, the return of the capital markets as a provider of long-term financing is essential.

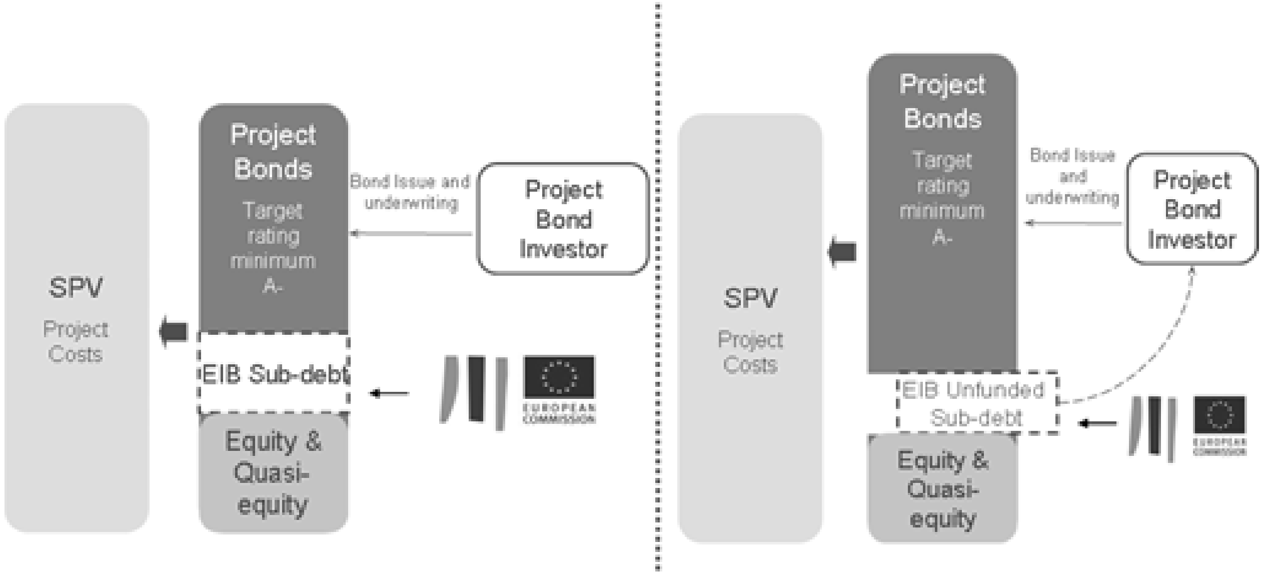
The credit enhancement of

The Project Bond initiative will use EU funds to attract additional private-sector financing for individual infrastructure projects via the issuance of

Project Bonds is intended to attract private sector financing

subordinated debt, based on unfunded or funded credit enhancement techniques (Figure 4). The principal idea behind Project Bonds is to provide EU support for project companies issuing bonds to finance large-scale infrastructure projects. The EC's key role will be risk-sharing with the EIB (or other financing partners), enabling it to provide guarantees or loans to support such bonds. To achieve this goal, no bond issuance will be required by Member State governments, the EU or the EIB.

Figure 4. Project Bonds



Source: EIB Group.

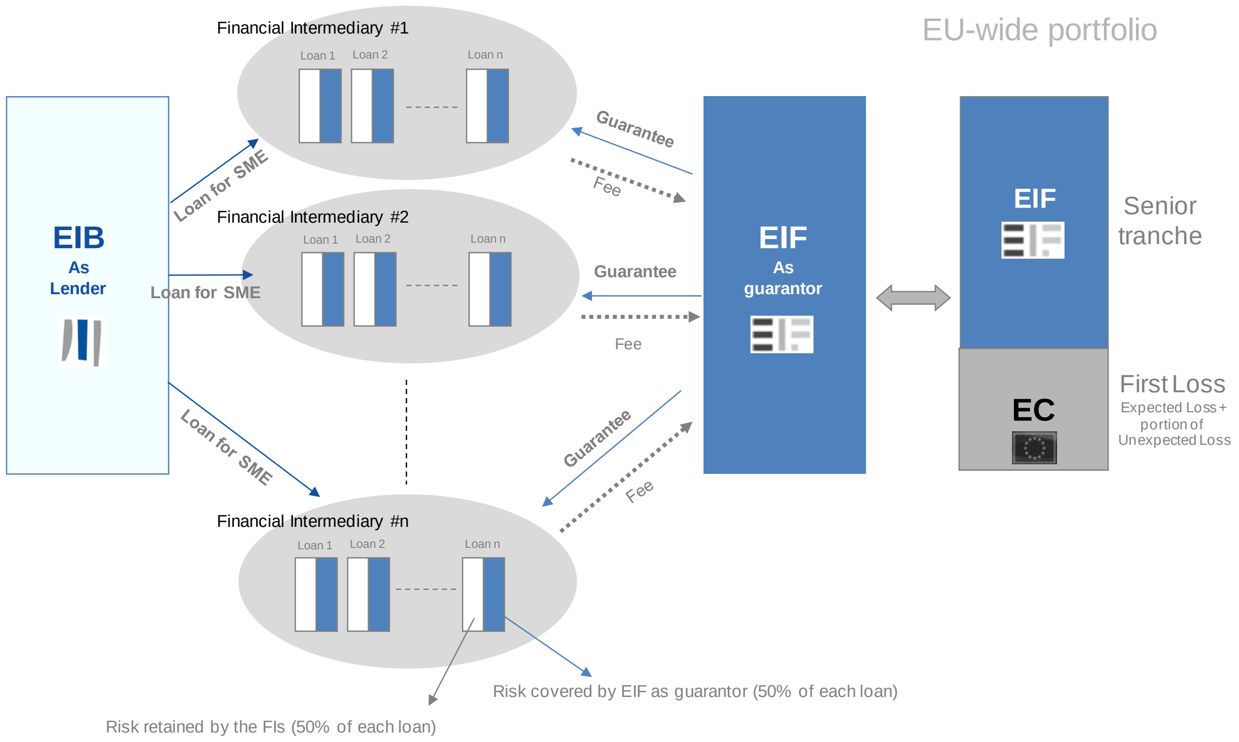
2. *Risk sharing for innovation*

Risk sharing in order to extend financing to small, innovative firms

A second initiative is risk-sharing instruments that support innovation: The objective here is to incentivise banks and other financial intermediaries to extend financing primarily to SMEs, but also to smaller mid-caps with significant research, development and innovation activities, through effective portfolio credit-risk transfer (via a guarantee). Figure 5 provides a diagrammed overview of the idea.

The aggregation of sub-portfolios at a European level would allow for diversification (EU-added value) that would otherwise have been unattainable at the national level, in addition to the EIF's usual risk-taking. The guarantees provided by the EIF through such instruments would provide significant economic-risk coverage for the participating financial institutions.

Figure 5. Basic structure of risk-sharing products to support innovation



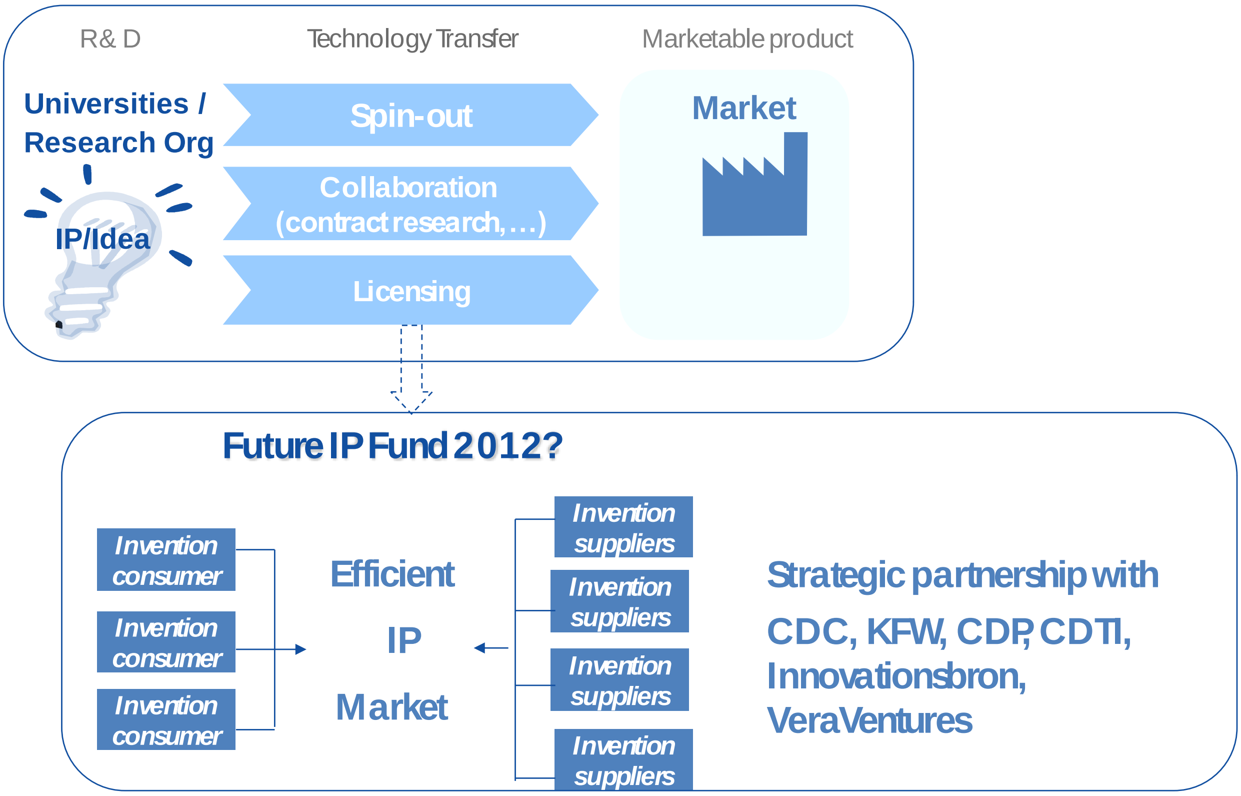
Source: EIF.

3. *Intellectual Property (IP) Financing*

The strategic partnership investment fund should act as catalyst for the European IP market

During the past several years, the EIF's Technology Transfer (TT) activities have supported the commercialisation of research innovations. A third initiative, which we exemplify below, is related to these TT and IPR (Intellectual Property Rights) activities. The idea is the creation of a strategic partnership[8] to fund IP and to play a catalytic role in the European IP market at a crucial time in its development. The IP fund would provide European universities, research laboratories, innovative SMEs and corporations a viable mechanism for monetising their inventions. The design of the IP fund is based on the assumption that by gathering a large number of patents it will be possible to establish IP clusters, which are increasingly necessary for large companies as well as SMEs developing innovative products and services. The IP fund will invest in patents, often by licensing the IP as well as the right to sub-license, while in other cases it will acquire the IP outright. The fund would then regroup patents in clusters and license these to end users, possibly with a focus on allowing SMEs access to the IP, and where appropriate, act as an efficient channel for EU research to reach the marketplace.

Figure 6. Diagram of EIF's TT and IP activities



Source: EIF.

IV. Concluding remarks

To conclude: we have shown that the financing of business, innovation and green growth faces significant challenges in regard to accessing venture and equity capital, but also in regard to debt financing.

Financing growth with public support to crowd-in private capital via new products and instruments

In this context, public financing is very important, but it is just as important to realise that public support alone cannot be the only solution – it needs to play a catalytic role to attract private financing and to crowd-in private investors. Moreover, public financial support cannot remove the risk associated with innovation activity at the firm level – and it should not attempt to do so; however, public financing can be used to make the innovation phase more attractive to private investors. Innovation takes place in markets, and the market participants know best where the needs are and where technological developments are leading.

There is intensive collaboration between the EIB Group and the European Commission regarding the design of financing products and instruments in context of the Europe 2020 strategy. Moreover, there is intensive co-operation between the EIB Group, Member States, and national operators in order to achieve subsidiarity, on the one hand, and European Added Value on the other.

The bottom line: we need innovative solutions to finance innovation

In order to create a better environment for financing business, innovation and green growth, there need to be new breakthroughs and demand-driven approaches – keeping in mind that it is impossible to design “catch all” instruments. We could even say we need innovative solutions to finance innovation (in the sense of Peter Drucker that innovation is the change that creates a new dimension of performance).

In this article, we exemplified three different approaches targeting project finance, SMEs’ innovation activities, and Intellectual Property; all of them require significant financial engineering and are important steps toward moving away from grant-driven support.

Notes

1. Eurostat (2010).

2. European Commission (2009).

3. For the sake of example, we briefly focus here on financing issues in Private Equity/Venture Capital. As mentioned earlier, there are also many financing issues in regard to the debt market (drop in loan growth to the private sector by banks, the tightening of lending conditions, etc), which we cannot cover here in detail. For detailed information see for example the ECB’s bank-lending surveys (http://www.ecb.int/stats/money/surveys/lend/html/index.en.html) or ECB (2011).

4. This section is based on Kelly (2011).

5. The EIF plays a crucial role in the European VC market; it provided around 8% of total VC funding, and 37% of the funding provided by government agencies in 2009.

6. In this article, we cannot provide an overall picture of all the financing solutions of the EIB Group (and the related impact); hence, we refer the reader to the respective web pages for more detailed information: www.eib.org and www.eif.org. An overview of the SME-related activities of the EIB Group can also be found in United Nations (2011).

7. OECD (2010), p. 36.

8. Currently, the members of the partnership are CDC (France), CDP (Italy), CDTI (Spain), EIB Group, Innovationsbron (Sweden), KfW (Germany), VeraVentures (Finland).

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