



D.T2.1.2 - PREPARATION OF PA 1: CE EX-ANTE ASSESSMENT ANALYSIS REPORT

WP : T2 Implementation of the instruments,
testing and transferability actions

Version final

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1. Introduction and definitions

In preparation for the Pilot Action 1 of the FIRECE project and following the indications of the guidelines and action plan already prepared, this document contains the results of the activities related to the "Block 1" of the ex-ante assessment of innovative financial instruments applied to the Emilia-Romagna Region, PP3.

The "Block 1: Market assessment" of the ex-ante assessment, as required by the article 37 (2) of the CPR¹ and summarized in the following figure:

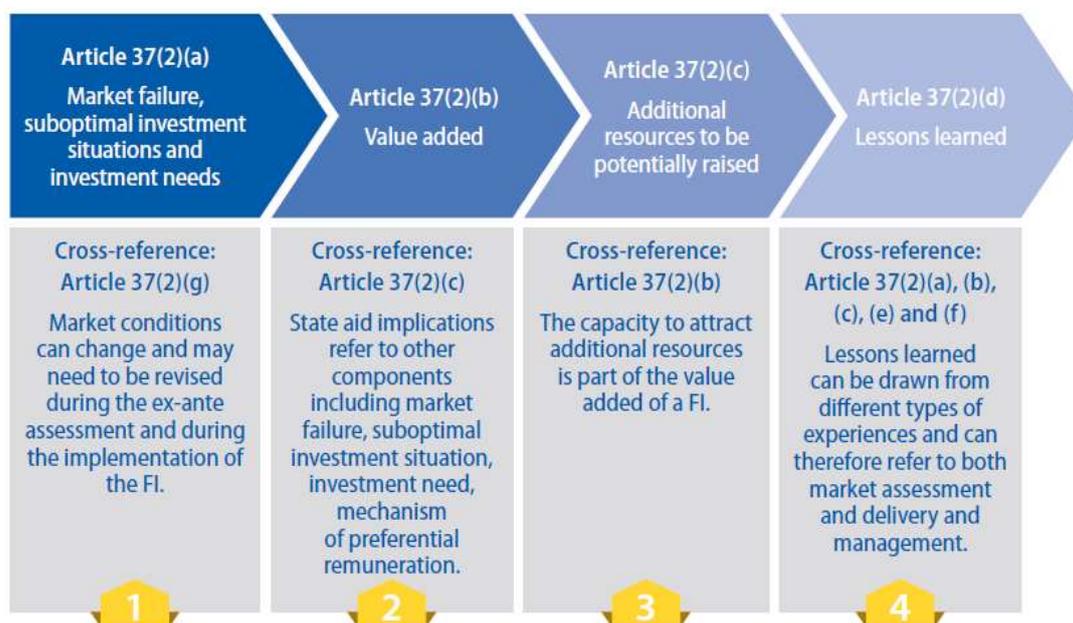


Figure 1 - Block 1 of the ex-ante assessment²

The purposes of block 1 are as follows:

- to examine the balance between supply and demand, highlighting any financing needs (market failures and sub-optimal investment conditions as identified in this document) that require the intervention of Financial Instruments
- to highlight the added value represented by the choice to use Financial Instruments, also presenting measures to ensure consistency with other forms of public intervention and to minimize market distortion
- to identify the possible additional public and private resources that each Financial Instrument has the possibility to activate by providing in-depth information on the SME Initiative, on how the combination of financial instruments and grants can take place and some considerations regarding the need to provide forms of preferential remuneration for private investors
- to identify through the analysis of similar experiences the main success factors and any critical issues to be considered in the setting of Financial Instruments in the areas of study.

¹ Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013

² fi-compass: "Ex-ante assessment methodology for financial instruments in the 2014-2020 programming period - General methodology covering all thematic objectives - Volume I"



The analysis performed was based on the collection of energy and economic data relating to the Emilia-Romagna Region for the years 2014-2018.

2. Analysis of market failures, suboptimal investment situations and investment needs

2.1 Demand-side analysis: the industrial context³

The growth of industrial activity in the Region, which began in 2015, continued in 2018, although to a lesser extent than in the previous year. Production increased by 1.8 percent, with a significantly greater increase than the average for mechanics and means of transport; for the textile industry, on the other hand, there was a decline. The expansion involved all company size classes but was less intense for smaller companies. The increase in production has progressively weakened during the year 2018: in the first half of 2019 the sector stagnated overall: the expansion of the activity of the largest and export-oriented companies was offset by a decline for small and medium-sized companies. The capital accumulation process was affected by the weakness of the economic situation as well as the uncertainty over the renewal of tax incentives, reintroduced only in April. Investments are slightly down compared to 2018 and are expected to remain stable for 2019 and 2020.

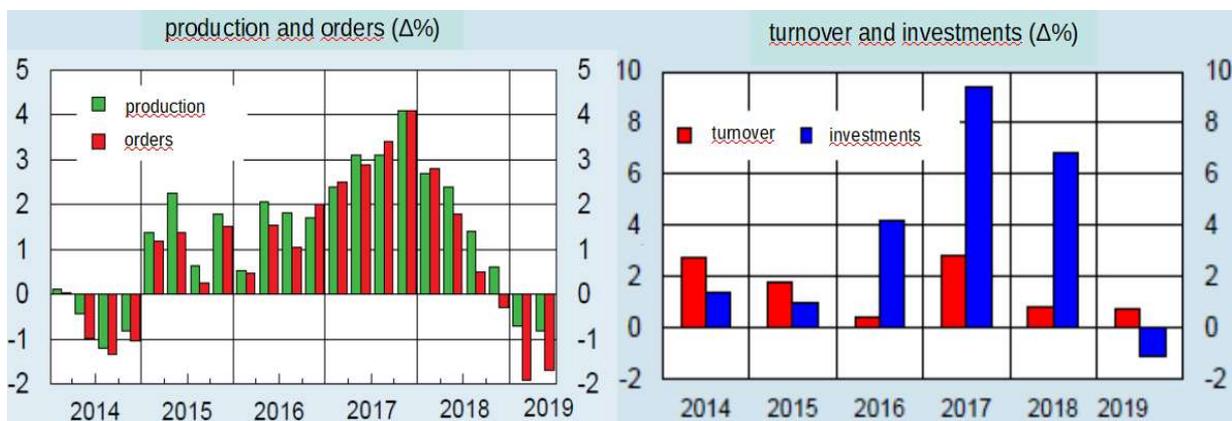


Figure 2 - Trends in the industrial sector of the Emilia-Romagna Region

³ Bank of Italy: Regional economies - The economy of Emilia-Romagna, June 2019



Branches	Absolut value [M€]	%	% change from previous year		
			2014	2015	2016
Food, beverage and tobacco industries	4.205	12,5	1,4	-0,1	0,2
Textile industries, clothing and leather goods packaging	1.736	5,2	-3,1	-3,2	-2,8
Wood, paper, publishing industry	1.248	3,7	4,7	-4,0	0,0
Cokeries plants, refineries, chemicals, pharmaceuticals	2.403	7,1	4,8	13,1	1,8
Manufacture of rubber and plastic products and other non-metallic mineral products	3.806	11,3	6,0	0,5	4,7
Metallurgical activities; manufacture of metal products, excluding machinery and equipment	4.243	12,6	1,4	2,0	3,3
Manufacture of computers, production of electronics and optics, electrical equipment, machinery and equipment	10.654	31,6	0,2	3,9	-0,2
Manufacture of means of transport	3.264	9,7	11,4	5,5	23,3
Manufacture of furniture; other manufacturing industries; repair and installation of machines and equipment,	2.125	6,3	2,8	3,0	4,0
Totale	33.682	100,0	2,5	2,7	3,1

Figure 3 – Value Added by branch of industry in 2016

2.2 Demand-side analysis: the economic context³

Sector	Absolut value [M€]	%	% change from previous year			
			2014	2015	2016	2017
Agriculture, forestry and fishing	3.467	2,5	3,7	-0,3	5,4	-5,6
Industry	43.520	30,9	0,1	1,8	2,4	3,1
manufacturing industry	37.442	26,6	1,8	2,4	2,3	3,5
construction industry	6.079	4,3	-8,4	-1,7	2,8	1,1
Private services	93.947	66,7	1,3	0,2	0,8	1,4
Commerce	34.107	24,2	3,1	1,2	0,9	7,9
Financial and insurance activities	37.486	26,6	0,8	0,0	0,6	-1,2
Public services	22.353	15,9	-0,3	-1,0	1,1	-3,0
Total added value	140.934	100,0	1,0	0,6	1,4	1,8
Gross Domestic Product (% of national GDP)	157.216	9,1	0,9	0,7	1,4	1,8

Figure 4 – Value Added by sector of economic activity and GDP in 2017

With regards to economic and financial conditions, in 2018 the income results remained positive for a large number of companies: the balance between the share of companies in profit and those in loss increased compared to the previous year. The widespread profitability partly financed the growth of investments and partly fueled the savings of the firms. The financial liquidity index also improved: the ratio between the most liquid assets held with the banking system and short-term debts with banks and financial companies reached a new peak during 2018. The demand for loans grew in moderate measure: the share of companies with increasing credit needs was slightly higher than the percentage of those with declining requests.

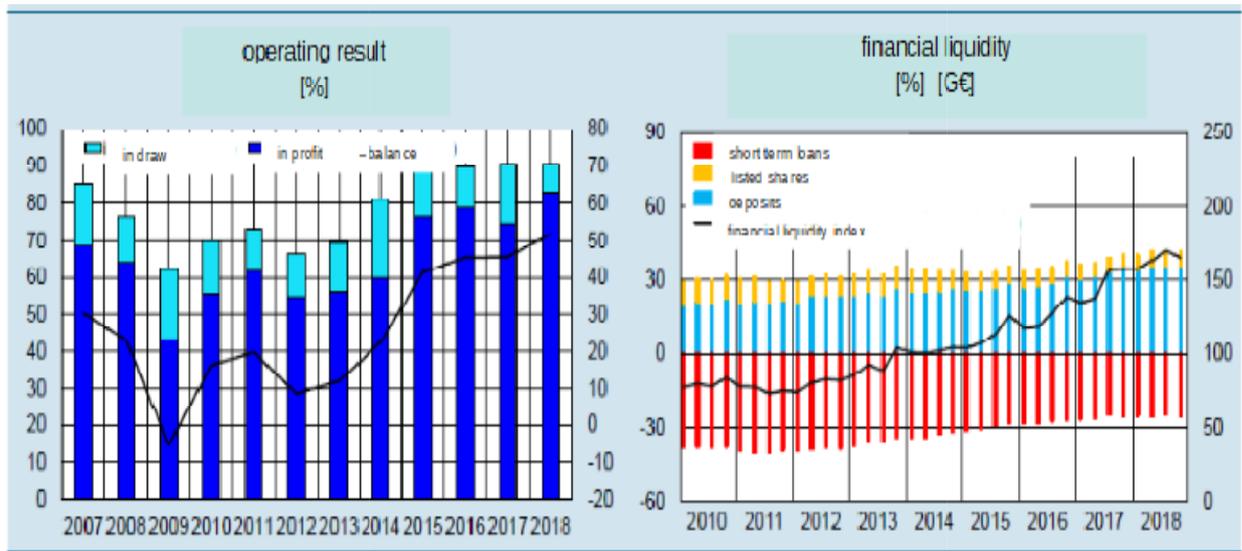


Figure 5 – Economic result and liquidity

After a prolonged phase of reduction, leverage (ratio between the financial debts and the sum of financial debts and shareholders' equity) in 2017 it remained stable at 42.3 percent. The further decrease in the degree of indebtedness of smaller companies (the most indebted category of the average) was offset by an increase for the largest companies, the first since 2010. Among the sectors, leverage remained more limited for manufacturing and services and higher for construction. The reduction in the indicator observed in recent years has also benefited from demographic factors, in particular the exit from the market of the most indebted companies; during 2017 the contribution of demography to the change in the indicator was almost canceled.

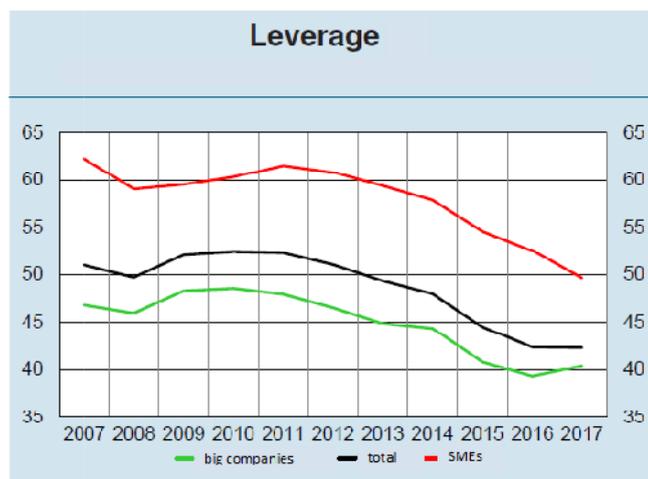


Figure 6 - Ratio between financial debts and the sum of financial debts and net equity

2.3 Demand-side analysis: the energy requirement⁴

From the comparative analysis of the data relating to the trend, in the 2012-2016 period, of the final energy consumption of the various economic sectors, there are significant differences:

⁴ [Emilia-Romagna Region - Environmental data: energy consumption by economic sector](#)



in particular, the industrial sector shows a tendency to reduce total consumption up to 2015, with -47% in 2015 vs 2002; starting from 2016, the trend in energy consumption recorded a trend reversal, with growth of + 10% in 2017 vs 2015. The most energy-intensive economic sector, with reference to the 2017 data, is the industry (31%), followed by transport (29%) and then by the residential sector (24%). Analyzing the consumption of the production activity sector by energy carrier shows that, in 2017, 72% of consumption is covered by thermal energy, while 28% by electricity. In the industrial sector there is a drop in consumption up to 2015, with, in particular, thermal consumption falling by -55% (2015 vs 2002), compared to a reduction in electricity consumption over the same period of time of 9%. Subsequently, there was a trend in overall consumption growth, +9% in 2017 vs 2015, although remaining lower than in the year 2002.

Comparing the data relating to the added value of production and energy demand for the industrial sector, obtained from the regional energy balance available for the years 2014-2017, it is possible to obtain the normalized energy intensity data, which presents the trend summarized in the following table and graphic:

Year	Value Added [M€]	Energy requirement [ktoe]			Energy intensity [toe/M€]		
		thermal	power	total	thermal	power	total
2014	38 079	2 794,43	1 055,76	3 850,19	73,39	27,73	101,11
2015	40 711	2 629,13	1 075,26	3 704,39	64,58	26,41	90,99
2016	41 942	2 840,29	1 084,80	3 925,10	67,72	25,86	93,58
2017	43 520	2 922,68	1 127,90	4 050,59	67,16	25,92	93,07

Table 1 – Energy requirement and energy intensity in the industrial sector

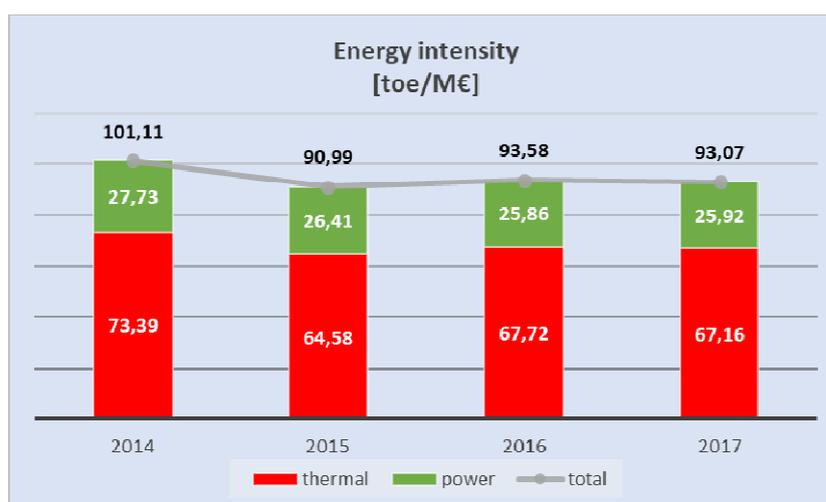


Figure 7 - Energy intensity in the industrial sector

2.4 Demand-side analysis: Regional Energy Plan and investment needs

The regional energy plan of Emilia-Romagna⁵ indicates three objectives for 2030: 40% reduction in greenhouse gas emissions compared to the 1990 value, 27% gross final consumption met by renewable sources and energy efficiency leading to a reduction 27% of trend consumption by 2030, which translates into an energy intensity target value in the industry of 52,6 toe per million euro in 2030.

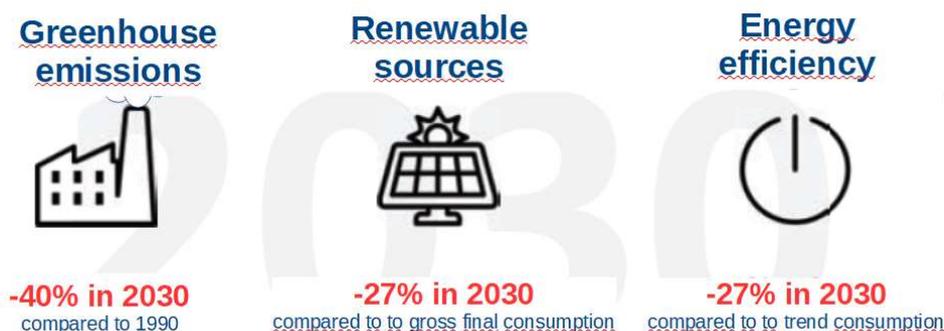


Figure 8 – Targets of the Regional Energy Plan

On the basis of the available monitoring data^{5,6,7}, the situation for the industrial sector is summarized as follows: the targets of the REP require a reduction to 2030 of the energy intensity for the industry by 48% compared to the 2014 value and considering a linear improvement in energy efficiency, this means an average annual saving of about 115.4 ktoe.

If we consider an average investment cost of € 4,000 / saved toe, corresponding to an investment with a payback period of about 5-6 years, the investments required to meet the objectives of the plan would amount to € 461,600,000 / year and overall to 2030 at around 7 billion and 386 million.

If we instead consider operations with shorter payback time, 3 years, we can assume an investment cost of around 2,500 € / saved toe, which would lead to investments of 288.500.000 € / year and 4 billion 600 million until 2030.

2.5 Supply-side analysis: transversal offer

The banking system is the main subject to which the Italian and even regional production systems are directed to meet their capital requirements. The share of bank debts to total financial debts has now fallen to 60.7%: in particular, the reduction in bank credit affects small businesses.

⁵ [Emilia-Romagna Region: Regional Energy Plan 2030](#)

⁶ [1st Annual Report on REP monitoring - July 2018](#)

⁷ [ENEA - Annual Energy Efficiency Report-2019](#)

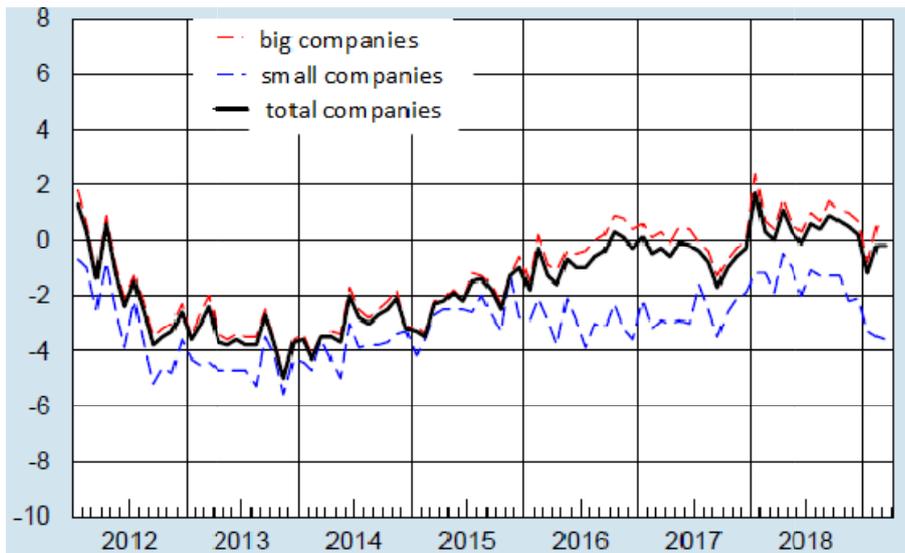


Figure 9 - 12-month percentage changes in bank loans to companies

As regards the availability of credit, in 2018 a reduction in the average spread was detected, thanks to the operations conducted by the European Central Bank, with a minimum increase in the quantity offered, but also an increase in costs: overall the trend was one of slight tightening of credit conditions.

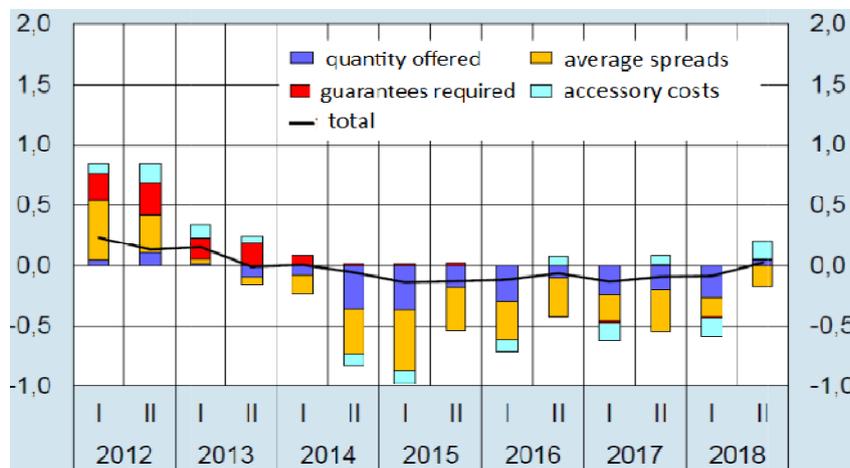


Figure 10 - Contributions to the tightening of credit in terms of percentages changes

Regarding interest rates: in the last quarter of last year, short-term rates fell to then rise to the beginning of 2019 to 3.33%. The cost of credit has remained higher than the average for construction companies and smaller ones. Rates on new medium and long-term loans increased to 2.23%.



	Dec 2016	Dec 2017	Dec 2018	Mar 2019
Short term loans	4,15	3,51	3,25	3,33
of which: medium-large companies	4,08	3,41	3,15	3,22
small companies	6,64	6,35	5,97	6,03
total companies	4,37	3,73	3,46	3,55
of which: manufacturing companies	4,18	3,31	3,08	3,14
construction	5,66	4,56	4,54	4,52
services	4,08	3,83	3,54	3,86
Medium and long term loans	2,03	1,97	2,14	2,23
of which: consumer households for the purchase of housing	2,22	2,28	2,25	2,35
companies	2,04	1,86	2,09	2,23

Figure 11 – Bank interest rates (percentage values)

The Italian system of guarantees is based on two components: a public one, represented in particular by the Guarantee Fund for SMEs and a private one, made up of collective guarantee consortia (so-called "confidi") created by business associations. The two systems find an integration through the instrument of the counter-guarantee that the public subject can provide to individuals, and that has been significantly strengthened by the Government and widely used in recent years characterized by the economic crisis. For practical reasons (greater difficulty in accessing credit) and for structure, smaller companies make use of the support of this tool. In 2018 the share of loans to businesses backed by guarantees stood at 49,9 percent; the incidence was confirmed to be higher for companies in the construction sector and for smaller ones. In the same year the value of the guarantees issued by collective and public entities rose to 6,9 per cent of the secured loans: the increase was concentrated in the "public" component, while the quota disbursed by the "confidi" remained steady at 2,4 percent.

The **Central Guarantee Fund** is financed by the Ministry of Economic Development and has also used the European resources of the national and interregional operational programs. The Fund Manager is now represented by a temporary grouping of companies consisting of five banking institutions. The guarantee of the Central Fund can be activated only against loans granted by banks, leasing companies and other financial intermediaries in favour of companies and professionals and can be requested either by the financial intermediary or by the "confidi" which requests a counter-guarantee to support of the first guarantee granted directly to the SME. Micro-enterprises or SMEs registered in the Business Register and professionals registered with professional associations or members of professional associations registered in the specific list of the Ministry can be guaranteed. Access to the guarantee is subject to the demonstration of the applicant's ability to repay the loan, which must therefore be considered economically and financially sound on the basis of specific valuation models. The Central Guarantee Fund also manages a line of guarantees dedicated to innovative start-ups for which the business plan is evaluated. The grant granted may not exceed, even in more tranches, a maximum amount of 2.5 million euros and can guarantee up to a maximum of 80% of the loan. The guarantee can be granted on all types of transactions, both short and medium-long term, both for liquidity requirements and for investments. The Central Fund, in addition to granting direct guarantees on loans granted by banks which, benefiting from the guarantee of the state,



can weight the loan with a zero coefficient, also plays a role of counter-guarantee in favour of the regional trusts.

2.6 Supply-side analysis: specific offer at national level

National Fund for Energy Efficiency (FNEE): is a revolving fund whose purpose is to support the financing of energy efficiency measures implemented through ESCOs, the public administration, through public-private partnerships and project companies or purpose-built companies. The Fund is a Financial Instrument aimed at encouraging the interventions for the energy requalification of Public Administration buildings and for the reduction of energy consumption in the sectors of industry and services.

The legislation has provided a budget of up to € 45 million per year for the 2014-2020 period.

The FNEE aims to finance projects such as:

- a) improving the energy efficiency of buildings owned by the Public Administration;
- b) the construction of networks for district heating and tele-cooling;
- c) the energy efficiency of public services and infrastructures, including public lighting;
- d) energy efficiency of entire buildings intended for residential use, including public housing;
- e) energy efficiency and reduction of energy consumption in the industrial and service sectors.

The FNEE is divided into two sections designed to:

- granting of guarantees on individual transactions or on portfolios of transactions (assisted by the State guarantee, as a guarantee of last resort, according to criteria, conditions and procedures to be established with a non-regulatory decree of the Minister of Economy and Finance, adopted by 90 days from the entry into force of Legislative Decree No. 102/2014);
- provision of loans (directly or through banks / intermediaries / EIB).

The **Italian White Certificates (WhC)** scheme is an Energy Efficiency Obligation (EEO) scheme in which the electricity and gas distributors with more than 50,000 clients are obliged to reach increasing annual energy efficiency targets. The Ministry Decree of 11 January 2017 set the WhC energy savings target in 2020 to 11.19 million tons of oil equivalent (toe) of primary energy. WhC is a flexible mechanism, since the energy efficiency savings can be obtained through interventions from market operators. The scheme is managed by the National Agency GSE with the support of other National Authorities (MiSE, AEEGSI) and Agencies (ENEA, RSE, GME). White certificates are used to certify the energy savings and the obliged distributors can buy them from voluntary parties or obtain them directly. Voluntary parties are non-obliged distributors, ESCOs, organizations with an energy management expert (UNI CEI 11339 certified) or with an ISO 50001 energy management system. A very large number of energy efficiency projects in almost all sectors is allowed, with particular emphasis on the industrial sector.

The exchange of white certificates between obliged and voluntary parties takes place on a dedicated platform managed by GME (owned by GSE) or with bilateral agreements over the counter.

The WhC scheme can thus work as an incentive for the voluntary parties, even if the WhC price can vary over time and there are no guarantees about WhC sales (no minimum price, no withdrawal if WhC are not sold to obliged parties). Due to a shortage on the market related to challenging targets, in 2017 the price has gone beyond 300 euro per white certificate, after being in the range 90-110 euros/certificate for over five years. Each certificate corresponds to



one ton of oil equivalent (toe) of annual energy savings. The savings are additional, meaning that only savings over a regulatory and market baseline are accounted for, and generate white certificates for a period between three and ten years, according to the Ministry Decree 11 January 2017. Actions that received a national incentive (e.g. tax credit) are not eligible for the WhC scheme. Most of the costs incurred by the obliged distributors are recovered through tariff components (electricity and natural gas bills). Every end-user thus contributes to this cost recovery mechanism. Obligated Distribution System Operators (DSO) obtain a reimbursement when they present certificates to GSE according to their specific targets. The reimbursement is set by AEEGSI and is linked to the WhC market price in the previous year. White certificates cannot be combined with other forms of national incentive, but can be combined with revolving funds.



Figure 12 - The Italian White Certificates scheme

2.7 Analysis of the gap between demand and supply

The difference between the demand and supply of financing derives from market failures that can refer to different factors: we present the list of the main critical issues that emerged during the analysis carried out simultaneously with the project partners involved in the pilot action 1.

2.7.1 Supply-side market failures

The analysis developed highlighted a strong difference between demand and supply of credit in Emilia-Romagna, which was accentuated during these years of economic crisis. Following the introduction of liquidity into the European banking system by the European Central Bank, the availability of financial resources and interest rates no longer represent a significant criticality for the market. The main factors that cause this strong imbalance can instead be identified as:

- information asymmetries: there is a clear difficulty for companies to properly communicate their projects and banks to adequately assess the advantages of the proposed interventions
- market prospects: there is still no clear positive view on the evolution of the economy, on the part of the banks that, therefore, evaluate new investment projects with a high degree of risk
- the increase in bank bad debts in recent years: the increase in bank balance sheets from a point of view of bad debts push credit companies to a more careful selection of projects,



concentrating disbursements on solid companies and rejecting requests from weaker companies

As regards more specifically to investments in energy efficiency, we note that:

- capital markets are not used to investing in energy efficiency and are unable to accurately assign the price of risk
- the lack of funding, particularly for SMEs and start-ups, adds to the consideration of the high level of risk of investments in energy efficiency, such as to require high levels of interest rates or a high level of subsidized loans.

2.7.2 Demand-side market failures

- one of the main problems for funds looking at investments in energy efficiency and renewable sources is the often the reduced size of projects and the relatively high transaction costs needed to place them on the market: overcoming this failure requires standardized contracts or the possibility of merging multiple projects with different risk profiles and dimensions to create an attractive financial perspective. This approach may require significant financing of technical assistance
- high transaction costs can be caused by long administrative procedures required for project approval
- even if there is access to finance, there is difficulty in preparing bankable projects, due to lack of information or inadequate technical preparation.

2.7.3 Sub-optimal investment situations

- energy efficiency project with a positive IRR (Internal Rate of Return), but not attractive for private financing due to a variety of factors:
 - long payback times
 - inadequate risk management
 - high technology costs against low energy carrier costs
- there is a gap between the private demand for investments in energy efficiency and the goals of the Regional Energy Plan
- ESCOs not adequately capitalized and insufficiently equipped in terms of technical skills or with a still limited track record for access to bank credit.

3. Assessment of the added value of the financial instrument

Financial instruments can fill some gaps that exist in the various areas of interest. In particular, if we want to achieve the objectives set in the various programming tools (regional operational plan and regional energy plan) it is necessary to give a boost to new investments and to fill the technical gaps even with the integration of non-financial instruments. Therefore, the aspects for which an Innovative Financial Instrument can add value are:

- reduction, through financial debt instruments, of the exposure of financial investors and of the cost of debt, thus limiting the overall risk of the project
- the debt financial instrument can be aligned to the capacity of the intervention to repay the investments with the savings achieved, foreseeing longer durations than the current duration or maturity of loans

- provision of capital in the form of equity/mezzanine for ESCo capitalization
- possibility of concentrating resources on two lines of action: grants for projects with pay backs that are too long or that do not produce adequate cash flows to repay loans, Financial Instruments for projects with cash flows that are able to repay the investments
- define a simplified financing channel for small projects
- support (incentive) for technical assistance related to:
 - energy audits aimed at carrying out interventions and using the financial instrument
 - project validation / certification
 - measurement plans and verification of savings
 - standardization and management of EPC contracts
- development of successful cases to be shared and disseminated among industrial operators in the communication activities of the Financial Instrument.



Figure 13 - Specification of the implementable interventions

4. Consistency with other forms of public intervention

To ensure consistency with other forms of public intervention that address the same market, there are two measures that the Managing Authority could implement: one to create the correct demarcation between projects supported by financial instruments and subsidies and to avoid a possible cannibalization of the projects and another to create the right coordination between the two forms of support. With regard to the projects in the context of the transition to the low carbon economy in the production system and taking up what has been described in the EU guidelines for the evaluation of financial instruments for the 2014-2020 programming period⁸, the criteria described in the figure can be used:

⁸ [European Commission - Guidelines for Member States on ESIF management checks](#)



Subsidies	Financial Instruments	Commercial banks
<p>Non-sustainable projects The costs incurred are significantly higher than the revenues generated</p>	<p>Marginally sustainable projects The costs incurred are slightly lower than the revenues generated</p>	<p>Sustainable projects The costs incurred are much lower than the revenues generated</p>
<p>Combination of grants and financial instrument for marginally sustainable projects The costs incurred are higher than the revenues generated, but a combination with a subsidy and / or a financial instrument would lead to break-even costs and revenues</p>		

Figure 14 - Criteria for the demarcation of projects between financial support measures

5. Estimate of additional public and private resources that the Financial Instrument has the possibility to collect

Structured public funds in the form of Financial Instruments can be a useful tool to catalyze additional resources towards specific projects, thus multiplying the effects of allocated resources: in addition to the regional resources made available by the region within the Operational Program, there are additional resources that can be classified according to the level to which they are made and according to the subject that brings them. From the first point of view co-investment can take place:

- at the Financial Instrument level
- at the individual project level

while, as regards the second aspect, we can distinguish:

- private resources
- public resources.

5.1 Evaluation of the coordinated use of structural and strategic funds⁹

The possible interaction between structural funds (ESIF) and European funds of different types available in the current programming period such as strategic funds (EFSI) is assessed: EFSI is an EU initiative launched jointly by the Commission and the European Investment Bank Group to assist in overcoming the current investment gap in the EU by mobilising private financing for strategic investments and SMEs. EFSI takes the form of a contractual arrangement between the Commission and the EIB, consisting of an EU guarantee (EUR 16 billion) complemented by an EIB capital contribution (EUR 5 billion). EFSI financial products will mainly be loans, guarantees and equity investments. No grant funding will be provided. The EU guarantee is granted on a portfolio basis, not on a project basis. The EIB will perform its standard due diligence in respect of any proposed EFSI operations, to determine the project's eligibility, additionality, mobilisation of private capital, consistency with Union policies as well as its economic, technical and financial viability. The EIB standard pricing policies apply to EIB

⁹ [EC - European Structural and Investment FUNDS and European Fund for Strategic Investments complementarities](#)



financings supported by EFSI. The approval of use of the EU Guarantee is subject to a decision of EFSI's Investment Committee.

With EFSI support, the EIB Group will provide financing for economically viable projects, including projects with a higher risk profile than ordinary EIB activities. Emphasis will be put on key sectors identified under Article 9 of the EFSI Regulation. Therefore, focus will among others be placed on: (i) transport, energy and the digital economy; (ii) environment and resource efficiency; (iii) human capital, culture and health; (iv) research, development and innovation; (v) support to SMEs and mid-caps. The EFSI Regulation offers the possibility to finance Investment Platforms (to channel a financial contribution to a number of investment projects with a thematic or geographic focus) and operations with National Promotional Banks (NPBs). The EIB shall use the EU Guarantee for supporting investment platforms or funds and NPBs that invest in operations meeting the EFSI Regulation requirements, after approval of the EFSI Investment Committee.

The "European Structural and Investment Funds" or "ESI Funds" is a common designation for five European funds: the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), which operate under a common framework (i.e. the CPR) as well as under fund-specific regulations. ESI Funds are some EUR 450 billion of EU funding over the 2014-2020 programming period, allocated to Member States and delivered through nationally co-financed multiannual programmes to develop and support actions related to the key Union priorities of smart, sustainable and inclusive growth in line with the objectives of each Fund. National co-financing constitutes an integral and obligatory part of these programme resources and is covered by a common set of rules applicable to all ESI Funds and further defined in the fund-specific provisions. ESI Funds programmes are approved by the Commission and implemented by Member States and their regions under shared management. It is therefore the ultimate decision of managing authorities in Member States where and how funds are invested at project level within the framework of the relevant programme setting out the specific objectives, results to be achieved and types of action to deliver them. Technical assistance is available both at programme level, where it can be used for a range of programme and project support activities, as well as at the initiative of the Commission, where it is used for more general tasks to support the preparatory, monitoring, administrative, evaluation, audit and control measures necessary for implementing the CPR¹.

ESI Funds programmes support focuses on 11 thematic objectives: 1) Research and innovation, 2) Information and communications technology (ICT), 3) SME competitiveness, 4) Low carbon economy, 5) Climate change adaptation and risk management, 6) Environment and resource efficiency, 7) Sustainable transport and network bottlenecks, 8) Employment and labour mobility, 9) Social inclusion and poverty, 10) Education and 11) Institutional capacity.

ESI Funds programme support is mainly delivered either in the form of grants or through financial instruments in the form of loans, guarantees and equity investments. The beneficiaries of ESI Funds programme grant support could be public or private bodies or even a natural person⁴. The type of beneficiaries and projects which can be supported derives from the applicable fund-specific regulation and the approved programme being ultimately reflected in the programme implementation. The target final recipients of financial instruments under ESI Funds programmes are identified in the relevant ex-ante assessment of the financial instrument



and depend on the objectives of the programme and the agreed strategy. ESI Funds programme support has to comply with the applicable law (including the CPR, fund-specific provisions, national legislation, State aid rules, public procurement rules).

In case of grants, the selection of projects is based on the selection criteria agreed in the respective ESI Funds programme monitoring committee. The programme support is decided by the Managing Authority or the relevant intermediate body. In case of financial instruments, the programme support is contributed by the managing authority to a financial instrument and then subsequently transferred through a financial intermediary to the selected final recipients.

The rationale of EFSI is to allow the EIB Group to take higher risk and mobilise private capital to provide additional financing for strategic investments and SMEs and mid-caps. ESI Funds programme resources cannot be directly transferred to EFSI, which is an additional and separate mechanism. ESI Funds programmes should contribute to the achievement of the objectives of the Investment Plan in complementarity with EFSI support, in a way which brings demonstrable added value and also ensures coordination and synergies. The EFSI Regulation allows Member States to use ESI Funds programme resources (including resources programmed to be delivered through financial instruments) with a view to contributing to the financing of projects receiving EFSI support. At the same time, the CPR, as the legal basis for the ESI Funds, allows that beneficiaries and final recipients receiving support from grants and financial instruments under ESI Funds programmes may also receive assistance from other instruments supported by the Union budget.

Combination of ESI Funds and EFSI is possible either at individual project or at financial instrument level in cases where the respective applicable eligibility criteria are satisfied. EFSI and ESI Funds programmes may cover different risks and may support different or same parts of the capital structure of a project or layered investment platform (e.g. equity or debt financing) provided that the rules on double funding and preferential remuneration are complied with.

In case of combination of support from ESI Funds delivered through a financial instrument and EFSI (e.g. in an investment platform) separate records have to be maintained between the support from an ESI Funds programme and from EFSI. The ESI Funds financial instrument shall be part of an operation with eligible expenditure distinct from the EFSI support. Thus EFSI support to the project cannot count as national co-financing of an ESI Funds programme and consequently cannot be declared as eligible expenditure. In such a case national co-financing of an ESI Funds programme could still be provided through another EIB/EIF financial product, either through a Structural Programme Loan or through intervention at project level. It is possible to consider that any additional resources leveraged and triggered by the combined ESI Funds and EFSI interventions can be treated as national co-financing for the ESI Funds programme: for example, an ESI Funds financial instrument receives a parallel investment from EFSI and both interventions trigger additional co-investments by other investors (public and private). If such additional co-investments are neither directly nor indirectly supported by the EU budget but are directly linked to the ESI Funds intervention, they can be treated as national co-financing for the ESI Funds programme provided that these resources are paid out to final recipients in line with the applicable rules (CPR, respective ESI Fund programme, national eligibility rules and funding agreement). The ESI Funds can be used to support the risk-bearing capacity of an EFSI Investment Platform in the form of a "layered fund", and leverage other sources of finance, most notably private investors as well as NPB.

ESI Funds programme and EFSI may also be combined at a higher level than individual projects, such as through a financial instrument and/or an investment platform (refer to EFSI Rules applicable to operations with Investment Platforms and National Promotional Banks or Institutions, approved by the EFSI Steering Board). Such financial instruments and investment platforms could be set up at national, regional or supra-regional level. The use of ESI Funds programme resources would have to be in line with the ESI Funds regulatory framework⁵ and the priorities of the participating programmes (which would generally imply inter alia national or sub-national geographical restrictions). In addition, other investor contributions may be foreseen at financial instrument level, for example by National Promotional Banks.

We consider the case in which the managing authority sets up a Financial Instruments with ESIF programme contributions and the investment platform set up with EFSI support could participate as an investor at the level of financial intermediary and other investors may also participate (this may also apply to NPBs). The investment platform set up with EFSI support can also intervene directly at project level on a deal by deal basis:

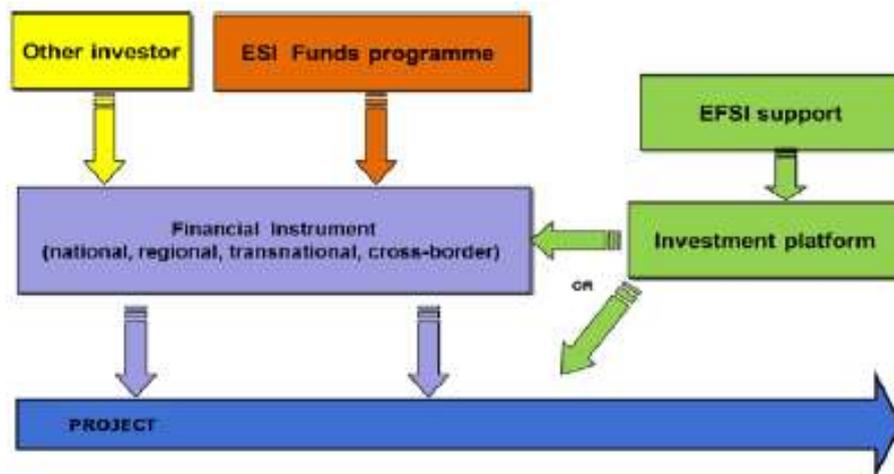


Figure 15 - Hypothesis of coordinated use of European structural and strategic funds

5.2 Layered Fund: combination of ESIF Funds and EFSI in an Investment Platform

The ESI Funds can be used to support the risk-bearing capacity of an EFSI Investment Platform in the form of a "layered fund" and leverage other sources of finance, most notably private investors as well as NPBs. The combination of ESI Funds and EFSI should be used to support operations which could not have been carried out or not to the same extent, without this combination and should maximise the mobilisation of private sector capital.

The layered fund would be structured in 3 classes of risk, clearly segregated in terms of risk and return (in line with the "like risk, like reward" principle):

- senior debt tranche (low risk-taking): to leverage private and institutional investors and open to NPBs.
- mezzanine tranche: financed by EIB, open to NPBs and private investors.
- first-loss-piece/equity tranche (high risk-taking): financed by ESI Funds or other national/regional public budget funds. Open to NPBs and private investors.



The remuneration and/or reimbursement of the first-loss-piece/equity tranche will only take place after remuneration and/or reimbursement for the senior tranche holders and the mezzanine tranche holders respectively, as per normal market practice.

The ESI Funds would be committed as first-loss-piece coverage, clearly distinct from the use of EFSI resources via separate records and covering distinct expenditures: in practice, ESI Funds would only be used to absorb the first losses arising from underlying projects up to the limit of the committed amount, whereas EFSI resources would only be used to absorb further losses, clearly distinct from those covered by the ESI Funds.

The layered fund could be revolving for a given timeframe. The resources (both capital and returns) paid back to the layered fund and attributable to ESI Funds (after remuneration and/or repayment of financiers intervening in less risky tranches or with higher seniority) should be reused according to CPR art. 44:

- a) for further investments through the same instrument or other instruments in accordance with the specific objectives under a priority
- b) where applicable, to provide "preferential remuneration" (in the form of asymmetric reward sharing within the same risk class/layer) to private investors, or public investors operating under the market economy investor principle. For the avoidance of doubt, since the EIB, when supported by the EU guarantee under EFSI, intervenes in a separate risk class, it does not benefit from such preferential remuneration attributable to ESI Funds.
- c) where applicable, reimbursement of management costs incurred and payment of management fees of the financial instrument.

The layered fund could provide debt and/or equity type of financing to the portfolio of targeted projects. The targeted projects financed by the layered fund would typically be further co-financed by private sector entities at senior level (debt) or *pari passu* (equity).

The combined use of ESI Funds and EFSI can be sought in cases where there is a market failure in risk-absorption capacity and where EIB/EFSI risk-pricing would not make it sufficiently attractive to finance projects mobilising other private or public (eg NPBs) sources of funds. The combined use of ESI Funds and EFSI must be structured in an efficient and synergetic way.

Private sector capital mobilised in the layered structure, i.e. by private investors in one of the risk tranches of the layered fund, must be clearly specified at the stage when ESI Funds and EFSI are committed to the fund. Private co-investment at project level can be estimated, and would be contracted as and when individual project investments are made by the fund.

If ESI Funds are invested *pari passu* with private investors within the same risk class of the "layered fund" or at project level and the aggregated private investment is of real economic significance (generally 30%), this normally indicates that ESI Funds operate in line with market conditions and does not constitute State Aid.

If, however, State Aid is involved in ESI Funds, it could still be compatible, provided it is *inter alia* limited to the minimum necessary (i. e. proportionate) in order to attract the required size of private investment. Financial transactions which are not invested both on own resources and at own risks cannot be considered as private in nature for the purpose of State Aid policy.

If the layered fund is newly created and uses ESI Funds, it should be subject to the *ex-ante* assessment for ESI Funds financial instruments prescribed under the CPR.

The approval of the use of ESI Funds is the responsibility of the Managing Authority.

The approval of the use of the EU Guarantee under EFSI is the responsibility of the EFSI Investment Committee, following EIB due diligence, under the Infrastructure and Innovation window.

The approval of individual projects is the responsibility of the layered fund governance (typically the Fund manager or the Investment Committee appointed by the investors).

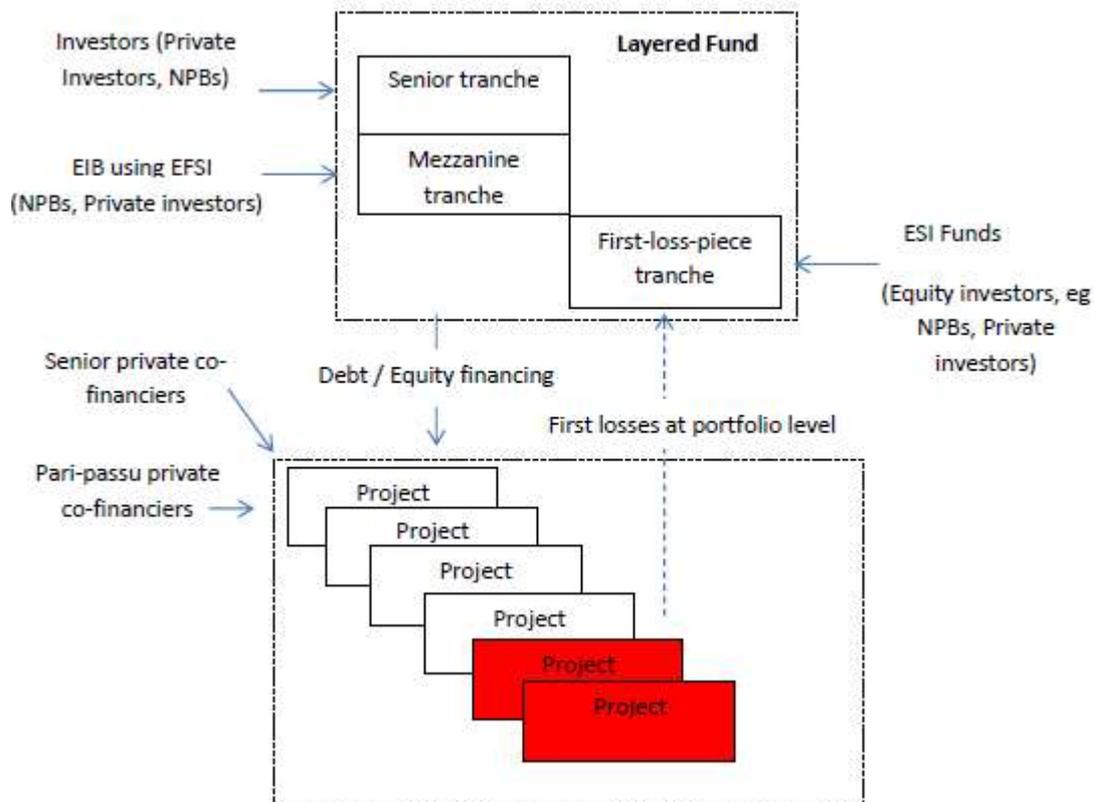


Figure 16 - scheme of layered fund combining ESI Funds and EFSI

5.3 Private resources that the Financial Instrument has the possibility to collect: assessment of the lending crowdfunding¹⁰

According to the definition of the European Banking Authority, crowdfunding consists in the request to the public for financing, typically by means of an online platform, by subjects who need funds to develop projects or for personal purposes. The online platform facilitates the meeting between the subjects that request funds (typically individuals, companies, non-profit associations) and those who are willing to finance the projects (EBA, 2015).

Lending-based crowdfunding differs from other forms of crowdfunding (donation-based, reward based and equity-based) as lenders and borrowers (directly or indirectly) sign a debt contract, with which the former provide a sum of money and the latter undertake to repay the capital (almost always increased by an interest rate) in a given period of time.

¹⁰ Bank of Italy - Issues of Economics and Finance nr. 375 - March 2017



The financed subjects are families, non-profit associations and small and medium-sized enterprises (SMEs), while investors are generally individual investors, companies that offer asset management services, institutional investors or banks.

The platforms that facilitate the meeting between supply and demand of funding can adopt very different models of activity, but almost all dies if it has the following features in common:

- a) collect applications for funding from potential debtors, which provide basic information on their identity and the project to be funded;
- b) select potential debtors on the basis of their creditworthiness and assign them a rating (rating), which briefly indicates the probability that the loan will be repaid;
- c) allow investors to finance even a small portion of the loan requested by each debtor;
- d) manage payment flows between debtors and investors (directly or using the services of a third party company);
- e) they use widely standardized and automated processes and the services are provided almost exclusively through digital channels;
- f) they are remunerated by means of proportional commissions to the amount of the debt and the amount invested.

Relations with debtors

The operation of the platforms is distinguished, first of all, as regards relations with potential debtors. The loans to which the latter can access are usually fixed-rate mortgages, worth between one thousand and one million dieur, which provide for the payment of installments made up of a principal and an interest share. The duration of the contracts varies from a few months to five years, but it is almost always possible to pay off the loan early without charge. In most cases the loans are not secured by guarantees, but recently the possibility of obtaining secured loans is also spreading, especially as regards loans for the purchase of residential properties.

The information provided by potential debtors - identity, income (in the case of families), financial statements (in the case of SMEs) - are verified by the platforms. The degree of accuracy of these checks, however, can vary significantly from platform to platform and from jurisdiction to jurisdiction. Only a few States have specific LBC regulations that provide for minimum standards of due diligence.

The platforms are also distinguished by the quantity and quality of the information they use to assess customers' creditworthiness. Almost all of them resort to data provided by credit bureaus that are normally interrogated by banks to obtain information on the credit history of potential debtors. Many platforms, however, also use data available on the internet, in particular information from social media or information provided by online trading companies (for example, online reviews about a restaurant or hotel). Most of the platforms allow only subjects with a high credit rating, but some of them are expanding their offer to marginal subjects.

Relations with investors

The way in which the platforms allow the meeting between the supply and the demand for funds is one of the points in which the different models of activity are more distinguished. Over



time, this aspect of platform operation has been increasingly simplified. This transformation has made the LBC more similar to traditional intermediation, gradually reducing the purely peer-to-peer character that characterized the operation of the first platforms.

The most common methods are:

- a) the platform or the debtor establishes a reference interest rate and the investors indicate the share of debt that they are willing to finance and the relative interest rate in a competitive auction. Once the amount to be financed is reached, debtor pays an average of the offered rates, weighted by the respective quantities. This model was the most widespread up until a few years ago, but has been progressively abandoned by most platforms as it is considered too much complicated for the average investor;
- b) the platform sets the interest rate based on the rating and the investors decide who to finance and for what amount. The platforms that adopt this model almost always allow investors to opt for an automatic allocation of their investment. In this case the investors indicate the risk return profile, the duration and the total amount of the investment, which comes divided by the platform over several debtors. This mode of operation is the most widespread in the USA and, in the United Kingdom, is the most prevalent for loans to SMEs;
- c) the investors do not have the possibility to choose the subjects to be financed, which are automatically selected by the platform respecting the indications in terms of duration and risk-return profile. Often, to compensate for this limitation in the choice of debtors, the loans are guaranteed by a fund of safeguard intended to cover any losses up to capacity. The size of this fund is determined on the basis of expected losses; it is fed by additional commissions paid by debtors and / or financiers and managed by a third party company.
- d) the lenders buy shares in an investment fund (which can also be listed on a stock exchange) which in turn finances loans through the platform.

In general, all the main risks typical of a debt contract (credit, interest rate and liquidity risk) remain entirely with the lenders.

Payment flows management

The last point of strong differentiation between the different business models is given by the management of payment flows between debtors and lenders. While almost all of them carry out the servicing of the debt, also as regards the recovery of the sums due in the event of late payments, the disbursement of credit can take place with very different methods, which also imply a different degree of investment risk.

The two main methods of providing credit are:

- a) when the offers of the various lenders reach the amount requested by the debtor, the platform makes available to the parties involved the legal and operational structure necessary to sign individual debt contracts. Once the contracts have been signed, the funds offered by the lenders, kept in deposits with a third bank, are made available to the debtor. This model is the most widespread in Europe and implies that the risks borne by lenders are only those related to the debt contract;
- b) once a bid amount equal to that requested by the debtor has been reached, the platform instructs a partner bank to provide a loan to the applicant for funds. The platform proceeds, after a few days, to purchase this loan, keeping it in its balance sheet. The credit is financed by



issuing debt securities (a platform liability) whose return depends on the payment of installments by the debtors. It follows that the lenders bear not only the credit risk of the debtors, but also that of the platform. This method of loan disbursement is typical of American platforms and is chosen mainly to circumvent some regulatory constraints, such as the need to have a license for the provision of loans and anti-usury rules.

The regulatory framework in Italy¹¹

- lending crowdfunding platforms framed in Payment Institutions
- enabled if enrolled in the Register of the Bank of Italy which regulates the activity
- between lender and subject financed «loan agreement» pursuant to the Civil Code
- 2017 Budget Law: investment income subject to withholding tax 26%
- the legislation authorizes the parties financed through the platforms to raise funds when borrowers and financiers are able to affect the contractual clauses by asserting their negotiating power in the context of a personalized negotiation. An admissible maximum limit for investment by private individuals is recommended, so as not to configure the abusive exercise of banking activity

Business models

Two business models are currently used in the market, the "widespread" and the "direct" ones.

The widespread model envisages an active role of the platform both in selecting credit requests among all those received, and in deciding the allocation of the invested capital. Lenders make a certain amount of money available to the platform, providing some indications with respect to the pre-established amount, the expected interest rate and the risk appetite, or the risk-return profile deemed satisfactory. is the platform

itself to automatically allocate the money among the projects considered eligible, according to the criteria indicated by the lenders. Given the flow of requests received via the web, the selection is typically done in two phases, the first based on criteria

standard, the second by examining the specific situation and consulting databases made available by the providers. Sometimes information on the applicant is also collected through social networks and the big data analysis related to past payments, credit card movements to any other element considered useful to forecast solvency. Lenders do not necessarily choose and know ex ante who will be the financed subject; instead, they can know in the first instance the income capacity and its main characteristics (age for natural persons, residence, credit risk) and they will know in real time whether the payments at the service of the loan are regular or not. Once they become lenders, they can of course ask for any detailed information. The repayments of capital and the interest paid each month are automatically reinvested, unless the lender gives different provisions. In some cases, he may ask for a greater influence in the choice of loans, depending on the chosen profile. The advantage of this model for the applicant is the certainty of having little

time the availability of funds, once the practice has been accepted, as the platform has already requested the funds from the lenders. The applicants in fact receive a proposal from the platform with respect to the expected interest rate, which includes the net remuneration for

¹¹ Polytechnic of Milan - 4th Italian Report on CrowdInvesting - July 2019

the lender, plus a margin for the platform and a second possible margin that goes to finance a security fund to protect the loans not repaid.

The direct model allows the connected investor via the web to transparently visualize the identity of the applicant and to choose who to actually lend money by evaluating the relationship between risk and the promised interest rate.

Temporarily - unlike the previous model - the process begins with the applicants, who are subject to the risk assessment of the platform (with criteria similar to those described above). Investors then choose whether and how much to invest in the various collection campaigns. It is a model closer to the crowdfunding paradigm but which obviously exposes to a high risk of insolvency (since the effect of portfolio diversification is not automatic) and is time-consuming for the lender. In this case the role of the platform consists only in the pre-selection of the projects that will be published and made accessible to investors.

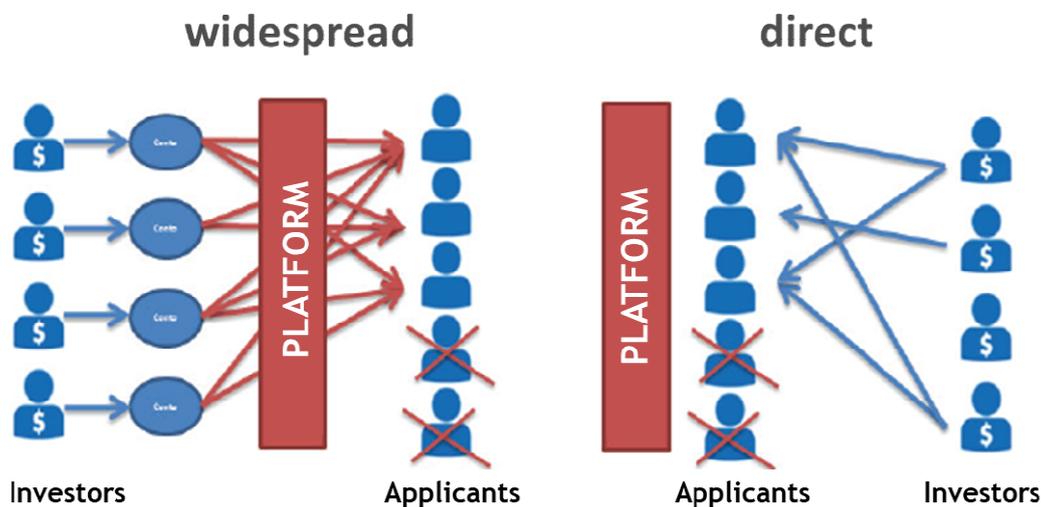


Figure 17 - Business models used in the lending crowdfunding market

Active portals

At 30 June 2019, 13 lending crowdfunding platforms were operating on the Italian market: six platforms are currently targeting individuals (consumer lending), seven targeting companies (business lending).

A vertical business platform specialized in energy projects (Ener2Crowd.com) and two business platforms in the real estate sector were in the start-up phase.

The cumulative total value of the disbursements to date is equal to € 156.3 million, with a contribution of the last year equal to € 84.2 million (+ 48% compared to the previous period).

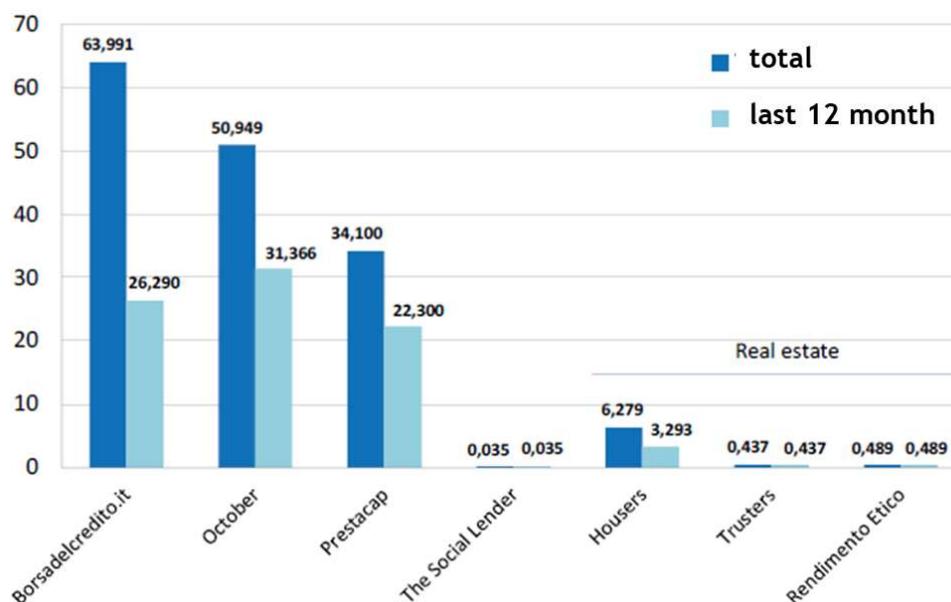


Figure 18 - Platforms operating in Italy in the business sector [M€]

Benefits

More widespread use of the LBC can have many benefits. First, it can contribute to reducing the cost of financial intermediation; secondly, it can allow greater diversification of the portfolio of families and institutional investors; finally it can improve the conditions financial support for households and SMEs by increasing the supply of credit to them and making it possible to reduce their dependence on bank debt.

The disintermediation of credit and the intensive use of new technologies allow LBC platforms, at least in principle, to reduce costs. Thanks to the LBC it should therefore be possible for debtors to obtain more advantageous financing conditions and for investors to achieve higher returns than is the case with traditional intermediaries. The available empirical evidence, although scarce, would seem to confirm the ability of the LBC to reduce the rates paid by debtors.

The benefits in terms of higher returns for the lenders are less simple to quantify, as it is difficult to identify an alternative investment with similar characteristics (for risk, duration and liquidity) to those proposed by the LBC platforms. The data published by the platforms also indicate that the returns received by the lenders were on average greater than those obtained by investing in the main stock indices.

In addition to reducing costs for debtors and increasing returns for investors, the LBC can also allow households and institutional investors to invest directly (and not only through securities deriving from securitization transactions) in an asset class (consumer loans and those to SMEs) up currently available only indirectly, through securities deriving from securitization transactions. This allows, at least in principle, a greater diversification of its portfolio, improving risk management without incurring the costs deriving from the securitization process.

Finally, the LBC could bring significant benefits in terms of availability and differentiation of funding for both families and SMEs. As happened in the past thanks to the introduction of the first automatic models for assessing the creditworthiness of customers, the LBC has indeed the potential to allow an increase in the supply of credit to families and SMEs.



Another positive aspect of the LBC is that it allows SMEs to differentiate their sources of funding. Due to the opacity of their balance sheets and the small size of the requested loans, SMEs do not have direct access to financial markets and their debt capacity depends to a large extent on the availability of bank loans. This means that a reduction in the supply of credit by traditional intermediaries, for example following a shock such as the global financial crisis or a tightening of regulations, could have serious repercussions on the financial conditions of SMEs. The possibility of accessing alternative sources of financing could therefore allow a greater capacity to deal with adverse events, with positive effects not only on SMEs, but also on the stability of the economy as a whole.

Risks

However, against these benefits there are risks that must not be overlooked. First, there are the risks of inefficient allocation of savings and financial stability. Secondly there is the stators not being informed correctly and transparently. Finally, there are risks, again for debtors and investors, which derive from the intensive use of new technologies.

Although all these risks are extremely low for the time being, given the small volumes of the LBC, it is necessary to follow closely the evolution of this market also through a systematic collection of data.

Among the former there is the risk that the spread of the LBC is largely achieved by financing individuals not deserving of a loan, resulting in an inefficient allocation of savings. The platforms, not assuming credit risk, could in fact not have the right incentives to accurately select the debtors. This phenomenon could be aggravated by the need to rapidly increase the volumes financed. The platforms, in fact, derive most of their revenues from the commissions obtained at the time the loans are granted and base their operations on a technology characterized by high economies of scale. Furthermore, the rating models used by the platforms are not subject to any form of validation by the supervisory authorities and have not been tested for a sufficiently long period of time, therefore they could underestimate the debtors' credit risk. In particular, almost all platforms have begun to operate in a favorable economic context (especially in the US and the UK): a reversal of the credit cycle could lead to an increase in insolvency rates far greater than expected. The growth of credit losses recorded in the United States for some debtor segments starting from the end of 2015, has led some institutional investors to revise their investment plans in LBC. A poor quality of credit disbursed through the platforms could be relevant to financial stability. First, there may be a risk that the access to loans disbursed through the platforms will lead to a rapid growth in the debt of the financed subjects, fueling an excessive expansion of credit in some segments of the economy. Secondly, the involvement of institutional investors and shadow banking in LBC's business could lead to the accumulation of risks similar to what occurred before the global crisis. If insolvency rates were to exceed expectations, the solvency of intermediaries who have made huge investments in loans originating through LBC platforms could be at risk. To the extent that these intermediaries are interconnected with other operators, for example due to a high degree of indebtedness, their difficulties could have systemic repercussions. An unexpected increase in loan default rates financed by the LBC could also undermine investor confidence in the ability to select the clientele from the platforms, making it rapidly decrease operations and compromising stability. The failure of a platform could also have repercussions on the lenders of the loans, posing risks to financial stability through the same channels described above. As seen above, if the loans are financed by the platform's liabilities, the lenders also assume the



latter's credit risk. Moreover, even if the credit agreements are directly entered into between debtors and lenders, the failure of the platform could compromise the servicing activity (collection of installments and payment of investors) since the latter is almost always carried out by the platforms themselves. To mitigate this risk, numerous FinTech companies operating in the LBC sector stipulate agreements in advance with financial companies able to replace them in the event of bankruptcy.

There are potentially significant risks for debtors and investors, resulting from a lack of transparency in the conditions applied. The relevance of this risk is demonstrated by the handling of the contracts related to a loan package

destined to be sold to an institutional investor, which generated the scandal involving Lending Club (one of the main US platforms) in March 2016. Furthermore, a recent public consultation carried out by the US Department of Treasury (US Department of Treasury, 2016) highlighted how many debtors have difficulty in fully understanding the terms of the loan agreements and making comparisons between the offers on the various platforms. Some surveys (Deloitte, 2016) also show that in many cases there is not full awareness, on the part of the lenders, of the actual risks deriving from the investment in loans disbursed by means of LBC platforms.

Finally, the intensive use of new technologies exposes the platforms to a high operational risk deriving from possible malfunctions of their IT infrastructures, which may interrupt or in any case compromise the possibility of providing services to users. The lack of adequate safeguards could expose the platforms to the risk of cyberattacks that would compromise the confidentiality of the data kept by them. Some surveys indicate that one of the main concerns of users of the platforms is precisely that relating to the protection of sensitive data.

3. Evaluation of lessons drawn from the use of financial instruments¹²

Energy fund of the Emilia-Romagna Region

The Emilia Romagna Energy Fund, or rather the "Rotative fund of subsidized finance for the green economy", is part of Activity III.1.3 under Axis 3 "Environmental energy qualification and sustainable development" of the ROP ERDF Emilia Romagna 2007- 2013.

The fund was created with the aim of increasing the investments of companies destined to improve energy efficiency and the development of renewable sources through production or self-consumption, as well as the use and / or production of technologies that allow the reduction of energy consumption from traditional sources.

A further purpose of the fund is to promote the creation of new companies operating in the field of green economy, encouraging intangible investments aimed at energy efficiency of processes and/or reducing the energy cost incorporated in the products.

Resources

The fund has a contribution of resources to be applied to Axis 3 of the ROP ERDF Emilia Romagna 2007-2013 of 9.5 million euros.

¹² [Ex-ante assessment of the Financial Instruments to be activated under the ROP ERDF Emilia-Romagna 2014-2020 - Final Report](#)



Financial products

Initially the fund provided subsidized loans with a maximum duration of four years with public funding of 60% (POR FESR Emilia Romagna 2007-2013 resources) at an interest rate of 0.5% and private rate of 40% made available by credit institutions with an effective rate equal to the Euribor plus up to a maximum of 4.75 points. The amount of funding could range from a minimum of € 75,000 to a maximum of € 300,000.

Subsequently the conditions were modified with the fund that provides subsidized loans with a maximum duration of seven years with public funding up to 70% remunerated at an interest rate of 0% and private up to 30% remunerated as before. The range relating to the amounts has also been extended: from a minimum of 20,000 euros to a maximum of 1 million euros.

Governance system

The fund is managed by the temporary grouping of companies R.T.I. FONDO ENERGIA EMILIA ROMAGNA, with the participation of Unifidi Emilia Romagna soc. coop. to r. the. and Fidindustria Emilia Romagna. The total contractual consideration due to the Manager for total fund management fees is 500.200 euros (VAT included).

Accomplished results

The investments planned by the beneficiary companies will allow:

- an increase in electricity produced by RES equal to 23,246.4 MWh;
- a reduction in energy consumption equal to 11,113.71 toe/y;
- a reduction in atmospheric emissions of 2,001.50 tCO₂ / y.

Lessons learned

The tool was judged to be particularly effective in mobilizing private resources aimed at productive initiatives, which on the one hand produce significant effects on the environment, on the other hand determine greater efficiency in the productive processes of the beneficiary companies.

However, during the stakeholder consultation that occurred subsequently, various elements emerged that could make it necessary to introduce corrective measures to the instrument. In particular:

- evaluate the possibility of increasing leverage on ESCos;
- assess the possibility of reducing public funding, or provide for it to intervene in the form of interest subsidies rather than capital;
- evaluate the possibility of introducing forms of support for capital rather than debt, for example by introducing equity or equity loans (quasi-equity) for companies with low capitalization, in particular in support of ESCo, and for substantial projects (2-3 million euro);
- evaluate the possibility of increasing the funding threshold, so as to be able to grant funding to projects with higher amounts.
- establish the maximum interest rate of private funding in line with market trends and therefore not tied to a fixed rate;
- differentiate the documentation required for granting loans based on the size of the project;



- support the procedures for issuing the necessary authorizations, which can sometimes represent an obstacle that can ultimately lead to the waiver by the beneficiaries;
- considering the interventions of the last energy accounts, the financed projects should be aimed more at energy efficiency than the production of energy from RES.

Furthermore, it is useful to include the following recommendations:

- it is important to give a signal of no change in the terms and conditions over the years in order to avoid any discontent among the beneficiaries and expectations of an increase in the subsidized contribution;
- it is important to increase the pool of banks involved in the initiative;
- it is important to accompany companies in energy efficiency interventions (which do not represent the core business), providing, in order to incentivize them, non-repayable loans for energy audits.

4. References

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