


# ***Mid-Term Evaluation of the Risk-Sharing Financial Facility (RSFF)***

*Final draft of the Group of Independent Experts<sup>1</sup>*

*(July 31<sup>st</sup>, 2010)*



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<sup>1</sup> This is the final draft of the Mid-Term evaluation report of the group of experts. We are particularly grateful for the many useful comments received from the European Commission and the EIB. The present text has been written, however, under the sole responsibility of the group of experts.

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<sup>2</sup> *The composition of the Expert Group has been established in compliance with the first sentence of Article 1.1 and with Article 1.3 of the Commission Decision on the Creation of a group of independent experts for the mid-term evaluation of the Risk-Sharing Finance Facility (C(2010)6 - 8-1-2010) and the Commission decision amending Commission Decision C(2010) 6 (C(2010) 3921 - 17-06-2010) :*

*- First sentence of Article 1.1: "A group of maximum six independent experts is established to carry out for the Commission a mid-term evaluation of the Risk-Sharing Finance Facility."*

*- Article 1.3: "The independent experts shall be appointed from the list of proposed independent experts in Annex II, under the responsibility of the Commissioner for Science and Research."*

*As a consequence of the above, taking into account availability of identified independent experts, the EG was composed of 6 members, including the Chair and the Rapporteur.*

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## Executive Summary

*The Risk-Sharing Finance Facility (RSFF) introduced in 2007 was the first “European scale programme” to use **debt-based finance** to complement the more traditional financing means for Research, Development and Innovation (RDI) such as grants as under the European Commission’s Framework Programmes (FP), or equity as provided by the European Investment Fund (EIF). Over the relatively short period of its existence – the first three initial years of rolling out this new facility: the period analysed here as part of the mid-term evaluation – the RSFF turned out to represent a particularly welcome instrument for addressing debt financing of RDI in Europe. As the financial crisis unfolded, the market imperfections with respect to loan finance for RDI investments did not just increase substantially, they became to some extent ubiquitous. RSFF remained one of the few financial instruments available to innovative firms and organisations to maintain RDI activities in a period of major financial stress. Thus, it helped some of the most innovative firms in Europe to maintain their RDI investment and reinforce their financial position at a time when banks and other financial institutions were reducing access to finance for high risk investments, while also providing loan finance to those innovative SMEs not interested in private equity funding.*

*The quantitative success of the RSFF has been partly due to the increased needs for RDI financing by the current banking and financial crisis – meeting the EIB’s strict credit quality as well as the EC/EIB policy objectives, RSFF outlays reached 65% of the total targets at mid-term versus the expected 50%. The success of the RSFF is also the result of the close collaboration between the European Commission (EC) and the European Investment Bank (EIB), using the latter’s existing technical, sectoral expertise and risk management capabilities, and building on the former’s expertise in pulling together interested RDI parties across Europe under headings such as European Technology Platforms (ETP), the Joint Technology Initiatives (JTI) or more recently the Strategic Energy Technology (SET) plan. Success has additionally been achieved through the EIB’s commitment to develop new financing products to meet the needs of various, so-called “pathfinder” projects which can be replicated by other entities in the same sectors. It is in this sense that RSFF has been particularly effective in providing increased access to and ‘credit enhancement’ for RDI activities in Europe. With the coverage of the expected and most of the unexpected loss through the provision of risk capital by the EC and the EIB, the remaining credit risk could actually be enhanced and even rise over time to investment grade category.*

*On the basis of all the evidence presented to the EG by the EC and the EIB, the evaluation report of the independent EIB Evaluations Operations unit, field visits as well as interviews with a relatively wide spectrum of highly diversified customers of the RSFF, the EG considers the RSFF a uniquely innovative, demand driven instrument, successfully introduced in the research funding of the EU within FP7 and having dramatically expanded the financing for RDI. In fact, RSFF has had a dual leverage effect: on research allowing for the utilisation of debt financing in areas which were up to now largely dependent on grant funding; and on private capital investors by helping them to remain involved in the financing of riskier activities such as RDI even in crises times as shown in the peak period of 2008-2009.*

*Furthermore, the implementation of the RSFF, at a particularly difficult moment in time, appears to have been carried out in a highly efficient and effective manner. A significant amount of learning is taking place both at*

*the EIB and the EC with respect to the most efficient ways in which to manage such a new, riskier financial instrument, as well as with the careful and yet time efficient ways in which the eligibility of RSFF projects for the FP7 EC window have been decided.*

*The EG is therefore highly positive about the first rolling out phase of the RSFF. The 10 recommendations listed below and presented at greater length in Part II all reflect this positive attitude.*

- 1. We recommend that the Second Phase of RSFF from 2011-2013 should be rolled out as foreseen from the outset and that the EC submit to the European Parliament and Council the release of the EC contribution of up to € 500 million to the RSFF under the conditions foreseen in the FP7 legal basis.**
  
- 2. In light of the financial crisis, we urge that RSFF should take into account the market needs for a higher volume of risk based financing. Since the EIB is intrinsically limited in its risk-taking capacity given its reputation in the financial market and its extensive risk-taking coverage at the moment, we propose that the RSFF authorities reflect on opportunities to utilise part of the EC contribution within the present RSFF Agreement as a first-loss piece<sup>3</sup> for specific sub-sectors e.g. for some target groups like Research Infrastructures and SMEs.**
  
- 3. We urge the EIB and the Commission to increase the numbers and range of SMEs financed under RSFF in a proactive way: we would like a stronger, more specific emphasis in the second phase of RSFF on financing RDI-intensive SMEs through a range of appropriately specialised intermediaries whether banking or non-banking institutions. In particular new ways in order to offer the RSFF both nationally and regionally in collaboration with partners should be explored. For the future, we therefore welcome the outline proposal for a FRISBEE scheme (Facility for Research and Innovation by Small Business Enterprises in Europe) providing to EU technology-driven/innovative SMEs a single, simple and more adapted scheme<sup>4</sup> to support them from the generation of knowledge until commercialisation (e.g. including risk-sharing mechanism for lending operations) and involving specialized national or regional financial institutions<sup>5</sup>.**

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<sup>3</sup> *The definition of first-loss piece is explained in more detail in Part II below (p.49).*

<sup>4</sup> *One should note that the FRISBEE (Facility for Research and Innovation by Small Business Enterprises in Europe) scheme is so far only work in progress/part of future financing instruments and not an existing scheme. It addresses the specific concerns of SMEs: firms could now submit a proposal alone, would be an open application with no deadlines, IPR often very important for SMEs would be granted, support could be provided through a possible combination of grants and lending/equity finance/participation/mezzanine finance, etc.*

<sup>5</sup> *See also Recommendation 10 below under section 2.*

4. We recommend that the EC and the EIB reflect on the use of RSFF as a means of increasing the resources available to universities and research organisations to complement their existing sources of financing, for their investments in Public Private Partnerships as well as to Research Infrastructure projects of European interest, to enable them to undertake investments necessary to the fulfilment of the smart public policy objectives of Europe 2020. This could be done by the EC taking a different risk-sharing approach to the use of RSFF resources while also taking into account the complex and difficult nature of the investments involved as well as their limited own revenues available to be dedicated to repay RSFF loan finance.
  
5. Given the effectiveness with which the RSFF has been rolled out over the first phase and the strong need for an increase in 'credit access and enhancement' for RDI activities in Europe, there is a need to increase the risk-sharing capital contribution for RSFF beyond that initially foreseen. The Expert Group considers it therefore important, in view of the results of the first phase of RSFF, for the risk profile of the EC window of RSFF to be expanded to bring it into line with the risk profile applied for the EIB window. The Expert Group also considers that the needs of certain specific categories of RDI-intensive sectors could also be met by using RSFF to finance equity in innovation funds and other comparable instruments. As far as the EC contribution is concerned, such contribution should come not just from FP7, but should equally come from e.g. unused agricultural funds under Heading 2<sup>6</sup> of the current budget review as well as from the unutilised funds under the EERP Programme. As a side effect, it would incite potential promoters to apply for RSFF more actively in the agro-food business sector as well as in Renewable Energies, Climate and the Environment. The EG recommends that an additional EC contribution of up to € 500 million to RSFF for 2011-2013 should be made, coming from FP7 (SP 'Cooperation') and/or non-FP7 resources. Given the high demand for RSFF and the effectiveness of RSFF in leveraging private funding today, such an additional EC contribution will allow for an even more effective rolling out of the second phase of RSFF and contribute directly to the EUROPE 2020 policy objectives of an increasingly smart and sustainable economic growth throughout the EU.
  
6. We are concerned that the current proliferation of EIB/EC implemented financial support schemes for RDI as part of EUROPE 2020 could make access to finance for RDI in Europe more complex and somewhat opaque. Especially as many of the new schemes designed and implemented are likely to be earmarked to particular groups and sectors, and will hence be governed by different sets of rules and regulations. We recommend that care should be taken when such programmes are established for RDI and SME financing instruments and funds and then monitored through regular evaluation to ensure their effectiveness as well as to develop greater synergy and complementarity between sectors and financial instruments and funds. A certain degree of rationalisation of existing/future financial schemes should be targeted.

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<sup>6</sup> Budget 2007-2013 - Heading 2 (Preservation and management of natural resources) includes the common agricultural and fisheries policies, rural development and environmental measures, in particular Natura 2000.

7. The RSFF should be continued beyond 2013, and become a specific - more visible - part of FP8, with a dedicated Community funding of no less than € 5bn under the EC window. Moreover the EC window should not only cover R&D but also Innovation (e.g. RDI). Furthermore the EC Risk Capital that will be released when the current RSFF loans are repaid from the EC window under the present RSFF (net of any loan losses) should be added to that € 5bn. The substantial volume of those figures should be seen in perspective: notably the structural need for Europe to invest more in RDI to improve growth and competitiveness; the proven capacity of RSFF to meet rapidly growing demand from a significant range of entities throughout the EU-27 in line with the objectives of FP7; the expected success in addressing the needs of currently underrepresented groups in RSFF; and the additional resources RSFF is capable of leveraging from third party investors both over the short and long term for future RDI investment.
8. RSFF should be monitored regularly and in a transparent manner.
9. The NER 300 programme<sup>7</sup> for Carbon Capture and Storage and Renewable Energy will provide a substantial source of grant funding at Community level for a specific number of technologies and projects per country. However, the EG wishes to highlight the fact that such grant funding will only be available to meet the needs of projects to the extent that they are not commercially viable. The EG considers that these additional resources for programmes such as CCS and Renewable Energies are a necessary and welcome response to the development of the EUROPE 2020 objectives for sustainable development. Again this implies that additional debt sources such as RSFF will be required. The EG recommends that the EC and EIB take the necessary steps, not only to ensure that RSFF is available to support the financial development of these sectors but also to work in collaboration with third party financial institutions both as investors and as lenders to further extend the availability of risk based financing.
10. We recommend, as a complement to the existing RSFF facilities, the development of new forms of public private Risk-Sharing Financial Facility to meet RDI needs in regional development areas: a RSFF programme for research and innovation with a dedicated SME & Midcap windows drawing upon the experience of the existing JEREMIE financial programme. Such a public-private partnership should blend European budgetary resources (structural funds) and risk based debt financing resources through the EIB (and possibly other financial intermediaries) and should be based on a different risk sharing concept given the grant nature of the Structural Funds. Moreover, it would provide a window of opportunity in difficult public funding times, significantly raising the effectiveness of European regional policy and hence also contribute to the EUROPE 2020 inclusive growth objective. It will be particularly useful in MS' regions where local banks are as yet insufficiently willing to invest in risky projects.

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<sup>7</sup> The New Entrants Reserve (NER300) of the EU Emission Trading Scheme (which will be operational from 2013 onwards) aims at investments in Carbon Capture and Storage (CCS) and Renewables.

*The development of RSFF and its successful utilisation as a risk-based debt financing instrument in support of RDI-intensive investment in strategic sectors identified by FP7, has achieved very considerable results on an EU-wide scale in the 3 years since its launch. RSFF itself has been an important European innovation in RDI financing and serves as a powerful lesson and encouragement to what can be achieved by the judicious combination of risk-based capital from the EU-budget and EIB's financial resources, expertise and effective programme management. In the "Political guidelines for the next Commission" (3 September 2009), President Barroso mentioned the RSFF as "an excellent example to build on" in order to "improve the blending between grants from the EU budget and EIB loans" and, in general, to further intensify the partnership between the EC and the EIB. At the end of this mid-term evaluation, the EG fully shares these views, RSFF appearing clearly as a model example to be further developed and intensified.*

*In conclusion, the EG considers and recommends that the EC and EIB should continue to pursue the deepening and widening of their joint financing activities in support of strategic RDI-intensive activities as set out in this report; operate well-targeted programmes that learn the various lessons that can be drawn from this EG report as well as the EIB Evaluation Report on RSFF but above all to prioritise the financing of RDI which can contribute significantly to the achievement of the Europe 2020 public policy objectives of smart, sustainable and inclusive growth.*

## Introduction

### Background on the establishment of the RSFF

The concept of a Risk-Sharing Finance Facility (RSFF) represents a first “European scale programme” by the European Commission (EC) to use **debt-based finance**, to complement more traditional financing means for Research, Development and Innovation (RDI) such as grants (as under the Framework Programmes FP), or equity and corporate cash flows. The risk-sharing feature refers to the sharing of risks between the EC and the European Investment Bank (EIB). The RSFF was established on June 5<sup>th</sup>, 2007, through a co-operation agreement between the EC and the EIB.

The origins of the RSFF go back to discussions at the beginning of the 2000s with the Lisbon declaration and the ensuing internal discussions at both EC and EIB level on how the broad Lisbon strategic goals could be implemented. On October 1<sup>st</sup>, 2003, an EC/European Council communication on “A European initiative for growth investing in networks and knowledge for growth and employment” set the scene: “Support from the EIB has been identified by several governments as a key factor in ensuring the financial viability of longer-horizon investments.” In 2004, a new joint EC-EIB mechanism baptised “SFF-RTD” was launched. On 28 November 2005 the Competitiveness Council confirmed RSFF as an integral part of FP7 “given the significant leverage effect and catalyzing role of RSFF, in particular for private R&D projects”. This confirmation was followed by the December 2005 European Council which invited “the Commission in cooperation with the European Investment Bank to examine the possibility of strengthening their support for Research and Development by up to a maximum of € 10 billion through a financing facility with risk-sharing components to foster additional investment in European research and development, particularly by the private sector”. After tripartite discussions including the European Parliament, on 7 February 2006 the Council concluded that “it remains important that RSFF be financed as planned even if cuts to FP7 were required under a budgetary adjustment derived from the 2007-2013 financial perspectives”. **This confirmed RSFF as a top priority of the EU’s political agenda.** The final inter-institutional phase led to the Decision N°1982/2006 of the EP and of the Council of 18 December 2006 to contribute the funds from FP 7 to the RSFF.

The EIB, meanwhile, had set up its own strategies i2i (“Innovation 2000/2010 Initiatives”), now followed up by the Knowledge Economy, as one of its core lending priorities. From this perspective RSFF is only one of the instruments available to the EIB to finance the Knowledge Economy. The EIB’s Knowledge Economy objective covers not only R&D, but also ICT investments and support for higher education institutions. Since the start of the EIB i2i programme (including Knowledge Economy) in 2000, a total of € 87.1bn have been signed under this objective, a figure significantly higher than the 2000 EIB pledge to make loans worth € 50bn for the Knowledge Economy by 2010.

Viewed in retrospect, the establishment of the RSFF was well timed. Put in place in 2007, few could have predicted the ensuing financial crisis and the accompanying dramatic shift in risk aversion in financial markets. Since 2007, there has actually been a significant decline in the availability of finance for private investment in the EU so that access to finance for RDI investments became an even more urgent need. Though the objective of RSFF was initially to meet the structural needs of RDI financing, it also met **anti-cyclical** needs. The creation of the RSFF was therefore perfectly timed and its success actually greatly enhanced by the financial crisis. RSFF, which was originally designed as a demand-led, debt financing based programme for high risk activities such as RDI, suddenly appeared a particularly welcome risk crisis instrument greatly “facilitating” access to private finance for R&D intensive companies in Europe when banks were becoming hesitant in taking on board such risky investments on their own.

However, despite the successful rolling out of RSFF, private investment in RDI has been, and still is, well below the level necessary to achieve the goals set by the Lisbon agenda. Private RD investment as a percentage of GDP, represents no more than 1% as it did in 2000, half of what it amounts to in the US. Furthermore, the financial crisis has not just had a profound impact on the structure of the European banking industry with as a result a significant shift in risk aversion, it has also had a significant impact on the long term sustainability of public debt in most Member States (MS), resulting in severe pressures on the public funding commitment to RDI for at least the period up to 2013, the period the RSFF was initially designed for.

### Description of the RSFF

As a debt-based finance facility for RDI, the RSFF is also, in contrast to RDI grants and/or subsidies, first and foremost a **demand-led instrument**. It had been set up with the aim to create additional financing capacity in Europe of up to € 10 billion in support of RDI in all sectors covered by the Framework Programme 7 (FP7) and covering all MS<sup>8</sup>. Both the EIB and the EC capital contributions at € 1 bn each to RSFF underpin the risk. The EIB contribution to RSFF comes out of the Bank’s own reserves; the EC contribution comes out of the FP7<sup>9</sup>. Whereas the EIB contribution represents a self-funded EIB participation based on the EIB’s Knowledge Economy investment criteria, the EC contribution is governed by specific FP7 eligibility criteria.

The RSFF is implemented by the EIB following its standard rules, regulation and procedures, largely based on a project by project basis. The EIB screens potential RSFF projects and is also responsible for all direct contacts with project promoters. It evaluates potential RSFF projects with regard to their RDI content in terms of creditworthiness, techno-economic risks and financial viability. The risk assessment and grading is based on standard procedures of the EIB (and of partner banks in case of risk-sharing arrangements with partner banks), external rating is not required. When the EIB wants to use the EC RSFF contribution for risk coverage, the RSFF

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<sup>8</sup> As well as FP7 Associated Countries.

<sup>9</sup> The EC contribution comes from the ‘Cooperation’ specific programme (up to EUR 800 million by proportional contribution of all thematic priorities, except socio-economic sciences and humanities) and the ‘Capacities’ specific programme (up to EUR 200 million from the research infrastructure line).

*project is submitted to a so-called RSFF Eligibility Committee. RSFF is managed by the EIB whereby the EC's contribution when used, is done so to partly cover EIB risks when providing loans and/or guarantees for eligible RDI investments. The level of total provisioning and capital allocation amounts of the EC contribution should not exceed 50% of the nominal loan or guarantee value. Both the EC and EIB contributions are used on a "first come, first served basis."*

*As a demand-led financial facility, RSFF funds complement first and foremost other sources of debt capital available for low to sub investment grade RDI intensive entities including large as well as small and medium-sized enterprises (SMEs), research infrastructures and universities and other public research institutions. In all cases, RSFF concerns companies, institutions or projects mature enough to demonstrate a clear capacity to repay debt on the basis of a credible business plan. Based on its own financial evaluation, the EIB assesses the level of financial risks and decides the value of the provision and capital allocation (for expected and unexpected loss). There are a number of quite explicit reasons why RSFF funds appear well suited to potential beneficiaries:*

- First, there is of course the sharing of risks on the capital provided by EIB and EC which has facilitated the establishment of the RSFF programme on a EU-wide scale.*
- Second, RSFF provides access to a substantial (€ 10 billion) financing programme specifically designed for the high risks financing requirements and expertise for RDI investments on particularly attractive terms and conditions, low EIB costs and not-for-profit risk pricing.*
- Third, RSFF allows for long maturities of up to 10 years, even longer for research infrastructures.*
- Fourth, RSFF involves a direct EIB financing of up to € 300 million per project.*
- Fifth, use is made of the strong technology/industry expertise from the EIB.*
- Sixth, RSFF has a significant signalling effect to financial markets where EIB involvement is seen as a "quality stamp".*
- And finally, RSFF is provided as debt and Mezzanine debt products.*

*The RSFF portfolio over the period 2007-2009 covered 137 projects: 46 signed operations<sup>10</sup>, 16 approved operations awaiting signature and 75 other projects under appraisal/cancelled. The 62 signed and/or approved projects make up a total of € 6.3 bn in 20 countries (18 EU Member States and 2 FP7 Associated Countries).*

*Three countries (Germany, Spain and Sweden) account for more than half of total RSFF approvals and two sectors (engineering/industry and life sciences) make up more than 60% of the portfolio. Of the 62 approved*

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<sup>10</sup> *From June 2007 until 31 December 2009 a total of 46 RSFF operations were signed. In Appendix we provide a list of the 44 signed RSFF operations which are currently active. A further 2 signed operations were subsequently cancelled.*

projects, 55 projects were submitted by the EIB to the Eligibility Committee for EC RSFF funding. 46 projects were considered eligible by the EC and 9 ineligible or withdrawn by the EIB.

### **Mandate and scope of the Group of Experts**

*The mandate of the group of independent experts (referred to as the Experts Group EG throughout this report) is based on the EC FP7 decision providing in article 7(2): “No later than 2010, the Commission shall carry out, with the assistance of independent experts, an evidence based interim evaluation of this Framework Programme and its specific programmes building upon the ex-post evaluation of FP6.” The present evaluation carried out over the first six months of 2010 is based on the evidence provided to by the officials from the EC, from the EIB and the EIB Evaluations Unit, detailed analyses of the portfolio of RSFF projects, interviews with a number of firms having benefited from the RSFF as well as field visits to a number of those<sup>11</sup>, interviews with EC officials responsible for the New Entrants Reserve (NER300) of the EU Emission Trading Scheme (which will be operational from 2013 onwards) aimed at investments in Carbon Capture and Storage and Renewables, as well as with the chairman of ESFR<sup>12</sup> and detailed discussions between the members of the EG.*

*Meetings took place in Brussels on February 3<sup>rd</sup>, March 22<sup>nd</sup>, May 18<sup>th</sup>, June 25<sup>th</sup> and July 13<sup>th</sup>, 2010. The field visits to LMS and Philips took place on February 11<sup>th</sup>, and to Abengoa and PharmaMar on June 1<sup>st</sup> and 2<sup>nd</sup>.*

*The EG was given detailed written information on the participation of the large, midcap as well as small and medium sized firms (SMEs), universities and other public research organisations; the initial focus on the five key sectors of FP7; the pan-European selection criteria; the kind of projects supported compared to the demand for the instrument; the duration of the authorisation procedure; the project results and the funding distribution. Despite the richness of information provided and the willingness on the part of all, EC and EIB officials as well as firms, to be open and transparent about all aspects of the RSFF, the fact remains that it is difficult to assess, within a relatively narrow timeframe – a financial facility implemented over the last three years, its impact on European knowledge investments, and in particular the extent to which it has contributed to Europe’s Lisbon strategy. This mid-term evaluation is in other words also mid-term in the real sense of the word: it can only assess those direct impact features in terms of the amounts of funds disbursed; the relevance and effectiveness with which the RSFF has responded to the market needs both with respect to the sort of firms and sectors having used the facility; the efficiency with which the RSFF has been rolled out and the collaboration between EIB and EC; the information and awareness of the existence across MS of the RSFF; the coherence and synergies obtained; and finally the impact and sustainability of the RSFF. When answering questions with respect to the internal effectiveness and efficiency of the implementation of the RSFF, use has been made of the EIB’s internal Operations Evaluation assessment and the EC’s internal information on the Eligibility criteria of RSFF projects.*

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<sup>11</sup> Field visits to LMS, Philips, Abengoa and PharmaMar were carried out. Interviews with Medinvest, Valeo took place in Brussels. We are particularly grateful for the hospitality and time made available for discussions with members of the EG.

<sup>12</sup> Professor Carlo Rizzuto.

*The EG particularly welcomed having access to these internal documents, as well as the opinions of individual members of the RSFF units both at the EIB and the EC.*

*Nevertheless, this mid-term evaluation of the RSFF represents solely the views of the members of the EG<sup>13</sup>. The evaluation will be presented to the European Parliament and to the Council of the European Union in the autumn of 2010. The outcome of the evaluation will be integrated in the FP7 evidence-based interim evaluation.*

## **Objectives**

*The main objective of this mid-term evaluation is to provide an answer to the question of whether funding for the RSFF as foreseen in the original agreement should be continued for the period 2011-2013. More specifically, should the second tranche of FP7 funding for RSFF be released and if so, would there be a need to change particular conditions with respect to the risk-sharing agreement between the EC and the EIB. There are, one might expect, a number of lessons to be learnt from the way the first roll-out phase of the RSFF has been implemented by the EIB, and the way the close interaction with the EC on its own eligibility criteria for EC contribution did work out.*

*As a second objective, the EG's mid-term evaluation is expected to contribute to the question of whether there should be more or less EC or EIB funds made available for the next stage of the RSFF. As highlighted above, the availability of a debt financing facility for high risk activities such as RDI was particularly timely: it was a very welcome risk based financing instrument that provided an innovative approach to the structural problem of low investment by the private sector in RDI. With the onslaught of fiscal austerity in many Member States (MS) in the years to come, having a European finance facility available which can successfully leverage access to private finance for R&D intensive companies, research infrastructures and universities, might well represent an essential tool in assisting MS in reaching the EU2020 strategic goals. More broadly this raises the question about raising the awareness of the existence of RSFF in the RDI community. Increased awareness within a context of a given, fixed amount of EC/EIB funds made available for RSFF, is likely to lead only to over-demand for the facility unless other institutions learn from the lessons of RSFF and decide to provide other facilities capable to meet these RDI investment needs.*

*Third, the EG is expected to provide answers to the question of whether there is a need for a more segmented, focused approach towards the demand for debt financing products for RDI investment. Some actors such as Small and Medium-sized Enterprises might be in need of more equity type of funds, some RDI activities might simply be too risky and/or require a difficult type of financing to be able to be funded through RSFF. While the EIB has a wide range portfolio of other financial support schemes, such as the European Investment Fund, it*

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<sup>13</sup> *The list of members and affiliation of the EG is given above.*

remains to be decided how the RSFF can be further adapted to particular needs, e.g. equity investments under RSFF.

Fourth, the EG is also expected to provide answers to the broader question of whether the RSFF can be replicated in other sectors, as is already the case with the new RSFF initiative under the so-called Strategic Energy Technologies (SET Plan) and New Entrants Reserve (NER300) scheme. Such replication appears particularly welcome in areas of strategic interest to the EU, such as RDI investments in digital broadband; in health and ageing; in regional development and cohesion. The objective for the EG in this respect is to provide, on the basis of the mid-term evaluation of the current RSFF, some broad hints as to the feasibility of expansion of RSFF type schemes in some of those other areas.

## Outline

In the first part of this mid-term evaluation report, we evaluate the RSFF following the specific evaluation questions and themes as specified in the Terms of Reference (ToR) for the EG as specified in the Annex VI to the letter of appointment to the experts. We follow the specific questions raised with respect to the six topics considered of particular relevance to the RSFF: the Relevance; the Effectiveness; the Efficiency; the Information, Awareness Raising and Access to the RSFF; the Coherence and Synergies; and the Sustainability and Impact. We start each of those topics with an overall assessment before answering for each section the specific questions listed for that topic in the ToR. In total 25 questions covering all six topics will thus be covered.

In the second part we focus on the broader questions associated with the future of the RSFF, both as regards its second phase (2011-2013) as well as for the future programming period after 2013. We address the five summarizing questions raised in the ToR from a future application perspective, i.e. also within the present context of the financial crisis, starting with an Overall Assessment, Strengths and Weaknesses of the RSFF, Level of Demand and Use Impact, Effectiveness of the RSFF and Other Applications for RSFF-like instruments. We also put forward a number of policy recommendations.

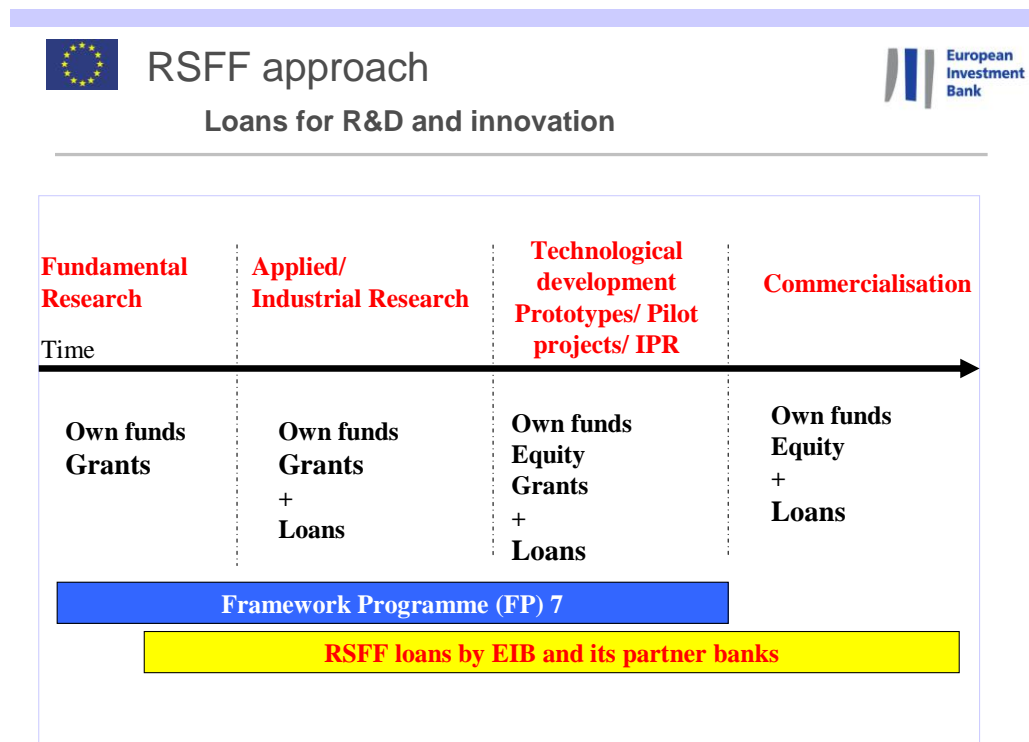
Apart from drawing our own conclusions from the assessments presented in Parts I and II for the 2<sup>nd</sup> term of the RSFF implementation, we also address, as requested in the ToR, questions with respect to the amount of the EC contribution necessary for continuation of an effective RSFF; views on the programming period after 2013 and reflections on possible synergies between RSFF, other instruments and policy initiatives with respect to the SET-Plan as well as some of the main flagship initiatives as proposed under the EU2020 strategy.

**Part I: Evaluation of the functioning of the RSFF**

**Relevance**

From the loan provision evidence gathered so far and assessed by the EIB Operations Evaluation unit, the **RSFF appears at face value a major and significant success**: half-way through the program the RSFF managed to significantly over shoot its target. At the mid-term stage, the signs are that the target of € 10 billion high-risk research, development and innovation financing will be matched at the end of the 7<sup>th</sup> Framework Programme in 2013, and possibly even before. Overall the projects selected for RSFF, appear to fall clearly within the EIB strategic i2i/Knowledge Economy priorities and the EC FP7 areas. Furthermore, important positive effects of RSFF funding on European co-operation in RDI, as well as technological, financial and economic spill-over effects could be noted.

The table below illustrates the complementarity between the EC FP7 funding and the EIB (plus partner banks) funding through the RSFF over the full spectrum of Research, Development and Innovation activities.



*The EIB's Operation Evaluation unit noted within this context that over time RSFF projects finance did gradually move from the innovation side towards the development side. The EG does not consider this a worrisome sign warranting specific efforts at this stage, rather it raises the questions as to how to distinguish innovation from the development side. Sometimes "development sides" are strongly connected to "innovation layouts", sometimes not. From this perspective, the case-by-case analysis as carried out by the EIB allowing for a great degree of flexibility is actually more preferable.*

*The Terms of Reference of the mid-term evaluation raised a number of specific questions with respect to "Relevance" which will be briefly addressed below:*

**1. Has the RSFF addressed the existing market imperfections for loan finance for RDI investments in Europe?**

*The answer to this question appears from the perspective of the very rapid use of the RSFF credit line a straightforward **yes**. The RSFF has been one of the most successful instruments for addressing market imperfections in the debt financing of RDI investments in Europe. As the financial crisis unfolded, the market imperfections with respect to loan finance for RDI investments did not just increase substantially, they became to some extent ubiquitous. RSFF remained one of the few financial instruments available to innovative firms and organisations.*

*RSFF helped many European research intensive firms to maintain RDI activities in a period of major financial stress, it has helped some of the most innovative firms in Europe to restructure their financial positions at a time banks and other financial institutions were reducing access to finance for high risk investments, it has provided loan finance to those innovative SMEs not interested in private equity funding<sup>14</sup>. At the same time, RSFF did contribute indirectly to the growth of European SMEs through the development of new products such as the financing of Open Innovation investments in collaboration between major corporates, research organisations as well as mid-cap and SME companies as well as portfolios of SMEs and SME clusters.*

**2. To what extent are the RSFF objectives pertinent to the needs, priorities, problems and issues it was designed to address? To what extent are the RSFF objectives pertinent to, and coherent with, the FP7 objectives? To what extent are the RSFF objectives pertinent to, and coherent with, the EIB i2i priority?**

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<sup>14</sup> *EIB support for the SME sector is provided primarily through equity and guarantees for loans through the activities of the European Investment Fund as the EIB's specialist SME financier as well as through EIB's own activities of lending to financial intermediaries on a global loan as well as a risk-shared basis to ensure a wide geographic distribution throughout the EU 27.*

*Viewed in retrospect the RSFF objectives were particularly pertinent to the needs, priorities problems and issues it was designed for. That European RDI investment kept its relatively (compared to other investments) high rate since the last quarter of 2008 might also be considered a result of the availability of an instrument at European level such as the RSFF. That it was primarily some of the larger and midcap European firms that made the most use of the RSFF over the period considered (2007-2009) is evidence of the fact that those firms were most in need of, and could best manage a debt finance facility for RDI investments. In fact the larger volumes of RSFF funding in sectors such as the Automotive Sector during the 2009 crisis served this purpose and contributed to a situation, where the US car producers for reasons of their general market and financial positions lost much more ground in comparison to the European.*

*For most small firms, debt finance for RDI does not seem to correspond to their needs for the financing of RDI. Other instruments such as the EIB's subsidiary, European Investment Fund (EIF<sup>15</sup>) providing equity support appear more appropriate for small innovative start-ups. Therefore, the EG does not consider the fact that, few SMEs benefited from the RSFF, or that the governance rules in many Member States prevented large research infrastructures and universities to make full use of the RSFF, as particular signs of failures of the implementation of the RSFF over the first three years. Rather it point to a possible lack of awareness of RSFF or bureaucratic fear to get involved in European funding (see further under Awareness).*

*Nevertheless, the EG believes that the RSFF can play a more important innovative role for SME financing e.g. through utilising the RSFF facility more actively through financial or corporate intermediaries and in support of public-private partnerships in conjunction with ETPs (European Technology Platforms); JTIs (Joint Technology Initiatives) and JUs (Joint Undertakings), providing relevant legal adaptation measures (in particular for JTIs and JUs) are taken.*

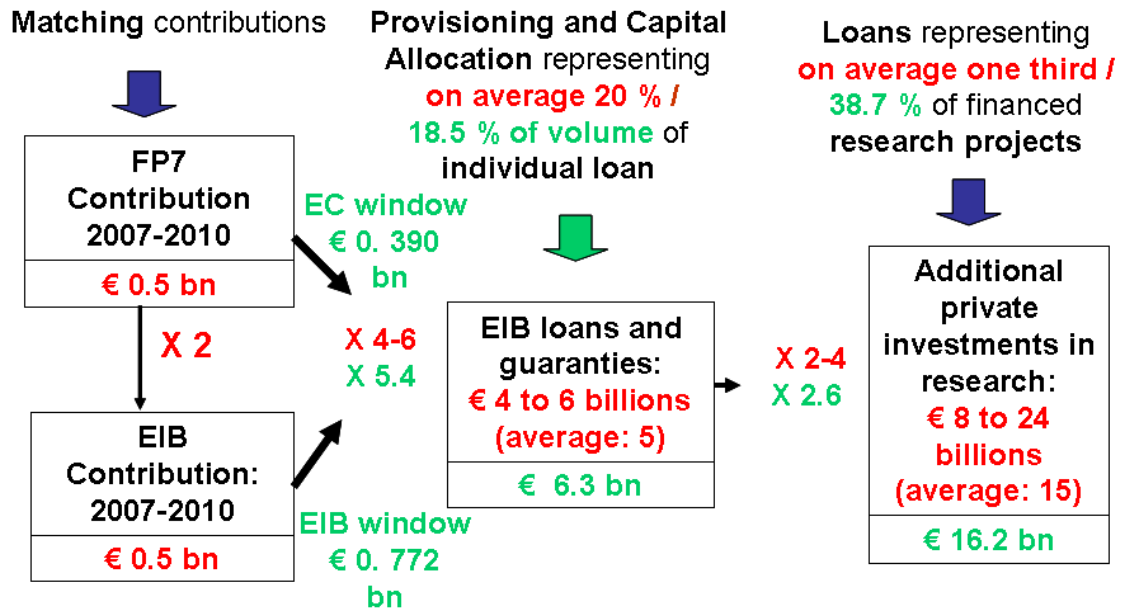
*The RSFF objectives appear both pertinent and coherent with the EIB i2i priority. In this sense the facility has been institutionally well designed. The implementation of the projects at the time of the mid-term evaluation has been fast and undoubtedly in part as a result of the financial crisis. As the EIB Evaluation points out, the quantitative realisations in **RSFF approvals exceed initial targets with leverage achieved so far reaching a factor of 14 and triggering some € 16.2 billion of investments in RDI.***

*Table 2 provides more detailed information on the expected and realised leverage effect.*

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<sup>15</sup> EIF's shareholders include: The EIB (62%), the European Commission (29%) and financial institutions (9%).

## Expected (until 2010) and Realised Leverage effect (as of 31/12/2009)



## Effectiveness

*The rolling out of the RSFF over the period 2007-2009 was very fast. Clearly after the long period it took to formalize the RSFF agreement, there was eagerness to implement the new facility: many already approved operations were converted into RSFF projects and more operations were actively initiated.*

*Thus as presented in the EIB's Operations Evaluation report:*

- 1) End of 2009, approvals, signatures and disbursements were more than triple those of 2007, reaching a total of € 6.3 bn (approvals), € 4.5 bn (signatures)<sup>16</sup> and € 2.0 bn (disbursements).*
- 2) The average signed RSFF loan increased from € 51 million in 2007 to € 129.5 million in 2009.*
- 3) RSFF loan signatures by volume in 2009 were significantly higher than the RSFF ex ante targets at inception:*

<i>RSFF ex ante targets / <u>ex post realisation</u></i> <i>"production of operations"</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
<i>Number of operations</i>	<i>13 / <u>13</u></i>	<i>30 / <u>14</u></i>	<i>62 / <u>35</u></i>
<i>RSFF amount approved</i>	<i>580 / <u>812</u></i>	<i>1320 / <u>1502</u></i>	<i>2720 / <u>3984</u></i>

*There is little doubt that the financial crisis affected the 2009 results:*

- First, and as the EIB Evaluation Operations unit notes: "2009 saw a significant increase in RSFF activity, which seemed more "volume" than "innovative/quality" driven."*
- Second, and as highlighted in the table above, the corollary was the total number of projects approved was actually lower in 2009 than forecasted, but the average loan size was larger (point 2). This highlights the particular demand from large and midcap firms with substantial RDI investments for RSFF which required greater access to financing to maintain their RDI programmes.*

*The impression that the increase in RSFF activity over 2009 was more "volume than innovative/quality" driven, combined with the dramatic increase in the average loan size is of course a factor of concern to the EG. If the innovation and quality factor is limited and the money used more for large organisations because companies experience difficulties in accessing money during the debt crisis, something **could** be wrong. And one might ultimately observe a more negative trend occurring, money going into traditional sectors and not in new ones, where Europe is already now experiencing a gap to more innovative regions globally. EIB however expects in*

<sup>16</sup> *Includes 2 cancelled operations (see footnote 10).*

response to the changes it has made to the organisation and management of the RSFF programme that the average size of loans will decrease and the number of loans will increase in 2010 relative to 2009 and in addition will focus on the development of new products for the various sectors of RSFF.

However, the EG is convinced that the portfolio of projects<sup>17</sup> rolled out so far by the EIB does represent a full sectoral mix of innovative projects in some of the key sectors targeted by FP7. Formally, RSFF is a demand driven mechanism delivered on a “first come, first serve basis”. As such there are no legally binding obligations to have a balanced RSFF portfolio, neither by sector, nor by country. Before addressing more specific questions with respect to the effectiveness of RSFF, we wish to first make some comments with respect to the question about choices of sectors and choice of countries.

### • **RSFF: an FP7 sector focus or rather an FP7 sector bias?**

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Formally, the EIB approach has been to provide RSFF financing for **all** sectors covered by FP7. While 5 sectors were so far prioritised (engineering/industry: 37%, Life science: 25%, Energy: 17%, ICT: 13%, Research Infrastructure: 4% and Risk Sharing with Banks: 4%), no sector has actually been refused. The success of RSFF has been greatly enhanced by the concentration on those sectors in which the Bank already had significant activities. This pragmatic approach, certainly in the first phase of rolling out RSFF, proved the right choice and allowed for the very high deal approval rate. We consider though that the RSFF sector focus should now be enlarged to include the sectors which have not yet been considered and which have a relatively high RDI intensity and spending (for instance key enabling technologies, strategic energy technologies and knowledge intensive services). For the second phase of RSFF, we would propose that one would more actively seek to develop all eligible FP7 sectors on the basis of the by now well established operational and business model for RSFF in the first phase. The EG is convinced that over the years, the EIB has significantly reinforced its ability to deliver innovative, high quality projects through RSFF by making also the necessary internal organisational changes (see below). Thus at the end of 2009 a major organisational change was implemented whereby the responsibility in EIB for the development of innovative projects and financing as well as for the performance of the overall RSFF programme was given to the RSFF team in the New Products Department (NPST) and, under NPST’s overall management, the increased roll-out of RSFF to the EU-27 countries and companies was given to EIB’s geographical lending departments.

Should the existing “sector focus” be enlarged beyond FP7? At a broad, more philosophical level, the EG is not a big fan of predefining a sector-based approach because innovation into new technology developments and business models are hard to predict, certainly from a sectoral/technological point of view. It also explains some of our concerns with respect to the SET plan (as detailed below under Sustainability and Impact. Ideally, RSFF should be “sector-free” even though it would follow primarily the demand-led R&D logic of firms and organisations in Europe. One idea worth pursuing could be to connect certain defined R&D topics (grant approach) with the RSFF structure.

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<sup>17</sup> In Appendix we provide a list of signed active RSFF projects to 31-12-2009.

- **Country diversification or country focus?**

Over the relatively short period 2007-2009, a wide country diversification for RSFF loans was achieved, but this was primarily the result of the demand led nature of RSFF rather than the result of an active prioritisation of particular countries. EIB has pursued the geographical roll-out of RSFF throughout the EU 27 and the FP7 associated countries. To date, RSFF financing has taken place in 22 Member States, an unusually effective roll-out result for the first three years. The EIB will continue to prioritise full geographic roll-out throughout the EU 27; in order to ensure a full roll-out of RSFF financing throughout the EU 27 on a systematic basis, responsibility for roll-out of RSFF to mature projects and sectors will be undertaken by the EIB's geographical lending departments. The EG is convinced that these EIB organisational changes will facilitate this implementation.

On the question of whether one needs a truly "active prioritisation of countries with lower or no RSFF participation", the EG view remains more sceptical. The answer would be **no** if it would become an established pre-condition on how projects are evaluated or how loans are given. If Europe does not stop to think that what is good for a single country is good for the whole of Europe, it will always remain a fragmented power. One approach could be to ask if more can be done to attract relevant projects from those countries and regions. We come back to this issue in our discussion on new application areas for RSFF such as cohesion funds. Specific efforts will need to be made in collaboration with DG REGIO and relevant national and regional authorities to design an appropriate RSFF type of funding mechanism to accelerate the development of RDI financing in these countries, supported by the necessary organisational capacity (as we will argue under Part II).

We now briefly answer some of the specific questions<sup>18</sup> with respect to effectiveness as raised in the Terms of Reference of the EG's mid-term evaluation:

**3. How has the RSFF contributed to the objective to provide more funding for private RDI investments? Has the RSFF achieved its goal of making available more funding for RDI investments through leveraging Community funding (EC Contribution) on the magnitude estimated?**

Table 2 above already highlighted the importance of the leverage effects of the RSFF achieved so far. Furthermore, the EIB Evaluation Operations unit assessed whether the RSFF achieved its goal of making available more funding for RDI investments through the leveraging of Community funding (EC Contribution) as originally estimated. The results are summarized in the table below.

amounts (in EUR bn)	Expected 2007-2010	Achieved 2007 – 2009
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<sup>18</sup> The numbering of questions runs through all six parts of this Section.

<i>FP 7</i>	<b>0.5</b>	<b>0.390</b>
<i>EIB</i>	<b>0.5</b>	<b>0.772</b>
<i>Total Contributions</i>	<b>1.0</b>	<b>1.162</b>
<i>EIB Loans and guarantees</i>	<b>4-6 (average 5)</b>	<b>6.3</b>
<i>Additional investments in RDI</i>	<b>8-24 (average 15 )</b>	<b>16.2</b>

*As the report noted, the higher achievement on the part of the EIB is largely due to the financial crisis and the impact it had on the entire banking sector, including the EIB. “The RSFF was conceived under a “normal” business environment and the initially set targets can be considered as rather ambitious. The quantitative achievements are significant, which also has to be seen in the context of the EIB’s high growth over recent years as a response to the financial crisis. This was reinforced by the worsening financial situation of companies, since many former counterparts of the EIB were downgraded and thereby reached sub-investment grade – territory.”*

*With respect to the evaluation of the 24 disbursed RSFF operations examined in depth, all projects were rated in the categories satisfactory or excellent, indicating that they met their objectives to a reasonable degree and were well implemented. As the report put it: “From an operational point of view, RSFF has started as “haute couture”, requiring a significant input to identify, develop and complete innovative projects/products etc. and over time has become more “prêt-à-porter”, i.e. roll-out through the Bank with increased operational responsibilities for the EIB Geographical Lending Departments .”*

*The shift from “haute couture” to “prêt-à-porter” is in many ways logical. It also builds on the points made above about the pragmatic approach by which RSFF was rolled out: from sectors most familiar to the EIB to all sectors. We also understand that the recent EIB organisational changes for RSFF will further facilitate the maintenance of a twin-track approach combining haute couture and prêt-à-porter. Another beneficial point lies in the standardisation which includes faster evaluation times, which initially was a weak point but which has been very substantially improved. However, we do also have concerns that the gradual shift towards “prêt-à-porter” will ultimately mean Europe will remain weak in areas such as the Internet ecosystem in which the EIB does not have a significant role as yet. Why and how did Europe e.g. miss the latest development in Internet-related business models even though it has a huge variety of very innovative small companies and R&D related developments which spur quite often technology developments in those sectors? The last big European “dinosaurs” are either from the telecom and software world (SAP). Surely there is also a link with access to finance here. Are we missing the trend once again?*

*The overall quantitative success in rolling out RSFF, even in the conditions that have prevailed due to the recent financial and banking crisis, have clearly been the result of effectively using EIB’s existing technical expertise in different sectors and its financing capabilities to manage the risks from such financing through a simple, highly efficient framework which has drawn heavily on the ETP as well as other structures created by the European Commission. Success has also been achieved through the EIB’s commitment to developing new financing*

products to meet the needs of various pathfinder projects which can be replicated by other entities in the same sectors. In addition, the success of RSFF has been due in part to the increased needs for RDI financing by the current banking and financial crisis which overall has meant that the financing provided by RSFF, while meeting its own strict credit quality as well as RDI policy objectives, has reached 65% of the total targets to 2013 versus an expected 50% at this stage of the programme (e.g. in 2010).

It is in this sense that RSFF has been particularly effective in providing 'credit access and enhancement' for RDI activities in Europe. Usually the EIB would not make a non-investment-grade deal to finance a project. With the coverage of the expected and most of the unexpected loss through the provisions of the EC and the EIB, the remaining credit risk has actually been enhanced and may rise over time to investment grade category. It should however be noted that EIB has now moved with many new products into a corridor of risk-bearing, as a result of which it has to keep the overall risk profile of its RSFF portfolio as well as of its balance sheet steady.

We will come back to the implications of those developments for the future of the RSFF in Section II. However, it will be clear, that if a higher volume of RSFF type transactions is wanted, it will be absolutely necessary to increase the EC contribution to risk-sharing by a substantial amount. Similarly, if given the financial crisis, the EIB should opt in its RSFF activities for a riskier portfolio, the EC part will have to go for a higher share of the risk provisioning. One may think here of transforming the EC contribution into a first-loss piece, at least in certain areas and/or certain target groups (e.g. Research Infrastructures and SMEs).

**4. Has the RSFF demonstrated its added value for its envisaged target groups? To what extent has the RSFF successfully reached SMEs, universities and research infrastructures? Which factors contributed to a successful application for RSFF funding?**

The EIB Evaluation Operation unit noted that whereas all envisaged target groups large as well as SMEs could receive RSFF funding, "specific RSFF barriers are evident, in particular as regards SME financing either directly or through bank risk-sharing formulae, as well as for research infrastructures and universities. There is a distinct trade-off between loan quantity and complexity of an operation with subsequent resource implications, which restricts the new product development."

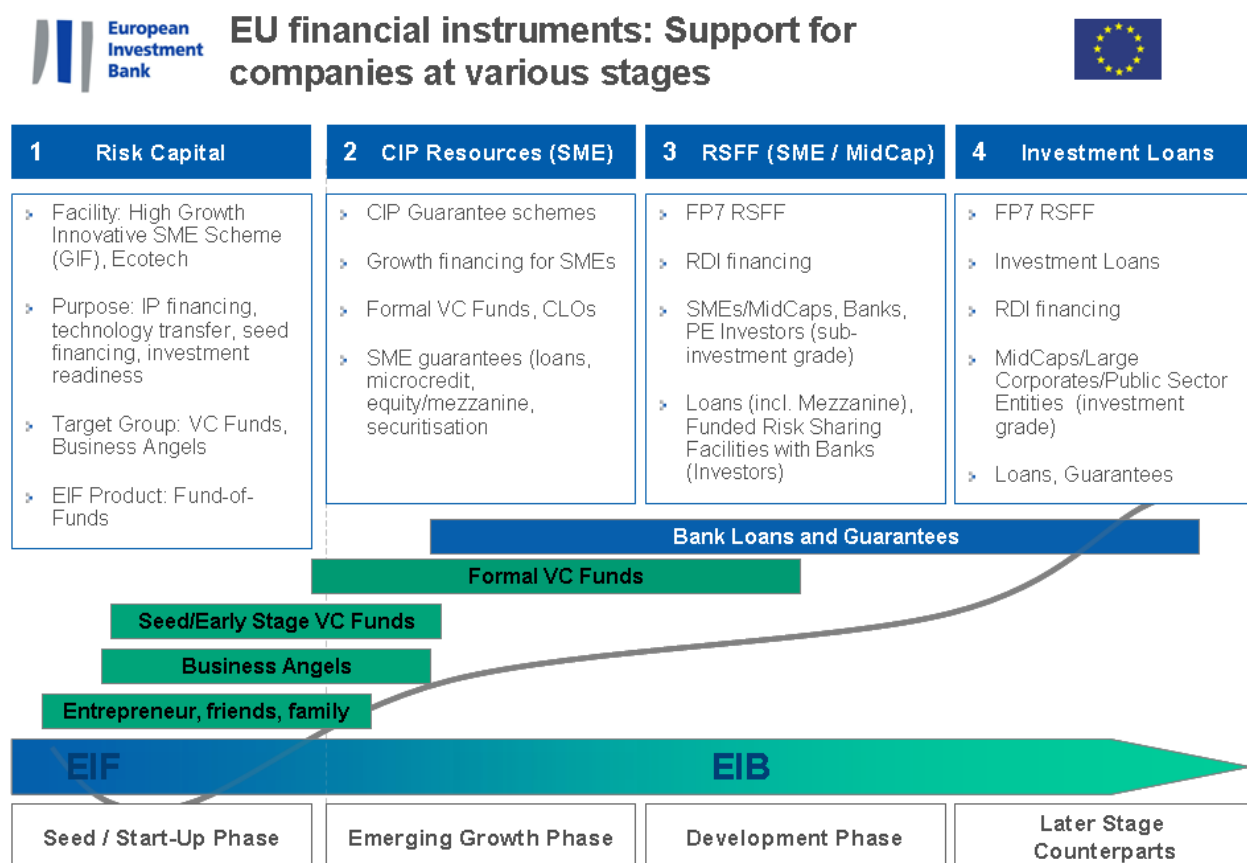
For the EG the real question here is whether the dominance of financially supported RSFF projects from large companies were from an innovation point of view essential and worthwhile, and furthermore did not crowd out proposals/projects from SMEs. Could they also be able to live further without access to RSFF instruments?

From discussions with EIB officials it appeared that the EIB considers that its present "full spectrum" approach of providing specific products and programmes for each core sector and phase of development within the overall EIB Group framework for financing innovative/knowledge economy/RDI investments is the appropriate approach to meeting the different financing needs of different types and size of company. One should also bear in mind that the EIB Group's support for the SME sector is provided primarily through equity and guarantees for

loans through the activities of the European Investment Fund (EIF) as its specialist SME financier as well as through EIB's own activities of lending to financial intermediaries on a global loan as well as a risk-shared basis to ensure the widest possible geographic distribution throughout the EU 27. As a result RSFF is primarily contributing to the development of SMEs through the development of new loan products such as the financing of Open Innovation investments in collaboration with major corporations, research organisations as well as mid-cap and SME companies as well as through portfolios of SMEs and SME clusters. The EG studied and even visited in more detail several such SME focused cases. Clearly RSFF can play an important innovative role for SME financing notably through utilising the RSFF facility in support of public-private partnerships in conjunction with ETPs (European Technology Platforms); JTIs (Joint Technology Initiatives) and JUs (Joint Undertakings), providing relevant legal adaptations measures (in particular for JTIs and JUs) are taken.

The EG would urge the EIB to continue to develop various approaches to SME financing through the coordinated and complementary development of all its different financing instruments in support of SMEs.

The figure below illustrates the full range of financial instruments serving different types and sizes of company as well as their financing needs according to their stages of development. The graph points to the complementarity between different financial products designed to meet the risk profile and phase of development of each company. It is also reflected in the EIB's approach away from a more simple but ineffective of "one size fits all". The graph also illustrates RSFF's role in complementing FP7 funding schemes and other Community financial instruments.



*The EG would urge both the EIB and the Commission to address the issue of not having granted enough loans to SMEs under the specific RSFF programme in a more proactive way. The EIB has of course its own EIF instrument, just as the Commission has developed SME tools, in particular under the Cohesion Policy, like JEREMIE which included Venture Capital and Technology Transfer. For the EG, this leads to a further fragmentation of financial tools (see also below under Sustainability and Impact). The EG would actually prefer to have a stronger, more specific emphasis in a new RSFF on SMEs.*

**5. Which barriers of access to the RSFF existed, if any? What could be improved to facilitate access to the RSFF in view of existing identified barriers?**

*The EG notes from this perspective the very different situations with respect to the different customers of RSFF loans.*

- *First, there are the large companies with no particular barriers to access to the RSFF. 73% of all RSFF loans are currently made to large companies. Both their absolute as well as their relative importance (from 57% in 2007 to 76% in 2009) have significantly increased over time. As the EIB evaluations Operation unit reported in its own assessment: “A number of enterprises have been first time clients with the Bank and this target group accounts for the lion’s share of RSFF financing. In most cases they have well established processes to deal with national and international banks. For an RDI facility like RSFF, large companies, as key drivers for RDI development in Europe, are of major importance and can not be ignored. Looking at the RSFF portfolio, there is a growing number of loans to large companies, which as a result of the crisis have become sub-investment grade. These companies may not normally have become clients of the RSFF in a non-crisis context. In the aftermath of the crisis, they might consider refinancing the deals and in more general terms, these counterparts might no longer be RSFF customers.”*
- *Second, there are significant barriers to the direct financing of SMEs under the RSFF scheme. The legal and administrative requirements are often too heavy and SME type promoters are also often not in a position to provide information amenable to conventional financial due diligence. There is in other words a clear trade-off between volume and SME financing with significant resource implications. But we tend to disagree with the argument that RSFF would not be an appropriate financial instrument for SMEs who do not want to give up ownership and control for access to finance. The EG considers that, as already demonstrated by various RSFF examples to date, RSFF can be used successfully in combination with various intermediaries (whether financial, corporate for special programmes as ETPs; JTIs; etc.) to facilitate access of Mid Caps and SMEs to RDI that addresses the needs of particular niches of SMEs.*
- *Third, only a few projects for research infrastructures have been approved and signed. Here major barriers and obstacles exist including the fact that loan finance is not foreseen in the statutes of a number of such organisations, or that there might be limited revenue generation for loan repayment*

which will restrict the possibilities to structure a bankable project. RSFF loan finance is also available for universities and research institutes, but in many MS universities cannot borrow<sup>19</sup> or as public entities have access to normal and potentially cheaper EIB loan products. This is actually demonstrated by the significant non RSFF lending portfolio to education: amounting to EUR 18 bn for the period 2000-2009 and EUR 2.5 bn in 2009. Here we would in other words, accept the much lower demand for RSFF funding and also not push the EIB and EC to take particular pro-active initiatives. RSFF represents here rather a scalable program that operates at European level, in contrast to the national funding of most of those organisations, and will gradually become a more important instrument for such activities.

#### **6. RSFF portfolio: which factors have been important for the thematic distribution of RSFF loan finance?**

The technical expertise of the EIB as well as the way the projects fitted the thematic areas of FP7 have been the most important factors behind the selection of RSFF projects. The selection procedure and criteria are of course not the same: FP7 focuses on excellence and frontier research, EIB on RDI projects which have a clear capacity for debt financing. However, the actual thematic distribution over the period 2007-2009 cannot be disassociated from the difficult market conditions and the effect of the credit crunch, on the demand for RSFF loans. Thus RSFF became particularly attractive for industrial/engineering and life science companies. By contrast RSFF approvals for ICT projects reached only EUR 565 m in 2009, while first approvals for research infrastructures were only recorded in 2009. Finally, Bank risk-sharing operations for SMEs remained of minor importance in the overall approvals.

An interesting question is whether the next generation of RSFF programmes should focus more on some of deficit sectors of Europe in worldwide competition, or whether it should rather build on the strengths. Clearly a leading position in a particular sector or area is not self-perpetuating. The larger volumes of RSFF e.g. in the Automotive Sector during the crisis served precisely this latter purpose and contributed to a situation, where the US car producers lost much more ground in comparison to the European car manufacturers. However, whether renewal in this area will come from within this sector or rather from outside remains to be seen. Overall and in line with the arguments set out above with respect to sector bias, the EG is not particularly fond of thematic or sector choices in selecting RSFF projects. As a demand-driven instrument RSFF will only have to take care of finding a right balance across all the themes of FP7.

#### **7. Product development: has the RSFF been flexible (enough) to provide finance to different target groups with different, specific financing needs? Has there been product development under the RSFF in order to meet such specific financing needs?**

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<sup>19</sup> Only one third of MS allows universities to borrow money.

*The RSFF both as instrument and as defined in the agreement between the EC and the EIB comprises a flexible range of various products to cater for several target groups. However, as a consequence of the dominance of RSFF loans to large corporations, the main loan products utilised were senior corporate loans and project finance (limited/non recourse) for SPVs<sup>20</sup>. Therefore, rather than being used as a “new” product, RSFF became gradually oriented towards a more standard product with high(er) risk features. Nevertheless, a number of innovative approaches and new product developments can also be noted: e.g. the portfolio approach for early stage companies for risk diversification combined with the use of PIK loans in one project, open innovation approach addressing clusters of SMEs in another.*

*There is, however, a distinct trade-off between loan quantity and the complexity of an operation with subsequent resource implications which does restrict new product development. It appears to the EG that even within the EIB, the risk appetite is wide, constrained only by the application of the CRPGs (Credit Risk Policy Guidelines) and the EC/EIB terms of the RSFF Agreement which are sufficiently extensive not to limit the possibility for new product development.*

**8. Has RSFF loan finance been used for demonstration projects exploiting R&D results which had received (FP) grant funding for R&D at an earlier stage?**

*Except for one project in Life Sciences, no RSFF loan has been awarded to a beneficiary in relation with its involvement in a FP7 project supported by a grant.*

*However, with the help of RSFF loan finance, R&D results made in the field of Concentrating Solar Power (CSP) and previously supported by FP grant funding (in FP5) have been applied at industrial scale showing that loans for R&D and Innovation can be a very useful funding source for RDI investments (see SANLUCAR and ANDASOL examples).*

**9. To what extent has the instrument been able to respond to changing economic and market conditions?**

*The approach followed by the EIB, avoiding the “one size fits all” approach, has allowed the RSFF to be used during the financial crisis as one of the few remaining instruments available to firms to finance high risk RDI projects. The financial advantage of the loan, the long maturity or ability to match currency (and avoid exchange risk), the ability to diversify funding sources and the catalytic effect on the confidence of other funders seeing EIB involvement was a major factor behind the success of RSFF in the dramatically changed economic and financial conditions of 2008 and 2009. While the banking landscape and risk appetite completely changed, the RSFF facility initially conceived and designed for a very different world, became a complete*

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<sup>20</sup> SPVs: Special Purpose Vehicles

success; evidence however suggests that RSFF was needed in any case even without crisis given the long term structural deficit for RDI financing in EU-27.

#### **10. To what extent can the RSFF instrument meet the demand as initially defined?**

*The demand for RSFF grew dramatically over the last two years. The fact that the EIB succeeded in exceeding the initial RSFF targets by investing more of its reserves than what had been initially planned and achieving a leverage of a factor of 14, triggering some € 16.2bn of investments in RDI over the last three years, is illustrative of the extent to which RSFF can meet a rapid growth in demand. It is from this perspective also that one fully understands that the balance between large and midcap firms versus SMEs was something which one could not fully keep under control.*

### **Efficiency**

*As with many new instruments, the handling of RSFF operations within the EIB has been subject to continuous improvements. It is as a matter of fact that the RSFF is not fully "in final form". The RSFF agreement can be interpreted to some extent as providing a flexible framework with "learning by doing" as rule rather than as exception. The EG welcomes this flexibility. It is confident that the internal dynamics of the EIB management with the independent Evaluation Operations unit will continue to trigger numerous internal discussions both within the EIB and between the EC/EIB contributing to further continuous improvements.*

*Both in terms of number of projects as well as with regard to the RSFF amount, 71% of all the projects approved, signed and/or disbursed were in the D- /E1+ loan grading category. The lowest **risk categories** (equity type operations - ETP/ETI) were not eligible under the EC window. Most of the ultimate loan financial risk is borne by the EIB bringing to the forefront the inherent conflict between banking prudence on the one hand with the EIB taking more risk, but in a controlled and pre-agreed framework, and EC budgetary considerations on the other hand with the EC aiming at maximising its utilisation and leverage risk-capital contribution so that it can be recycled in due course.*

*With the very high demand for RSFF, both risk sharing partners committed their resources as planned. However, as already noted, the EIB in particular stepped up its contribution to the RSFF in 2008/9 to satisfy the growth in demand. In the future one may expect that a number of projects can be converted relatively quickly to the EC window once additional resources are made available allowing thus for further increases in the RSFF volumes. For the EG it is clear that the risk-sharing between the two partners has been up to now well balanced. However, it is clear that this balance remains fragile given the inherent conflict between banking prudence, something the EIB stands for given its financial reputation in international financial markets, and research funding accountability something the EC is responsible for. The more so once the present financial context of both private and public funding risk aversion, a context which is likely to remain with us till 2013, is taken into account.*

We now briefly answer some of the specific questions with respect to efficiency as raised in the Terms of Reference of the EG's mid-term evaluation:

**11. To what extent are the costs of managing, the instrument reasonable and in line with expectations?**

*While there is some discussion between the EIB and the EC about the costs of managing the RSFF, it appears to the EG that those costs are shared fairly between the two partners. As stated in the RSFF agreement between the EIB and the EC (Art. 1) "EIB shall apply professional standards and practices for EC operations not less favourable than those used for EIB RSFF operations." It will be clear that the RSFF is not, from a management perspective, a profit centre for the EIB. The EIB's involvement apart from the fact that it is in line with its own Knowledge Economy strategy, appears first and foremost based on enhanced reputation both in the European political world as well as in the European financial and business worlds.*

**12. Management: Has the RSFF been implemented efficiently by the EIB and the EC? Have RSFF loan applications been handled efficiently and timely including the EC response to the EIB's requests to decide on the eligibility of projects under the EC window?**

*From interviews with firms made as part of this evaluation, the EG can only conclude that the RSFF has been implemented in a very professional way. There have been some concerns expressed primarily by SMEs<sup>21</sup> that the response by the EIB took too long. Considering though the complexity of the RSFF operation, the EG considers that the response both to clients and between EC and EIB with respect to eligibility were handled in a relatively speedy way.*

*As the EIB Evaluation Operations unit noted: "Appraisal times have been reduced, but signature crunch in the last month of the year increases operational risk. Internal procedures for the RSFF agreement are complex and not always clear. The agreement and the EC eligibility check should be improved to clarify and streamline procedures." We wholeheartedly agree.*

*Currently the EC has to approve potential RSFF projects submitted by the EIB in case the EIB wants to use the EC/FP7 contribution for risk coverage. The decision here is made by consensus by an internal Eligibility Committee consisting of at least 3 representatives (the Head of the RSFF EC Designated Service as Chair, the Eligibility coordinator and one or more representatives from DG RTD or other relevant DGs (INFSO, MOVE, ENERGY, ENTR). While cumbersome at first sight, the average time for the EC to decide on eligibility was 12*

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<sup>21</sup> Only the representative of PharmaMar complained about the time it took for an RSFF project to be approved.

working days<sup>22</sup>. The EC examined 55 projects submitted by the EIB and accepted 46 of those. Ultimately though the EIB signed only 21 of those using the EC contribution.

**13. Distribution between EIB and EC window: How do EIB and EC assess RSFF projects in view of ensuring compliance with the eligibility criteria set for RSFF projects to be supported under the EC window?**

As the EIB Evaluation Operations unit reported end 2009, € 433 million<sup>23</sup> (€ 359 million from SP 'Cooperation', € 74 m from SP 'Capacities') were transferred from the EC broadly in line with the initial assumptions.

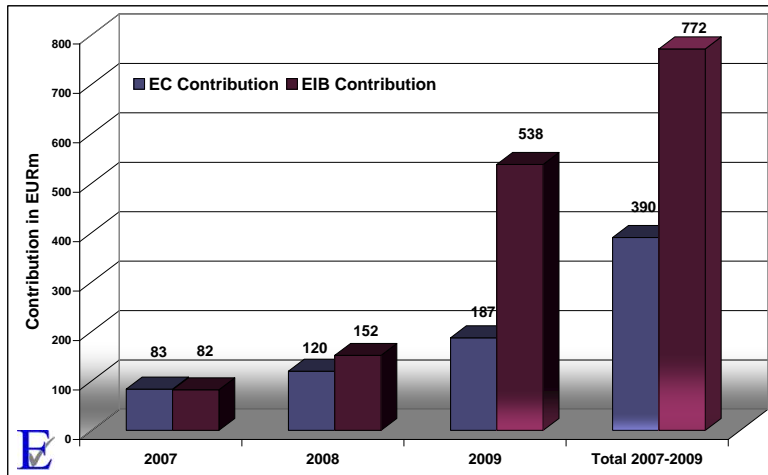
Figure 2 from the EIB Evaluation Operations report presents the development of the take up of funds from the EC and EIB window contributions. End 2009, out of the total EC contribution, € 390 million (90%) had been committed. For the EIB window, the cumulated amount was € 772 million<sup>24</sup>. In 2007 and 2008, the take up of contribution under both windows was more or less balanced. However, the significant demand increase for RSFF in 2009 as a response to the economic crisis led to a take up shift towards the EIB window: 76% versus 24% under the EC window, despite a frontloading of the EC contribution from 2010 to 2009 for an amount of € 70 million (as part of the EC economic recovery plan).

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<sup>22</sup> The EC/EIB Agreement on RSFF implementation allows a maximum delay of 20 working days.

<sup>23</sup> Including Primary, EFTA and Third Countries Appropriations Credits.

<sup>24</sup> In terms of distribution between the EC and EIB contribution to the RSFF, the figures for those RSFF operations which had already been signed until the end of 2009 are almost balanced (EC contribution: 46%, EIB contribution: 54%).



We remain somewhat concerned that some 8 projects with a total RSFF loan amount of € 188 million were ultimately put under the EIB window even though they had received full approval from the EC. The reasons are of course perfectly acceptable: fully denominated foreign currency loans as well as performance related margins increases the internal handling complexity making it difficult to cover those projects through the EC window. Consequently these projects were no longer allocated to the EC window, which limited the applicability of the window. For some other projects, at the time of signature no further funds under the window were available.

As explained above, the appraisal process for a typical RSFF projects has two steps. The economic and financial due diligence is carried out by the EIB which also prices the loan after a thorough risk analysis. In parallel, the EC verifies the content of those RSFF projects for which the EIB asks the EC to assume risk by providing risk coverage under the EC contribution. The EC then assesses the content of the project regarding R&D relevance and/or innovation in order to decide whether the EIB can use the EC contribution for risk coverage. This EC assessment of the R&D content of a project is based on the information received from the EIB (checklist, project report before the EIB Board decides on the project). This level of information is considered absolutely necessary for the EC to have a clear understanding whether the R&D project can be supported under the RSFF. It is only for this purpose that the EC/FP 7 Risk Capital contribution is actually meant to cover financing risks as defined in the RSFF Agreement between the EC and the EIB.

For the EG this is actually not the best basis for future operation of the RSFF. We elaborate further on this point below in answering the next question.

**14. How has the risk-sharing between the EC and the EIB evolved since the RSFF launch, and have both risk-sharing partners made their contribution, as foreseen? In case of imbalances, what are the reasons for any such imbalances?**

*As already indicated above, 71% of all the RSFF projects approved, signed and/or disbursed were in the D- /E1+ loan grading category. General provisions for expected loss and capital allocation for unexpected loss depend on the credit risk evaluation of the EIB carried out in accordance with the CRPG (for both the EC and the EIB window). The RSFF agreement stipulates that: "In no case shall the total of the EC Provision and EC Capital Allocation exceed 50% of the initial nominal loan or guarantee value under an EC RSFF Operation" (Art. 1 point 4), which restricts the use of the EC window for certain risk categories, in particular equity type operations. The RSFF provisioning level of 18.5 % (for general provisioning (GP)/capital allocation (CA)) is in line with the initial assumptions (around 20%).*

*As a consequence of the increased overall risk exposure of the EIB, in 2009 the EIB's services, including its top management, developed a more prudent risk approach when it comes to accepting E2/3+ or lower loan grading categories.*

*Looking at the loan grading development since approval, this did not change for more than three quarters of all projects. Four projects experienced an LG upgrade within RSFF territory (i.e. E1+ to D-), one was upgraded from D- into "non RSFF" territory under the EC window. Contrasting this development with the projects' amounts, it appears that in particular projects with "smaller" loans have been downgraded as a consequence of worsening financial conditions. One concrete project example showed that a downgrading of the loan results in higher risks for both parties (EC/EIB), but the provisioning (GP/CA) for the increased risk remains unchanged for the EC, whilst the EIB assumes the additional risk within its overall project portfolio. Should the company's risk profile further deteriorates the capital allocation from the EC window would need to be paid and further special provisioning for the loan would be provided by the EIB. In the case where the full loan amount could be recovered, the EC CA would probably need to be reimbursed to the EC account. This however is not entirely clear from the RSFF agreement. This is also the case for partial loan recovery and upward modulation for instance. The ultimate financial risk would not be equally shared between both partners (EC/EIB). Should the project fail completely and no funds could be recuperated, the EC would lose its CA and GP (13% of the total RSFF loan), while the remaining losses of 87% would have to be supported by the EIB.*

*The inherent conflict between banking prudence referred to above "the EIB takes more risk, but in a controlled and clear framework " and EC budgetary considerations "aiming at maximising Risk Capital disbursements which would help resolve this issue disbursements for good targeted projects" is also visible at portfolio level. Should future losses be below expectations, the undisbursed amount under the EC window would increase, while should losses be above expectations, then the EIB would support a higher shares of these. The EG is from this perspective particularly concerned that a (sizeable) part of the EC contribution will not be utilised for future operations. The revolving nature of the RSFF (in particular after 2013) is unfortunately not clearly established in the agreement.*

**15. To what extent could measures be taken to improve the efficiency of the RSFF, in view of the second phase of the RSFF for the period 2011-2013?**

*As indicated above under the discussion on the Relevance of the RSFF, the EIB has reinforced over the years its ability to manage RSFF by making a number of internal organisational changes. Thus at the end of 2009 the overall responsibility for the development of innovative projects and financing as well as for the performance of the overall RSFF programme has been given to the RSFF team in the New Products Department (NPST). This will help the EIB to develop, in collaboration with the Commission and other entities, further products specifically designed to meet the risk profile and phase of development of RSFF customers large or small, private or public. The EG welcomes this further move away from the simple but ineffective “one size fits all” approach to a more customer-based approach.*

*As already mentioned above, the second phase of the RSFF will raise new challenges. The EC funding through the FP7 will come to an end in 2013 and while the FP7 budget is gradually increasing till the end of 2013, there may be no RSFF committed financial resources available within FP7 for RSFF from 2012 onwards, due to the current trend of RSFF demand.*

*There is also the issue about how to deal with loans to SMEs under the RSFF programme, which we address in greater detail in Part II.*

### **Information, Awareness Raising and access to the RSFF**

*Over the last three years, the EIB and the EC have carried out over 100 dedicated RSFF conferences and intends to continue this programme in priority countries and sectors where this is needed. The RSFF communication and awareness programme carried out by the EIB and the Commission has achieved its objectives in so far as the demand for RSFF financing seems likely to substantially exceed the size of the current facility. Therefore some revision of the current programme is necessary to ensure a wider understanding of RDI financing by other financial institutions who are capable on their own or in collaboration with EIB and/or the Commission of providing additional financing facilities to meet the evident market needs as well as to increase market understanding of the suitability and availability of debt financing as an appropriate means of financing a wide range (but not all) of RDI investments.*

*On the other hand, the provision of RDI financing to financial intermediaries has been developed in a number of major countries but has been less successful to date than expected. As a result, the EIB is currently considering alternative structures to financing RDI through financial intermediaries and expects to develop this collaboration with other financial intermediaries as part of its ‘full spectrum’ approach as outlined earlier.*

*Below follows brief answers to the specific questions with respect to awareness as raised in the Terms of Reference of the EG’s mid-term evaluation:*

**16. Has access to the RSFF in the EU Member States and Associated Countries been supported by adequate awareness-raising of the EIB, the EC, and the partner banks?**

*Awareness raising support to the RSFF instrument has been developed continuously since 2007 by four different means, ranging from the least to the most interactive: internal communication actions (presentations to staff and external offices), specific brochures and web pages, conferences and road shows targeted towards a specific audience, as well as specific RSFF workshops.*

*Between 2007 and 2009, a total of 112 “RSFF events” took place. The trend has slightly decreased from 35 events in 2007 to 28 in 2009. 20 events were fully dedicated for RSFF (18%), while the RSFF instrument has been mostly introduced at either a general conference on RDI, Knowledge Economy and finance or during a sector specific event (8 out of 10). A limited number of events have taken place within universities or centres of research. A maximum of dedicated events took place in 2008, at a time when it was especially useful to raise awareness, with a total of 12 events, which corresponds to an occurrence of once a month.*

*An important proportion of events have been organised either by the EC, the EIB or by both jointly (43%), while the events managed by professional associations represent more than one third and are now as important as the first category .*

*Awareness campaigns have already yielded positive results, but still more needs to be done to fully complement the increasing financing under RSFF and to reach even more companies, in particular new counterparts. Press releases for each RSFF project are used to support this.*

**17. Have these awareness-raising measures for the RSFF achieved their goal to inform potential target groups in Member States and Associated Countries?**

*As highlighted above, there remains the broader question of whether one actually needs an active prioritisation policy towards countries with lower or no RSFF participation through e.g. awareness programs. One approach the EG subscribes to, could be to orient awareness efforts through increased collaboration with DG REGIO and relevant national and regional authorities, as well as with relevant FP7 Programme Committees, so as to design an appropriate RSFF type of funding mechanism to accelerate the development of RDI financing in regions, supported by the necessary organisational capacity. We come back to some of those broader reflections on the future of RSFF in Part II.*

**18. Has the EIB established a network of partner banks in EU Member States and Associated Countries to facilitate access to the RSFF? If not, what were/are barriers for financial institutions and other intermediaries? Has the EIB found efficient partners in national financing markets, and what kind of agreement between the EIB and banks shall be recommended for innovative small/medium-sized projects and companies?**

*Even though the EIB has a large and established network, as well as long standing relationships with many partner banks in EU Member States and FP7 Associated Countries, so far the efforts using intermediated loans to provide RDI finance to smaller projects have been less successful than expected; as a result, EIB is now discussing with other financial intermediaries how a revised scheme could be implemented. The formula foresees that the EIB fully delegates the due diligence to its partner banks. However, to protect itself (and the RSFF portfolio) from an “adverse selection” of riskier projects and ensure both the EIB and the counterpart bank assume similar risks, the EIB requires extensive disclosure of its counterpart’s risk assessment procedures, which has generally proved difficult to accept by the banks so far. Two out of the three signed risk sharing partnerships with banks have been cancelled. One signed bank intermediated operation is still under negotiation and it is hoped that in the course of 2010 the first disbursements can be made. Most of the other risk sharing operations with banks, which have been initiated by the end of 2009 are still under consideration by both parties.*

*Several reasons have been observed explaining this trend:*

- a) as a result of the recent crisis many of the target companies have cut their RDI expenditures, which makes it more difficult to find appropriate projects and interested partners.*
- b) the crisis has reduced the creditworthiness of companies, increasing the risk to the extent that the risk appetite of the partner banks has vanished.*
- c) these operations are relatively complicated and some banks are more interested in less complex and risky operations.*

*The EG fully understands the present difficulties in convincing financial intermediaries to remain fully involved in RSFF agreements. However, there is of course the complaint that EIB/RSFF procedures may be too demanding and therefore too cost-intensive with regard to loans of relatively small amounts, something which in the present environment of cost-cutting and financial uncertainty might well contribute the present difficulties. These procedures in so far as they are linked to a number of conditions and constraints, mainly imposed by the EC in response to demands from Parliament, need to be streamlined so that they allow for a more diversified cooperation with RSFF.*

*We of course acknowledge the fact that streamlining procedures will have to take into account the fact that both organisations are to different extents handling taxpayers’ money and bank lending procedures must necessarily be taken seriously. However, we do believe that simplification of procedures could be introduced in the RSFF Agreement between the EC and the EIB as well as in the contractual relations between the EIB and its RSFF clients/ beneficiaries or between the EIB and its partner banks.*

*In terms of coherence and synergies the EG concludes on the basis of interviews with RSFF customers as well as EIB and EC officials that the RSFF operations are performing very well certainly considering the risk profile of the facility. In this context though two central coherence questions arise:*

- *What will happen to the funds available after the end of the RSFF period in 2013?*
- *Can the EC's RSFF contribution be returned if the RSFF ceases to exist?*

*Clearly, for the RSFF, long-term clarity in this context is absolutely essential for the sustainability of the RSFF. This is not an instrument which can be invented one day and forgotten the next day. The EG would urge the Commission to reflect already today – with a new EP, a new Commission, preparations of the FP8 in full swing – on the long terms coherence of having a financial instrument available which has brought a radically new approach to the funding of research and innovation. One based on the one hand on debt-financing bringing a revenue generating feature within FP7, the European research funding multi-annual programme which has been dominated for the last 30 years or so by a strong belief in the merits and advantages of grant funding for research, and on the other hand on the “incentivation” or “activation” of private financial markets under the secure umbrella of the EIB, to invest into RDI. The result has also been that demand now plays also a much more significant role in European research funding. We, as an independent EG, are enthusiastic about such developments, it would be good if the EC expressed the same excitement about those developments.*

*The reasons are those which have been highlighted above under the Relevance heading. The RSFF has had a dual leverage effect on research funding in Europe: on public research funding allowing for the utilisation of loan financing in areas which were up to now dominated by grant funding; second on private capital investors by assisting them to remain involved, even at the height of a totally unforeseen debt crisis, in the investment of high risk activities such as RDI.*

*At the same time, the grant-loan combination as a particular feature of RSFF opens up a large number of synergies and other new avenues for combining publicly funded budgetary resources with private debt, loan resources in very different “risk-sharing” combinations. We will come back to some of those ideas and concepts in Part II.*

*We now turn to the specific question raised within the ToR with respect to Coherence and Synergies.*

### **19. To what extent does the RSFF complement FP7 funding schemes and other Community financial instruments in the area of R&D and Innovation (Competitiveness and Innovation Framework**

**Programme "CIP" instruments for SMEs and innovation, financial instruments of the EIB Group at the various stages of a company/project cycle, Structural Funds related instruments)?**

*As regards the links to EU regional policy, it is evident that the very broad range of activities supported by EU funds – from frontier research under FP7, to regional research capacity building under the Structural Funds and access to innovative financing mechanisms under the CIP – all contribute to the general development of the research and innovation capacity of the EU. The actual amount of funds foreseen under Structural Funds for RDI are substantially larger than the total of FP7 and CIP funds. A large proportion of those funds is also currently underutilised or not committed. Currently € 22.2 billion, only 26% of the € 86 billion that had been allocated to RDI at the beginning of the period<sup>25</sup> has been allocated to operations.*

*Here too it should be borne in mind that the resources currently available under Structural Funds are provided almost entirely in the form of **grants** and thus again heavily biased again in favour of supply-based policies. Consequently, as with any non-refundable grant mechanism, the Structural Funds are – when available – a more attractive proposition than a debt-based finance facility such as the RSFF. As a consequence, at the moment the RSFF can only be seen as yet another instrument in the EU toolbox “complementing rather than competing” with other funding instruments like Structural Funds. This “complementing” does not, however, address, the current major weaknesses linked to the use of Structural Funds in areas such as RDI. We come back to this issue in Part II.*

*With respect to SMEs, the Structural Funds currently have their own financial instrument, JEREMIE, which is aimed at financial intermediaries supporting the SME sector. As with the mainstream Structural Funds, the potential relationship between the RSFF and JEREMIE should currently be seen as primarily complementary. JEREMIE does not support the SME directly, but rather through the - generally small-scale - funding mechanisms made available by the financial intermediary. The RSFF could be envisaged as intervening downstream from JEREMIE when debt-related funding would be required on a larger scale by an individual enterprise.*

**20. How could the coherence and synergies of the RSFF with other Community financial instruments in the area of RDI finance be improved, notably through a better complementarity of existing instruments?**

*The Commission services and MS have been working intensively over the last years to develop further synergies between the EU funding instruments for research and innovation. This has included the provision of a Practical Guide to such funding. So too has the RSFF. However, more can be done and we understand that the EC will ensure that the RSFF continues to form part of its ongoing work to develop synergies on the ground. This applies in particular to the relationship between the RSFF and the CIP given the related tasks of the two funding sources in the area of financial engineering.*

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<sup>25</sup> SEC (2007) 1547 'Regions Delivering Innovation Through Cohesion Policy'

*As the EIB Evaluations Operations report noted: “The EIB has been transformed from an extremely risk averse bank into an institution accepting more risk in a controlled manner”, but as the report added the bank should further develop the instruments (incl. IT systems), contracts and staff resources to implement this consistently throughout the organisation. There are obviously also clear resource implications from the shift to riskier operations: thus with respect to RSFF a different hands-on approach is probably required (e.g. stricter reporting conditions in the contract and consequently enhanced monitoring) when compared to what is appropriate for standard loan products, and with respect to resources to monitor projects.*

*As we have argued throughout the answers provided above, so far the RSFF has been a success: it has provided good quantitative and qualitative results and has been given close attention by EIB services. However, as the Evaluation Report also noted: “Under a growth or stabilisation scenario at high level, every loan officer has lending targets and has to make a choice between a complex and possibly small RSFF project and the larger non RSFF one.” It might explain why the size of approved RSFF projects, as noted above under Relevance, has increased so much over the last three years. At the same time, “even though RSFF operations are often more difficult to establish, there could be a tendency that an RSFF loan is rated highly internally, but a comparable operation with a better rated company, contributing at least similarly or even more to the achievement of the Lisbon agenda, is considered as “sub-standard” or not as interesting.” It explains why we remain hesitant to come up with specific recommendations with respect to the internal organisational propositions with respect to the RSFF within the EIB. We trust that the EIB as a bank will introduce the necessary measures as already has been the case (see above under the heading of Effectiveness) to develop further RSFF management within the EIB in a sustainable manner.*

*There remains of course the issue about the sustainability of the EIB’s external partnerships both with other private banks and the EC. Most of those partnerships have specific requirements, which also differ substantially from one facility such as the RSFF to another. Again it would be useful to review and streamline, reporting, monitoring and accounting principles to the extent possible, in different partnerships particularly those with the EC. A clear partnership between the EIB and the EC is extremely relevant, since the pooling of two very complex and highly sophisticated institutions can be either a burden or liberation; to date it has clearly been highly effective.*

**21. Are the impacts of the RSFF - as assessable at this stage - in line with the initial expectations? Has the RSFF already demonstrated - at this stage - impacts in other respects, notably in economic and societal terms?**

*The financial impact of the RSFF, given the success of firms in making use of the facility, is significantly higher than what could have been initially expected. As the EIB Evaluation Operations unit report noted: “In all projects the contribution was significant or high, which is a good result demonstrating the important*

contribution the RSFF and the EIB/EC has provided. In fact, the financial advantage of the loan, the long maturity or ability to match currency (and avoid exchange risk), the ability to diversify funding sources and the catalytic effect on the confidence of other financiers of seeing EIB involved came up repeatedly as drivers for taking EIB finance.”

*The main other reason is of course the financial crisis which has pushed the RSFF to the forefront of available, trustworthy and reliable financial facilities available to firms in need of funding for investments in research and innovation.*

*An additional impact of significance on RSFF is that it has placed the financial structuring capability; sectoral expertise as well as financing resources of EIB at the disposal of significant pathfinder projects that comply with the objectives of FP7 and RSFF. Though the financing volume on its own provided in support of these projects is small in comparison to the overall RDI investment needs of these sectors, the significance of this contribution is that it provides clear pathfinder models that have demonstrated the viability of debt financing for RDI investments in these sectors. These models are capable of being replicated where the appropriate organisational capacity exists by other public and/or private institutions, separately or in conjunction with the EIB Group throughout the EU 27.*

*At the same time, it remains at this stage difficult to make any finite comments about the economic, let alone societal impacts of RSFF beyond the simple statement that a substantial number of research and innovation projects are currently being carried out thanks to the RSFF covering some key areas for Europe’s future growth and competitiveness, long term sustainable development and research and innovation attractiveness.*

**22. Has the RSFF been a useful instrument for the support of private investments in RDI under the current difficult market conditions due to the economic and financial crisis? If so, what were the success factors for the RSFF? If not, what were the reasons?**

*The success of RSFF is due to its focus on providing debt finance for high risk, but financially viable projects on terms well suited to the RDI projects being financed. The financial crisis added to the need for such financing but the structural need for appropriate RDI debt finance was already long evident.*

*A potentially emerging problem for the RSFF is the way the growing risk aversion in financial markets and private banks might affect internal RSFF project assessment within the EIB. The project evaluation within the EIB does not take place in a vacuum: risk assessment will take into account consciously or not the overall risk level in financial markets. This is most obvious in the case of ordinary EIB loans where private banks that have to carry the risks are less and less interested in exploiting such EIB investment opportunities. RSFF projects by contrast where the EIB does take significant risks, are likely to be scrutinized in a more risk averse manner as a result of such trends, the internal EIB risk assessment team being keen on keeping the EIB’s high standing reputation unchallenged. The result might well be that in a period of financial crisis only the least risky RSFF*

projects are being implemented with as a result a lower RSFF implementation rate than would have been optimal compared to the high demand for RSFF funding. The problem with the RSFF methodology is of course that contrary to periods of high growth and easy access to credit, in periods of financial crisis, the instrument's strength – the EIB's standard risk assessment applied to research projects – might turn out to become a real constraint. The indiscriminate assessment of research projects on the same basis as other projects while the RSFF is actually half funded through originally grant funds from the Framework Programmes. In short, what appears an ideal instrument in periods of easy access to research funds pulling in some economic rationale in the innovative potential of European research projects, might in periods of financial crisis look more like an instrument "selecting away" high risk research projects which would otherwise have been funded through FP7 programmes.

In response to these concerns expressed to EC and EIB officials, it was argued by the EC that the selection procedure and criteria, as discussed above under the heading of Efficiency, are clearly not the same for the RSFF as for FP7 and hence should not be mixed up. In the case of FP7, excellence and frontier research is generally sought. That might also explain the relatively low number of RSFF projects (21 out of the 46) which were ultimately signed under the EC window. In this sense the risk-sharing between EIB and EC does not imply that the selection criteria would be similar and that one funding partner could be considered a simple replacement for the other. As the EC noted in its written reaction: "In fact, the RSFF, although technically a part of FP7, is also complementary to it and the selected RSFF projects are, with only a few exceptions, different from activities under the regular FP7 R&D grants."

From the EIB, the response was that the RSFF is in reality much less influenced endogenously by external financial markets than thought. The main reason for this is that the €1 bn invested by the EIB is coming out of its own reserves, and hence shielded from any external financial "mood" influence. Furthermore, the RSFF as a new research and innovation financing instrument represents, for the EIB, also a strategic commitment as one of EIB's core objectives. It is a highly visible and significant part of the Bank's annual programme of activity. Finally, the overall evidence over the period 2007-2009 is clear: there was a significant growth in RSFF funding when financial markets were getting worse; the growth in RSFF funding maintained diversity in the financing of high risk activities of research and innovation in Europe. Thus in many cases, the RSFF was actually used to correct the financial structure of companies heavily involved in research and innovation. This often required a very custom-based approach, it also leaves leeway for addressing future concerns as indicated to the EG in some of the discussions with companies. The EIB appears from this perspective well informed in terms of its assessment of the risks involved in the research and innovation projects submitted for funding. A potential future problem appears more related to difficulties for the EIB to find co-funding support from other financial institutions. Some of those indicated in writing to the EIB that at this stage of the financial crisis, they and other potential financial partners were not interested and/or that they had other priorities. How could other banks be convinced to change their position? Here one might reflect on the EIB taking a position of covering a so-called first loss piece. From this perspective the RSFF could, given its wider application, evolve further in a portfolio approach with respect to capital provision (see further).

**23. Has the RSFF been a useful instrument for the decision making and the implementation of new pan-European Research Infrastructures? If so, what were the success factors for the RSFF? If not, what were the reasons? Up to now, what has been the added value of RSFF in that respect and its usefulness**

**measured against the contribution allocated by the Infrastructure Specific Programme? What would be the possible synergies between the RSFF and the Community legal framework for a European Research Infrastructure Consortium (ERIC)?**

*Regarding Research Infrastructures, and particularly those with a European dimension, or importance for the EU as such, the RSFF could be a useful source of finance complementing EU and national grant finance for such projects. It is actually for this reason that part of the EC contribution is provided under the FP7 specific programme "Capacities".*

*In practice, however, European research infrastructure projects are rather difficult to finance due to a number of reasons: long, complex preparation periods; a large number of shareholders/promoters sometimes outside of the EU, sometimes including only some EU MS; a lack of significant revenues of such projects often dedicated to fundamental research without any medium term industrial application able to generate revenues; legal obstacles to obtain loan finance; political barriers with some governments not wishing loan finance for research infrastructures and only allowing grant funding; difficulties of managing the implementation of such complex project to time and to budget.*

*Despite those rather difficult challenges, three research infrastructures projects have been approved by the EIB for an RSFF loan; others are currently under consideration. The EIB has already signed two RSFF loan agreements for Research Infrastructure: Alphasat (a commercial satellite project with EU research content via INMARSAT/ESA, the European Space Agency) and Sincrotrone Trieste (as presented by Professor Carlo Rizzuto to the EG). For both projects, the EIB will be able to use the EC contribution to the RSFF as those projects concern R&D and comply with the conditions defined for acceptance as "research infrastructure". An additional list of projects has been accepted as eligible for RSFF funding with the support of the EC contribution including also 2 important European projects, FAIR (Germany) and the European Extremely Large Telescope (E-ELT).*

*The issues facing public authorities in deciding on financing for new European research infrastructure projects are complex in that these projects of European scale require support from many countries, some from within and some outside the EU, coordination of whose financing positions is particularly difficult to manage. In addition, the nature of these investments is so large and on occasion so technologically complex that major difficulties are normally expected as regards the successful implementation of the project; its budget and timetable targets.*

*However, the EG considers that when supported by the project finance discipline and contractual arrangements that are required to successfully manage such projects, EIB/RSFF can play a material role in the structuring and financing of these investments. In view however of the limited revenue base of many of these projects that a different, probably first-loss, portfolio approach needs to be considered by the European Commission for the use of its capital contribution to meet expected and unexpected losses in this sector.*

**24. To what extent has RSFF contributed to financing low-carbon technologies and to the implementation of the objectives of the SET Plan in general?**

*The success of RSFF so far has been heavily biased towards sectors the EIB has been most familiar with (see point 2 Effectiveness), in the EIB Operations Evaluation words: “undoubtedly part of the success of the facility”. For the EG this success should now also be reassessed within the framework of the EU 2020 strategy and the SET plan. At mid-term, the current RSFF sector focus needs to be enlarged to include more systematically all the so-called European Industrial Initiatives under the SET plan so as to provide a good balance of sectors of direct relevance to the EU’s long term strategy with respect to the development of Low-Carbon Technologies. It is particularly in this area that the RSFF with its trend towards development and scaling up did provide a particularly valuable facility for large as well as midcap firms.*

*The EG would like to subscribe to the statement made by the European Parliament at its meeting of March 11<sup>th</sup>, 2010 on the SET Plan stating amongst others: “Calls for the EIB in financing energy-related projects to be enhanced, in particular by increasing its lending targets in the field of energy, by increasing its capacity to offer loan guarantees to energy projects and by improving the coordination and continuity of funding for higher risk research and development energy projects.”*

*We do note that many technologies eligible under the SET Plan including Carbon Capture and Storage as well as solar and wind technologies, are currently already eligible and some have already been financed under RSFF. The decision to launch a substantial SET Plan programme means that substantial new investments will take place in the coming years in these sectors. The EG is concerned that the present Risk Capital lending and organisational capacity of the RSFF programme may, at its current scale, be unable to meet the potential future demand for RSFF funding.*

*At the same time, the EG notes the specific RSFF barriers in particular for SMEs, research infrastructures and universities (see point 2 above under Effectiveness). Here a major effort is required to render RSFF more directly relevant to such parties, particularly with respect to the different technological roadmaps falling under the heading of the European Industrial Initiatives. As the EIB Operations Evaluation report notes: there seems to be “a considerable trade-off between loan quantity and complexity of an operation with consequent resource implications, which limits new product development.” We would urge the EIB to come up with new financial schemes and/or products geared specifically towards the needs of those parties (SMEs, research infrastructures and universities) with a particular focus on the following roadmaps identified within the SET European Industrial Initiatives: the European wind initiative, the solar Europe initiative, the European electricity grid initiative, the sustainable bio-energy Europe initiative, the fuel cells and hydrogen, and the smart cities initiative. To leave the research and development of low carbon technologies to the large and midcap incumbents in Europe would be to underutilize in a dramatic way the creative and innovative potential of thousands of young entrepreneurs whether in highly innovative SMEs, starters, university or public research labs.*

*As above, the EG would like to refer to the strong statement made by the European Parliament which: “recognizes that SMEs are a major driving force in the development of many sustainable low carbon energy technologies, in particular as regards developing more decentralized energy systems, and underlines, therefore, that access to public grants and loans, including funding under the SET plan must be designed in an SME friendly manner, calls for a very significant share of the EU funding available under the SET-Plan to be earmarked for SMEs.” We fully endorse this point.*

**25. Is there any evidence that there could be concrete demand for the RSFF in new areas (e.g. low-carbon technologies) which have not been originally foreseen when the RSFF was set up? If such additional demand exists, is the RSFF sufficiently prepared, in terms of volume and structure, to meet such additional demand or should it be reinforced? If it should be reinforced, how?**

*As the arguments put forward under the previous point noted, there is, certainly under the current financial circumstances a clear demand for a renewed form of RSFF with different characteristics than its current pure loan financing structure: a renewed RSFF allowing e.g. for including equity investment for SMEs, or of a more portfolio type in the case of research infrastructures. This holds, as argued under the previous points for low carbon technologies, but also for many other areas in which the combination of large scale development in research needs to be accompanied by small scale experimental research, development and in particular innovation. One may think of health and ageing, digital applications (including broadband) and many more.*

*The EG is nevertheless concerned that the current fragmentation of EIB implemented financial support schemes for RDI which involve multiple decision making procedures such as “supply driven grants procedures” with demand driven loan procedures could be difficult to manage both for EIB/EC as for clients. Apart from the RSFF, the Marguerite -2020 European Fund for Energy, Climate Change and Infrastructure (an Equity Fund for the development of Trans-European Networks in Transport and Energy, including renewable energies), the so-called New Entrants Reserve (NER 300) for Carbon Capture and Storage (CCS) and Renewables (a monetization of 300 million of emission allowances which could – depending on the price per Carbon ton in the market for trading emission allowances – be in the order of EUR 6 billion - coming from the New Entrants Reserve of the EU Emission Trading Scheme operational from 2013 onwards), the European Investment Fund activities (the EIB’s own equity instrument for SMEs involved in a wide variety of activities including JEREMIE – Joint-European Resources for Micro-to-Medium Enterprises – the Mezzanine Facility for Growth, etc.), and the GEEREF (the Global Energy Efficiency and Renewable Energy Fund), and the High Growth and Innovative SME Facility (GIF) is making access to finance for RDI in Europe opaque. The more so as many of the new schemes designed and implemented are likely to be earmarked for particular groups and sectors, and will hence be governed by different sets of rules and regulations (see e.g. the rules governing NER 300 and the way they might affect RSFF involvement). In this context, it should be underlined that the RSFF can principally be a complementary source of co-financing for projects which may receive grant funding out of European schemes (i.e. through the NER-300). However, the decision to provide loans under the RSFF for such projects will be based on the eligibility and feasibility of each project asking for RSFF loan finance, without any automatic entitlement to receive RSFF loan finance.*

*It goes without saying that there is often a trade-off in aiming for objective-specific target groups vs streamlining procedures and/or achieving overall results; one instrument can rarely cover all intended objectives and may thus need special rules which in turn may be counterproductive in terms of efficiency.*

*Furthermore, in cases such as the NER 300 programme for CCS and Renewable Energy or Structural funds, this will provide a substantial source of grant funding at Community level for a specific number of technologies and projects per country. As grant funding will only be available to meet the needs of projects to the extent that they are not commercially viable, additional debt sources such as RSFF will also be required in due course.*

*It is to those as well as other questions concerning the future of RSFF that we turn now in Part II.*



## **Part II: Towards a sustainable RSFF**

*In this second part we focus on some of the broader questions associated with the short (2011-2013) and long term (after 2013) future of the RSFF.*

*Our concluding comments and recommendations on the short-term future of the RSFF follow in a relatively straightforward manner from the assessment presented in Part I. We follow the five summarizing questions raised in the ToR focusing on the immediate measures needed to operationalize an effective and efficient RSFF within the present context of the financial crisis. We start with a brief summary of our Overall Assessment, followed by an overview of the Strengths and Weaknesses of the RSFF, the Level of Demand and Use Impact, the Effectiveness of the RSFF and possible other Applications for RSFF-like instruments. Each time we also make some specific recommendations.*

*In the second section we present a long term view and vision on the RSFF. The RSFF could well be one of the major financial instrument flagships of FP8, illustrative of a future vision on how private investment for RDI can be leveraged by an efficient combination of public budgetary resources and debt financing. At the same time RSFF could also serve to ensure financing both of research and innovation based on demand and on the merits of the individual proposals without the different research and innovation constituents being in a position to make claims on the distribution between research and innovation. Finally RSFF has brought the EIB with its financial resources and sectoral and financial expertise to the forefront as European institution for RDI financing. In all, these are sufficient reasons for the EG to present its long term reflections and recommendations.*

### **Section 1: Next Phase of RSFF: 2010-2013**

*On the basis of all the evidence presented by the EC and the EIB, the evaluation report of the independent EIB Evaluations Operations unit, field visits as well as interviews with a relatively wide spectrum of highly diversified customers of the RSFF, the EG considers the RSFF currently as a particularly relevant financial instrument substantially in line with the EC FP7 objectives as well as the EIB's Knowledge Economy priority. Furthermore, the EG considers that through the participation of two very different sources of RDI funds to establish RSFF as a shared risk- capital platform, **a new demand-driven instrument has been introduced in the European Union's research funding within FP7, while at the same time private financial markets have been incited to expand financing for RDI.** In this sense the RSFF has had a dual leverage effect: on research allowing for the "utilisation" of debt financing in areas which were up to now largely dependent on grant funding; and on private capital investors by helping them to remain involved in the financing of riskier activities such as RDI even in crises times as shown in the peak period 2008-2009.*

*At a more detailed level and as discussed above, the implementation of the RSFF, at a particularly difficult moment in time, appears to have been carried out in an efficient and effective manner. Considering the*

*inherent higher risk profile of RSFF projects, the overall outcome is clearly positive. As the EIB Evaluation Operations report noted: “only two projects were rated partly unsatisfactory at this stage and both companies are showing signs of recovery”. All other projects were rated satisfactory or excellent.*

*We now briefly turn to the five summarizing questions using those as the framework for our recommendations under section 3.*

### **A. Overall Assessment: Is the novel approach proposed by the RSFF efficient with respect to reaching its intended objectives? Were the objectives of the RSFF as a novel instrument supported by FP7 clearly specified and have they been implemented according to plan?**

*The RSFF is clearly a novel and successful approach to the financing of RDI by providing risk-shared debt financing. The contribution of the FP7 as well as of EIB to the risk capital required to underpin EIB debt financing for the RDI sector has been an essential part of the success of the RSFF in the first phase of its rolling out. A lot of learning took place both at the EIB and the EC with respect to the most efficient ways to manage such a new, riskier financial instrument. A careful yet time efficient way of deciding about the eligibility of RSFF projects for the FP7 EC window has been used. As discussed at greater length while answering the questions in Part I, the EG is confident that under the demand-led pressures from customers further internal organizational improvements will be introduced so as to manage RSFF in the most efficient way, keeping with the EIB approach that not one size fits all.*

*This brings the EG to its first recommendation:*

#### **First recommendation:**

**We recommend that the Second Phase of RSFF from 2011-2013 should be rolled out as foreseen from the outset and that the EC submit to the European Parliament and Council the release of the EC contribution of up to € 500 million to the RSFF under the conditions foreseen in the FP7 legal basis.**

### **B. What are the main strengths and weaknesses of the RSFF?**

*The strengths of the RSFF are relatively straightforward. As noted in Part I, RSFF has been particularly effective in providing “credit access and enhancement” for RDI investment throughout the EU. With the coverage of the expected and most of the unexpected loss through the provisions of the EC and the EIB, the remaining credit risk has actually been enhanced. It may even rise over time to investment grade category. In this sense the EG*

also concludes that to allow for a higher volume of RSFF type of transactions given the current significant needs in Europe, it is necessary to increase the EC contribution to the RSFF risk-sharing capital cushion by a substantial additional amount.

The weakness of the RSFF is closely associated with the inherent conflict between banking prudence referred to in Part I “the EIB takes more risk, but in a controlled manner” and the EC budgetary considerations “aiming at maximising grant disbursements for good targeted projects”. Thus, should future losses to the Risk Capital be below expectations, the unused amount of EC capital contribution would increase, while should loan losses be above expectations, then the EIB would absorb a high share of these while the EC capital contribution would remain unchanged in line with its earmarked budget limit.

This brings the EG to a second recommendation:

#### **Second recommendation:**

**In light of the financial crisis, we urge that RSFF should take into account the market needs for a higher volume of risk based financing. Since the EIB is intrinsically limited in its risk-taking capacity given its reputation in the financial market and its extensive risk-taking coverage at the moment, we propose that the RSFF authorities reflect on opportunities to utilise part of the EC contribution within the present RSFF Agreement as a first-loss piece<sup>26</sup> for specific sub-sectors e.g. for some target groups like Research Infrastructures and SMEs.**

### **C. What has been the level of demand, take-up and use of RSFF?**

As discussed at great length in Part I, RSFF helped many European research intensive firms maintain RDI activities in a period of major financial stress. It has helped some of the most innovative firms in Europe to reinforce their RDI capability and structure their financial positions at a time banks and other financial institutions were reducing access to finance for high risk investments. It also provided appropriate loan finance to those innovative SMEs not interested in private equity funding<sup>27</sup>.

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<sup>26</sup> The EC contribution would be used **first** to cover potential losses for a portfolio of loans provided to a specific target group, up to a defined percentage of losses (“first-loss” cushion). Only if potential losses were to exceed the EC contribution, the EIB contribution to the RSFF would be used to cover such further losses on an agreed basis.

<sup>27</sup> EIB support for the SME sector is provided primarily through equity and guarantees for loans through the activities of the European Investment Fund (EIF) as the EIB’s specialist SME financier as well as through EIB’s

*At the same time, RSFF did contribute indirectly to the growth of European SMEs through the development of new products such as financing for Open Innovation investments by major corporates, in collaboration with research organisations as well as mid-cap and SME companies. RSFF also promoted risk-sharing with financial intermediaries for the financing of their RDI intensive SMEs.*

*The benefits of RSFF to SMEs are currently limited by the fact that individual SMEs that seek direct funding under RSFF have to fulfil the same due diligence requirements that apply to larger, more substantial project promoters and projects. Therefore, in order however to increase the number of SMEs benefiting from RSFF type financing, the EG believes that the RSFF facility should aim to develop more intermediaries partnerships with specialist financial institutions. These could include corporate entities for programmes such as Open Innovation or special purpose vehicles such as JTI (Joint Technology Initiatives) or alternatively in collaboration with other RDI programmes for SMEs carried out by the EIB Group which would facilitate use of RSFF by RDI intensive SMEs across the EU.*

*This brings the EG to the following recommendation:*

**Third recommendation:**

**We urge the EIB and the Commission to increase the numbers and range of SMEs financed under RSFF in a proactive way: we would like a stronger, more specific emphasis in the second phase of RSFF on financing RDI-intensive SMEs through a range of appropriately specialised intermediaries whether banking or non-banking institutions. In particular new ways in order to offer the RSFF both nationally and regionally in collaboration with partners should be explored. For the future, we therefore welcome the outline proposal for a FRISBEE scheme (Facility for Research and Innovation by Small Business Enterprises in Europe) providing to EU technology-driven/innovative SMEs a single, simple and more adapted scheme<sup>28</sup> to support them from the generation of knowledge until commercialisation (e.g. including risk-sharing mechanism for lending operations) and involving specialized national or regional financial institutions<sup>29</sup>.**

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*own activities of lending to financial intermediaries on a global loan as well as a risk-shared basis to ensure a wide geographic distribution throughout the EU 27.*

<sup>28</sup> *One should note that the FRISBEE (Facility for Research and Innovation by Small Business Enterprises in Europe) scheme is so far only work in progress/part of future financing instruments and not an existing scheme. It addresses the specific concerns of SMEs: firms could now submit a proposal alone, would be an open application with no deadlines, IPR often very important for SMEs would be granted, support could be provided through a possible combination of grants and lending/equity finance/participation/mezzanine finance etc.*

<sup>29</sup> *See also Recommendation 10 below under section 2.*

The EG also noted the limited RSFF use with respect to research infrastructures and universities. While universities in particular often have access to cheaper EIB loan facilities when borrowing directly, RSFF financing could nevertheless be used by universities for the financing of RDI based Public-Private Partnerships (PPPs) or similar structures. Moreover, the EG considers that the EIB could use project financing techniques and disciplines in combination with RSFF resources thus playing a significant role in the structuring and financing of large scale research infrastructures investments such as the ESFRI priorities projects. This could make an important contribution to their successful implementation given the greater inherent complexities and challenges involved in such projects than in conventional RDI projects due to their size, international nature and technological uncertainties. In view of the limited revenue base of many of these research infrastructure projects, it is likely that a different (probably a portfolio and/or first-loss) approach will need to be considered by the EC for the use of its capital contribution to meet expected and unexpected losses in this sector.

This brings the EG to the following recommendation.

#### **Fourth recommendation:**

**We recommend that the EC and the EIB reflect on the use of RSFF as a means of increasing the resources available to universities and research organisations to complement their existing sources of financing, for their investments in Public Private Partnerships as well as to Research Infrastructure projects of European interest, to enable them to undertake investments necessary to the fulfilment of the smart public policy objectives of Europe 2020. This could be done by the EC taking a different risk-sharing approach to the use of RSFF resources while also taking into account the complex and difficult nature of the investments involved as well as their limited own revenues available to repay RSFF loan finance.**

#### **D. What is the early evidence of the effectiveness of the RSFF?**

*Under Part I the evidence on the effectiveness of the RSFF is addressed specifically. The EG concluded that the overall quantitative success in rolling out RSFF, independently of the conditions that have prevailed due to the recent financial and banking crisis, have clearly been the result of using EIB's existing technical expertise in different sectors and its financing capabilities to manage the risks of such financing through a simple, highly efficient framework which has drawn heavily on the ETP; JTI; JU<sup>30</sup> as well as other structures created by the European Commission under FP7. Success has also been achieved through the EIB's commitment to developing new financing products to meet the needs of various pathfinder projects which can be replicated by other*

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<sup>30</sup> ETP: European Technology Platforms; JTI: Joint Technology Initiatives; JU: Joint Undertakings

entities in the same sectors. In addition, the success of RSFF has been due to the fact that it meets the long term need for additional financing for RDI in the EU as well as in part to the increased needs for RDI financing by the current banking and financial crisis. As a result, the financing provided by EIB under RSFF, while respecting its own strict credit quality as well as RDI policy objectives and eligibility criteria reached 65% of the overall loan approvals targets to 2013 versus an expected 50% at this stage of the programme.

This leads the EG to the following fifth recommendation:

**Fifth recommendation:**

Given the effectiveness with which the RSFF has been rolled out over the first phase and the strong need for an increase in 'credit access and enhancement' for RDI activities in Europe, there is a need to increase the risk-sharing capital contribution for "RSFF" beyond that initially foreseen. The Expert Group considers it therefore important, in view of the results of the first phase of RSFF, for the risk profile of the EC window of RSFF to be expanded to bring it into line with the risk profile applied for the EIB window. The Expert Group also considers that the needs of certain specific categories of RDI-intensive sectors could also be met by using RSFF to finance equity in innovation funds and other comparable instruments. As far as the EC contribution is concerned, such contribution should come not just from FP7, but should equally come from e.g. unused agricultural funds under Heading 2<sup>31</sup> of the current budget review as well as from the unutilised funds under the EERP Programme. As a side effect, it would incite potential promoters to apply for RSFF more actively in the agro-food business sector as well as in Renewable Energies, Climate and the Environment.

The EG recommends that an additional EC contribution of up to € 500 million to RSFF for 2011-2013 should be made, coming from FP7 (SP 'Cooperation') and/or non-FP7 resources. Given the high demand for RSFF and the effectiveness of RSFF in leveraging private funding today, such an additional EC contribution will allow for an even more effective rolling out of the second phase of RSFF and contribute directly to the EUROPE 2020 policy objectives of an increasingly Smart and Sustainable economic growth throughout the EU.

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<sup>31</sup> Budget 2007-2013 - Heading 2 (Preservation and management of natural resources) includes the common agricultural and fisheries policies, rural development and environmental measures, in particular Natura 2000.

## E. What could be done to improve the effectiveness of the RSFF and in which areas?

*Part I discussed at greater length the many ways in which the effectiveness of the RSFF could be further improved.*

*Let us here pick out one in particular. Above we noted the specific RSFF barriers especially for SMEs, research infrastructures and universities and pleaded for a major effort in rendering RSFF funding of more relevance to such parties depending of course on the appropriateness of RSFF for their specific life cycle phase. As the EG strongly supports the notion that one “RSFF size cannot fit all purposes”, we would urge the EIB to come up with new financial schemes and/or products geared specifically at the needs of those parties (SMEs, research infrastructures; universities and new sectors). There is, certainly under the current financial circumstances a clear demand for additional forms of RSFF with different characteristics to its current pure loan financing structure: e.g. a RSFF that would allow for including equity investment for SMEs, or of a more portfolio type in the case of research infrastructures. This holds, as argued under the previous point, also for specific financing arrangements to be developed for low carbon technologies, but also for many other areas in which the combination of large scale development in research needs to be accompanied by small scale experimental research, development and in particular innovation. One may think of health and ageing, digital applications (including broadband & aerospace); agri-food; climate biodiversity and many more.*

*At the same time, the EG is concerned that the further proliferation of EIB/EC implemented financial support schemes for “EUROPE 2020” smart, sustainable and inclusive objectives is likely to involve multiple and increasingly diverse decision-making procedures. These would include on the one hand “sector specific supply driven grant procedures” and the other hand “demand driven loan procedures” with as a result a risk of reduced effectiveness and increased time for decisions required for financing as well as a lack of transparency.*

*It leads the EG to the following recommendation:*

### **Sixth recommendation:**

**We are concerned that the current proliferation of EIB/EC implemented financial support schemes for RDI as part of EUROPE 2020 could make access to finance for RDI in Europe more complex and somewhat opaque. Especially as many of the new schemes designed and implemented are likely to be earmarked to particular groups and sectors, and will hence be governed by different sets of rules and regulations. We recommend that care should be taken when such programmes are established for RDI and SME financing instruments and funds and then monitored through regular evaluation to ensure their effectiveness as well as to develop greater synergy and complementarity between sectors and financial instruments & funds. A certain degree of rationalisation of existing/future financial schemes should be targeted.**

The broader question about possible other applications of RSFF like instruments is discussed in greater detail below under Section 2. This question appears of particular relevance to the future programming period of RSFF after 2013.

## **Section 2: RSFF from 2014-2020: expansion in scale or expansion in scope?**

As an independent group of experts, the EG uses the opportunity of this interim evaluation of the RSFF to also present some views on the long term future of RSFF as a financial instrument both for European RDI funding, as well as for other areas of central importance to Europe's long term growth as defined within the EUROPE 2020 strategy.

Our reflections can be summarized under two different headings. Expanding RSFF **in scale** while limiting its focus on European RDI efforts whether under the "smart growth" or "sustainable growth" EUROPE 2020 heading; or expanding RSFF **in scope**, broadening its use to different areas going beyond the current purely RDI investments focus.

### **A. Expansion in scale?**

Having evaluated RSFF at mid-term, the EG is convinced that the RSFF should be continued beyond 2013 and should become part of a new FP8, at an increased level of EC contribution. The EG strongly favours a substantial increase in the EC contribution for the next financing period, no less than € 5 billion, given the significant impact RSFF has had on expanding the range of financial instruments for financing RDI and the substantial leverage effect the use of budgetary EC funds achieved. In this spirit, the RSFF scheme should also appear under FP8 in a more visible way (e.g. as a specific part of FP8). Furthermore, it would be useful to earmark the risk capital being released when RSFF loans are being repaid under the EC window of the present RSFF, to this new FP8 RSFF scheme. Doing so will mean that in the long term, the RSFF funding part from the EC will gradually become more of a revolving fund.

The reasons for the EG's proposal for a significant increase in future RSFF funding from the EC are closely linked to the current coverage of RSFF. There are many sectors as discussed above under recommendation 6, which are at the moment underrepresented in the RSFF project portfolio. As we also noted in Part I, the participation of research infrastructures and universities as well as SMEs, has remained low. Moreover the first phase of RSFF has been largely focussed on 5 Themes of FP7 (Life Sciences; Engineering; Energy/Climate; ICT; Research Infrastructure) and has yet to be fully extended to cover the other 4 themes in an as significant manner. One can also expect that as a result of greater awareness, the number of new RSFF customers will increase substantially in the years to come. Finally, and depending to some extent on the persistence of the financial crisis, there is likely to be a growing demand for access to RSFF funding for RDI investment. European levels of private RDI investment are still substantially lower than those in the US; Japan or South Korea and need to increase significantly if the European economy is to meet the future competition from growing investment in RDI by China and other major emerging economies.

*As there is both a need for a higher volume of RSFF finance as well as for financing higher risk of the average operation under RSFF, it will be worth considering the volume and the risk of the respective market niches. As a rule of thumb the EIB contributes in its core objectives to some 3-5 % of gross fixed capital investments in various sectors. If the Barcelona RDI targets for 2020 remain at about 3% of GDP then a significant increase in volume of RSFF financing as well as other comparable schemes of debt and equity on risk sharing principles will be needed.*

*It leads the EG to the following “long term” recommendation aimed at the future programming periods for the RSFF:*

**Seventh recommendation:**

**The RSFF should be continued beyond 2013, and become a specific - more visible - part of FP8 with a dedicated Community funding of no less than € 5bn under the EC window. Moreover EC window should not only cover R&D but also Innovation (e.g. RDI). Furthermore the EC Risk Capital that will be released when the current RSFF loans are repaid from the EC window under the present RSFF (net of any loan losses) should be added to that € 5bn. The substantial volume of those figures should be seen in perspective: notably the structural need for Europe to invest more in RDI to improve growth and competitiveness; the proven capacity of RSFF to meet rapidly growing demand from a significant range of entities throughout the EU-27 in line with the objectives of FP7; the expected success in addressing the needs of currently underrepresented groups in RSFF; and the additional resources RSFF is capable of leveraging from third party investors both over the short and long term for future RDI investment.**

*At the same time, the EG is aware that this mid-term evaluation covers only the first three years of a new financial facility which in all fairness can as yet not be assessed in terms of its full, long term impact. It leads the EG to the following additional recommendation.*

**Eighth recommendation:**

**RSFF should be monitored very regularly and in a transparent manner.**

**B. Expansion in scope?**

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The EC Risk capital- contribution<sup>32</sup> to RSFF is a unique feature of RSFF and opens up many similar opportunities for combining publicly funded budgetary resources with private debt loan resources in different “risk-sharing” combinations. One may think of several of the so-called “grand” societal challenges the EU is confronted with over the next decades such as climate change, energy saving, demography (ageing), but also social cohesion. Obviously, the EIB’s risk bearing capacity is limited so that RSFF cannot be scaled up indefinitely as in the case of the current RSFF for which € 1 billion capital contribution came from the EIB’s own reserves. It means that possible future RSFF like instruments will have to involve different forms of risk sharing partnerships, **possibly even** more customer-contract relationships between the EC and the EIB in respect of the EU’s priorities (in particular EUROPE 2020 and the future FP8) and of course the EIB’s priorities as a banking institution, and where the potential extent of the loan losses as well as the need for risk capital are more fully taken into account than is the case of RSFF today.

The EG noted with satisfaction that many technologies eligible under the SET Plan including Carbon Capture and Storage as well as solar and wind technologies, are already eligible and that several of those have been financed under RSFF. The decision by the EC to launch a substantial SET Plan programme means that even more substantial new investments are expected to take place in the coming years in these sectors which can only be welcomed. However, the EG is concerned that the present capacity of the RSFF programme is, at its current scale, unable to meet the demand for RSFF funding from major new programmes such as SET as well as the other themes of FP7 and FP8 in the future.

This leads the EG to the following recommendation:

**Ninth recommendation:**

The NER 300 programme for CCS and Renewable Energy will provide a substantial source of grant funding at Community level for a specific number of technologies and projects per country. However, the EG wishes to highlight the fact that such grant funding will only be available to meet the needs of projects to the extent that they are **not** commercially viable. The EG considers that these additional resources for programmes such as CCS and Renewable Energies are a necessary and welcome response to the development of the EUROPE 2020 objectives for Sustainable development. Again this implies that **additional** debt sources such as RSFF will be required.

The EG recommends that the EC and EIB take the necessary steps, not only to ensure that RSFF is available to support the financial development of these sectors but also to work in collaboration with third party financial institutions both as investors and as lenders to further extend the availability of risk based financing.

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<sup>32</sup> A contribution given not as an interest rate subsidy but rather used as a provision for expected and unexpected loss with upside effect for the EC to the extent losses don’t materialize.

Expansion of Research & Innovation Capacity; Regional Focus and other Sector priorities.

*As regards the possible links to social cohesion and EU regional policies, it is evident that the very broad range of activities supported by EU funds – from frontier and excellence based research under FP7 to regional research capacity building under the Structural Funds and access to innovative financing mechanisms under the CIP – all contribute to the general development of the research and innovation capacity of the EU<sup>33</sup>. The actual amount of funds foreseen under Structural Funds for RDI is substantially larger than the total of FP7 and CIP funds. Those resources are provided almost entirely in the form of **grants** and thus again heavily biased in favour of supply-based policies. Consequently, as with any non-refundable grant mechanism, the Structural Funds are – when available – a more attractive proposition than a debt-based finance facility such as the RSFF.*

*The EG believes that there is a need to re-assess such RDI investments at the regional level. At the moment European investment in innovation at regional level is managed and implemented through regional “management authorities” which handle European structural funds in the spirit of being primarily concerned about their reputation with the EC in terms of accountability and control. As a result, structural funds are being managed on the basis of a heavy load of administrative procedures which lead to a complex but also highly risk adverse use of structural funds, explaining also indirectly the lack of use of such funds particularly with respect to innovation and research.*

*This leads the EG to its final recommendation:*

**Tenth recommendation:**

**We recommend, as a complement to the existing RSFF facilities, the development of new forms of public private Risk-Sharing Financial Facility to meet RDI needs in regional development areas: a RSFF programme for research and innovation with a dedicated SME & Midcap windows drawing upon the experience of the existing JEREMIE financial programme.**

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<sup>33</sup> *The structural funds earmarked for innovation and research (2007-2013) amount to €86 billion (compared to € 50 billion for FP7) out of a total of € 343 billion. For the previous period 2000-2006 the figure was € 26 billion. This dramatic increase in structural funds for innovation and research happens to coincide with a likelihood that a large proportion of cohesion funds are not being used (estimates vary from 50 to € 100 billion of the total) particularly in less developed regions where regional management authorities have not been able to satisfy the matching and other EC criteria.*

Such a public-private partnership should blend European budgetary resources (structural funds) and risk based debt financing resources through the EIB (and possibly other financial intermediaries) and should be based on a different risk sharing concept given the grant nature of the Structural Funds. Moreover, it would provide a window of opportunity in difficult public funding times, significantly raising the effectiveness of European regional policy. It will be particularly useful in MS' regions where local banks are as yet insufficiently willing to invest in risky projects.

## Conclusions

*The Risk-Sharing Finance Facility (RSFF) introduced in 2007 was the first “European scale programme” to use debt-based finance to complement the more traditional financing means for Research, Development and Innovation (RDI) such as grants as under the European Commission’s Framework Programmes (FP), or equity as provided by the European Investment Fund (EIF). Over the relatively short period of its existence – the first three initial years of rolling out this new facility: the period analysed here as part of the mid-term evaluation – the RSFF turned out to represent a particularly welcome instrument for addressing debt financing of RDI in Europe. As the financial crisis unfolded, the market imperfections with respect to loan finance for RDI investments did not just increase substantially, they became to some extent ubiquitous. RSFF remained one of the few financial instruments available to innovative firms and organisations to maintain RDI activities in a period of major financial stress. Thus, it helped some of the most innovative firms in Europe to maintain their RDI investment and reinforce their financial positions at the time when banks and other financial institutions were reducing access to finance for high risk investments. It also provided loan finance to those innovative SMEs not interested in private equity funding.*

*While the quantitative success of the RSFF has been partly due to the increased needs for RDI financing by the current banking and financial crisis – meeting the EIB’s strict credit quality as well as the EC/EIB policy objectives, RSFF outlays reached at mid-term 65% of the total targets versus the expected 50% – the success of the RSFF has also been the result of the close collaboration between the European Commission (EC) and the European Investment Bank (EIB). The collaboration is using the latter’s existing technical, sectoral expertise and managing risks financing capabilities, whilst building on the former’s expertise in pulling together interested RDI parties across Europe under headings such as European Technology Platforms (ETP), the Joint Technology Initiatives (JTI) or more recently the Strategic Energy Technology (SET) plan. Success has also been achieved through the EIB’s commitment to develop new financing products to meet the needs of various, so-called “pathfinder” projects which can be replicated by other entities in the same sectors. It is in this sense that RSFF has been particularly effective in providing increased access to ‘credit enhancement’ for RDI activities in Europe. With the coverage of the expected and most of the unexpected loss through the risk capital provisions of the EC and the EIB, the remaining credit risk could actually be enhanced and even rise over time to investment grade category.*

*On the basis of all the evidence presented to the EG by the EC and the EIB, the evaluation report of the independent EIB Evaluations Operations unit, field visits as well as interviews with a relatively wide spectrum of highly diversified customers of the RSFF, the EG considers the RSFF as a uniquely innovative, demand driven instrument, successfully introduced in the European Union’s research funding within FP7 and having dramatically expanded the financing for RDI. In effect, RSFF has had a dual leverage effect: on research*

*allowing for the utilisation of debt financing in areas which were up to now largely dependent on grant funding; and on private capital investors by helping them to remain involved in the financing of riskier activities such as RDI even in crises times as shown in the peak period 2008-2009.*

*Furthermore, the implementation of the RSFF, at a particularly difficult moment in time, appears to have been carried out in a highly efficient and effective manner with a significant amount of learning taking place both at the EIB and the EC with respect to the most efficient ways to manage such a new, riskier financial instrument as well as with respect to the careful yet time efficient way in which the eligibility of RSFF projects for the FP7 EC window have been decided.*

*The EG is therefore highly positive about the first rolling out phase of the RSFF. The development of RSFF and its successful utilisation as a risk-based debt financing instrument in support of RDI-intensive investment in strategic sectors identified by FP7, has achieved very considerable results on an EU-wide scale in the 3 years since its launch. RSFF itself has been an important European innovation in RDI financing and serves as a powerful lesson and encouragement to what can be achieved by the judicious combination of risk-based capital from the EU-budget and EIB's financial resources, expertise and effective programme management. In the "Political guidelines for the next Commission" (3 September 2009), President Barroso mentioned the RSFF as "an excellent example to build on" in order to "improve the blending between grants from the EU budget and EIB loans" and, in general, to further intensify the partnership between the EC and the EIB. At the end of this mid-term evaluation, the EG fully shares this view, RSFF appearing clearly as a model example to be further developed and intensified.*

*In conclusion, the EG considers and recommends that the EC and EIB should continue to pursue the deepening and widening of their joint financing activities in support of strategic RDI-intensive activities as set out in this report; operate well-targeted programmes that learn the various lessons that can be drawn from this EG report as well as the EIB Evaluation Report on RSFF but above all prioritise the financing of RDI which can contribute significantly to the achievement of the Europe 2020 public policy objectives of smart, sustainable and inclusive growth.*

## Acknowledgments

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**Appendix: List of signed active RSFF operations to 31/12/2009**

<i>Signature Year</i>	<i>Operation Name</i>	<i>RSFF-Based Financing EUR m</i>
2007	ABENGOA RDI LOAN	49
	ANDASOL SOLAR THERMAL POWER	60
	ANDASOL SOLAR THERMAL POWER II	60
	EBERSPAECHER AUTOMOTIVE RDI (SFF)	30
	POWERTRAIN R&D	30
	SOLUCAR SOLAR THERMAL POWER	50
	SORIN TECNOLOGIE MEDICALI R&D	100
	ZELTIA MARINE PHARMACEUTICALS	30
<b>2007 Total</b>	<b>(9 Operations)</b>	<b>409</b>
2008	BULGARIA TELECOM DEVELOPMENT (SFF)	30
	EUROPEAN PHARMA	200
	GAMESA WIND POWER RDI II	140
	GETINGE MEDICAL TECHNOLOGY RDI	54
	MEDINVEST	30
	NSG R&D	52
	OUTDOOR EQUIPMENT AND TOOLING RDI	68
	PIAGGIO R&D	150
	SENSING SOLUTIONS RDI	40
	SOLNOVA 1&3 CONCENTRATED SOLAR POWER	110
	TOFAS NEW VEHICLE DEVELOPMENT	50
<b>2008 Total</b>	<b>(12 Operations)</b>	<b>924</b>
2009	ACCIONA RDI	185
	ADVANCED LITHOGRAPHY	200
	ALPHASAT	225
	AUTOLIV SAFETY SYSTEMS R&D	225
	BIA SEPARATIONS	8
	CAR EFFICIENCY AND SAFETY RDI RSFF	225
	CIE AUTOMOTIVE MULTITECHNOLOGY PARTS	60
	DEBRECEN PHARMA R&D RSFF	100
	ENERGY EFFICIENT CAR COMPONENTS	50
	ENGINEERING INNOVATION - RSFF	15
	EUROPEAN MEDTECH	200
	FCC MEDIO AMBIENTE	8
	GAMESA WIND POWER RDI II	60
	GKN AEROSPACE RDI	88
	ICL SPECIALITY CHEMICALS R&D (RSFF)	100
	INTESA SAN PAOLO RISK SHARING FACILITY	50
	ION BEAM APPLICATIONS	50
	MEDICAL R&D EUROPE	150
	NOKIA SIEMENS NETWORKS SINGLE RAN RDI	250
	PROCESS TECHNOLOGIES (GEA)	150

<i>Signature Year</i>	<i>Operation Name</i>	<i>RSFF-Based Financing EUR m</i>
	THERMOSOLAR GEMASOLAR SPAIN	80
	THYSSENKRUPP TECHNOLOGIES RDI RSFF	210
	UPM FOREST PRODUCTS RSFF	125
	VAILLANT INNOVATIVE HEATING RSFF	120
	WEBASTO ENERGY EFFICIENCY AND SAFETY	50
<b>2009 Total</b>	<b>(25 Operations)</b>	<b>2,984</b>
<b>Grand Total</b>		<b>4,317</b>