How to finance bioenergy companies and its value chain using ESIF.

The Ingenium ESIF fund: a tool to foster regional economic develepment .

This project has received funding from the European Union's
Horizon 2020 research and innovation programme
under grant agreement No 818351

EUROPEAN SUPPORT FOR BIOENERGY

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EU is supporting the bioenergy sector through a number of initiatives.

The main investment tools of the EU are:

- **European Structural and Investment Funds (ESIFs)** for promoting regional development and infrastructure development. Under the current ESIFs, Investment Priority 4, *Supporting the shift towards a low-carbon economy in all sectors,* can support bioenergy development.
- Rural development policy under the **Common Agricultural Policy**, which provides support for farm activity diversification via the European Agricultural Fund for Rural Development (EAFRD).
- **Horizon 2020**

They are coming to an end but both will be renewed in 2021-2027 with slightly adapted priorities.

- **European Green Deal**
- **Regional Development and Cohesion Policy in** 2021-2027 will focus on five priorities, with opportunities for bioenergy development in the priority, ‘**Greener, carbon free Europe**
- **European Innovation Partnership on Agriculture (EIP-Agri)**
- **Sustainable Energy Technologies (SET) Plan**
- **Horizon Europe (2021-2027**) will also provide significant support for sustainable energy development,

EUROPEAN SUPPORT FOR BIOENERGY

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- **The Bio-Based Industries Joint Undertaking (BBI-JU)**, a public-private-partnership between the EU and the Bio-based Industries Consortium (BIC)
- **The LIFE Programme** is the EU's funding instrument for environment and climate action, cofinancing pilot and demonstration projects that can contribute to EU goals, including the roll-out of renewable energy.
- **European Local Energy Assistance (ELENA)**, provided by the European Investment Bank and European Commission, grants technical assistance to renewable energy projects to finance costs related to feasibility and market studies, programme structuring, business plans, energy auditing, financial structuring and preparation of tendering processes and contractual arrangements.
- **InnovFin**, also from the European Investment Bank, provides loans, loan guarantees or equity type financing for innovative energy demonstration projects.
- **The European bioeconomy fund**

ESIF- THE EUROPEAN STRUCTURAL AND INVESTMENT FUNDS

The EU is committed to creating jobs and building a socially inclusive society: European Structural and Investment Funds, ESIF

ESIF funds have two main goals:

- Investment to boost growth and jobs, a common goal for all 3 types of regions: less-developed, transition and more-developed
- European territorial cooperation, supported by the European Regional Development Fund (ERDF)

ESIF- THE EUROPEAN STRUCTURAL AND INVESTMENT FUNDS

- European Agriculture Fund for Rural Development
- Cohesion Fund
- European Social Fund
- European Regional Development Fund
- European Maritime and Fisheries Fund

ESIF programme support is mainly delivered either in the form of **grants** or through **financial instruments** in the form of loans, guarantees and equity investments.

Grants schemes are NOT financial instruments because are not revolving

ESIF programmes are approved by the Commission and implemented by Member States and their regions. 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.

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ESIF FINANCIAL INSTRUMENTS (or PRODUCTS)

LOAN

"Agreement which obliges the lender to make available to the borrower an agreed sum of money for an agreed period of time and under which the borrower is obliged to repay that amount within the agreed time*". Under a FI, a loan can help where banks are unwilling to lend on terms acceptable to the borrower. They can offer lower interest rates, longer repayment periods or have lower collateral requirements.

GUARANTEE

"Written commitment to assume responsibility for all or part of a third party's debt or obligation or for the successful performance by that third party of its obligations if an event occurs which triggers such guarantee, such as a loan default*". Guarantees normally cover financial operations such as loans.

EQUITY

"Provision of capital to a firm, invested directly or indirectly in return for total or partial ownership of that firm and where the equity investor may assume some management control of the firm and may share the firm's profits*". The financial return depends on the growth and profitability of the business. It is earned through dividends and on the sale of the shares to another investor ('exit'), or through an initial public offering (IPO).

QUASI-EQUITY

"A type of financing that ranks between equity and debt, having a higher risk than senior debt and a lower risk than common equity. Quasi-equity investments can be structured as debt, typically unsecured and subordinated and in some cases convertible into equity, or as preferred equity*". The risk-return profile typically falls between debt and equity in a company's capital structure.

WHAT MA NEED TO KNOW BEFORE STARTING..

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Before allocating money to a financial instrument, Managing Authorities **have to assess what** is needed, **why** and by **whom.**

Financial instruments are usually managed by nationally or regionally operating financial institutions (such as banks) that are selected and entrusted with running financial instruments on behalf of the managing authority.

For grants, ex ante assessment is not required

Financial instruments supported with the ESIF must comply with specific regulatory provisions which are set out in a range of legislation: **the Common Provisions Regulation (CPR**) which governs implementation of ESIF

Each of the fund-specific regulations and several related delegated and implementing regulations.

THE EX-ANTE ASSESSMENT (in brief)

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According to Article 37 (2) of the CPR, the required content of an ex-ante assessment is around seven main groups:

1. Analysis of market failures or suboptimal investment situations and the estimated level and scope of public investment needs;
2. Assessment of the value added of the FI, consistency with other forms of public intervention in the same market and possible State aid implications;
3. Estimate of additional public and private resources to be potentially raised by the FI, including assessment of preferential remuneration when needed;
4. Identification of lessons learnt from similar instruments and ex-ante assessments carried out in the past;
5. Proposed investment strategy, including an assessment of its possible combination with grant support, options for implementation arrangements, financial products and target groups;
6. Specification of expected results including measurement of indicators;
7. Provisions allowing the ex-ante assessment to be reviewed and updated.

TAILOR-MADE INSTRUMENTS VS OFF-THE-SHELF FINANCIAL INSTRUMENTS

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When using ESI Funds, Managing Authorities (MAs) must implement Financial instruments and related financial products according to the ex-ante assessment results.

MAs have 3 different options, providing a financial contribution to:

- **already existing** or **newly created FIs** which are specifically designed to achieve the intended purpose, and which respect the applicable Union and National rules. (tailor-made instruments)
- FIs complying with the standard terms & conditions laid down by the Commission by means of implementing acts in accordance with the examination procedure referred to in Art 143 (3). (Off-the-Shelf Instruments)
- to invest part of their structural funds in compartments of EU level instruments "ring-fenced" for investments in regions and policy areas covered by operational programmes from which structural funds resources are contributed ("joint instruments").

"OFF-THE-SHELF" FINANCIAL INSTRUMENTS"

Objective: To provide standard terms & conditions for a set of predefined FIs that can be set up and managed by MAs under Article 33 (1) (b) of the CPR.

Not an obligation but an opportunity for MAs to deliver faster & safer financial means to the final recipients

OFF-THE-SHELF FINANCIAL INSTRUMENTS

Type of instruments proposed

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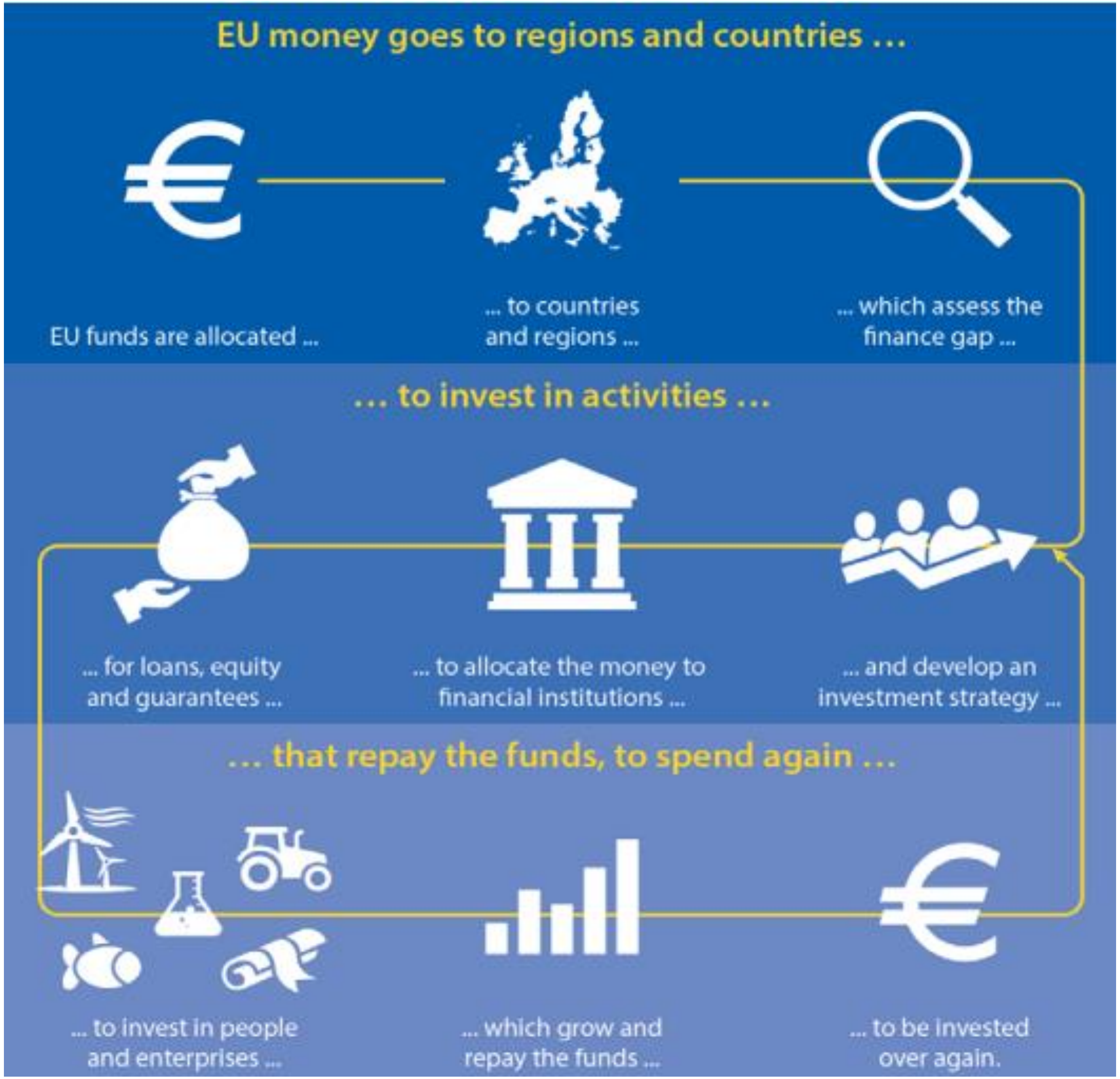
5 off-the-shelf financial instruments have been designed:

- RS LOAN: Loan for SME's based on a portfolio risk-sharing loan model
- CAPPED GUARANTEE: Guarantee for SMEs (partial first loss portfolio)
- CO-INVESTMENT FACILITY: Equity Investment Fund for SMEs and start-up companies based on a co-investment model
- RENOVATION LOAN: Loan for energy efficiency and renewable energies in the residential building sector
- URBAN DEVELOPMENT FUND, to finance and support implementation of urban development projects in assisted areas



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TO SUM UP..

fiCompass, 2015. A sustainable way of achieving EU economic and social objectives. Financial instruments

GOOD PRACTICE
Sirkkala Energy Park

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Sirkkala Energy Park, owned by the Karelia University of Applied Sciences (Finland), is a research, demonstration and educational platform that promotes renewable energy use. It works with enterprises to increase knowledge on energy solutions and support uptake of new energy technologies. The park provides technical solutions for testing and development of new energy solutions, including a CHP unit with real-time monitoring, a combined wood log & pellet boiler, a wood fuel dryer and laboratories. The output of the research centre includes cost structures of renewable energy production and maintenance, demonstrating the business opportunities for bioenergy use. The park also creates synergies between enterprises, education and research to support innovation and knowledge sharing.

Funding: It was funded through **three ERDF co-funded projects**, and is a nationally unique centre for hybrid-energy systems that also contribute to national and international research.

For more information, visit the BIO4ECO website.

GOOD PRACTICE
Biomethane from anaerobic digestion of agricultural wastes

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AgriBioMéthane (ABM) was established in 2014 in Vendée (Pays-de-la-Loire, France) by four farms which were looking to improve nutrient management in the region.

The farms set up a biogas plant to convert livestock slurry and agri-food industry waste into biomethane (which is sold into the gas grid), with resulting residues used to replace more than 70 tonnes of chemical fertilisers each year. Other farms in the region are also able to sell their residues to ABM, gaining an income from their wastes. The plant produces around 450,000 normal cubic metres (NM3) of biomethane each year, which is consumed locally by businesses, with a BioNGV (natural gas vehicle) service station foreseen in the next years, for refuelling buses and lorries.

Funding: As well as the investment of **local farmers**, the project was also supported by the **National Waste and Energy Agency**, the Vendée district council and the **European Regional Development Fund.**

For more information, visit the BIOREGIO website

EQUITY vs DEBT Financial Instruments

1. **Job creation**: Long term vs Short term
2. **Quality vs Quantity**: (no. of companies and types of jobs)

High Risk High Return vs Low Risk Low return (Financial and Economic)

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Rationale for an ESIF financial instrument:

- Why we need new innovative (bioenergy) companies
- PPP: why we need to use (also) public money

Case studies: Regional equity funds: the Ingenium funds

Main conclusions and take away

WHY DO WE NEED KNOWLEDGE INTENSIVE COMPANIES? The US market

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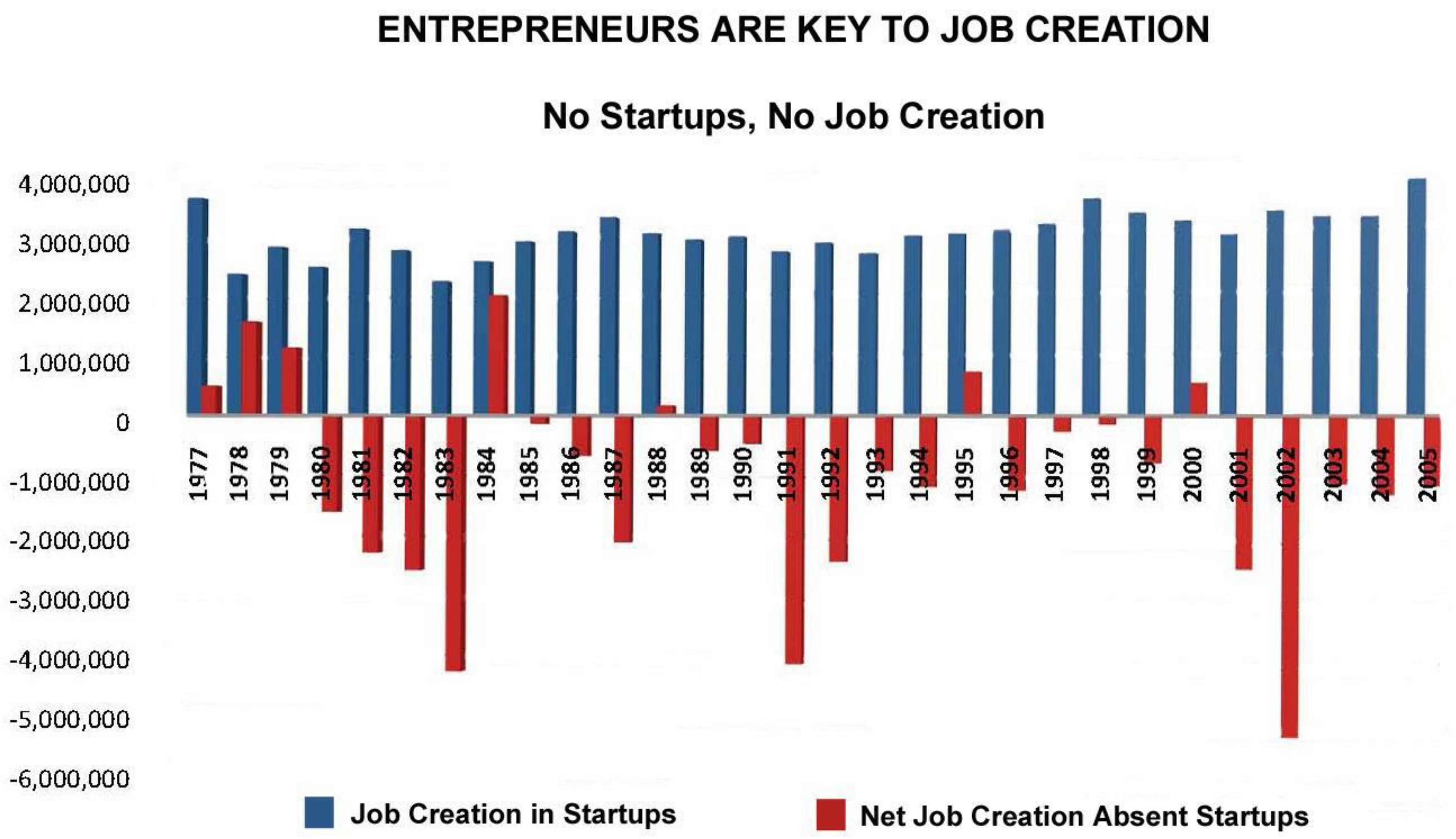
New jobs are created by new companies:

TOP 1% OF NEW COMPANIES = 10% of all new jobs, 40% indirect**

NEW COMPANIES = 100% new jobs*

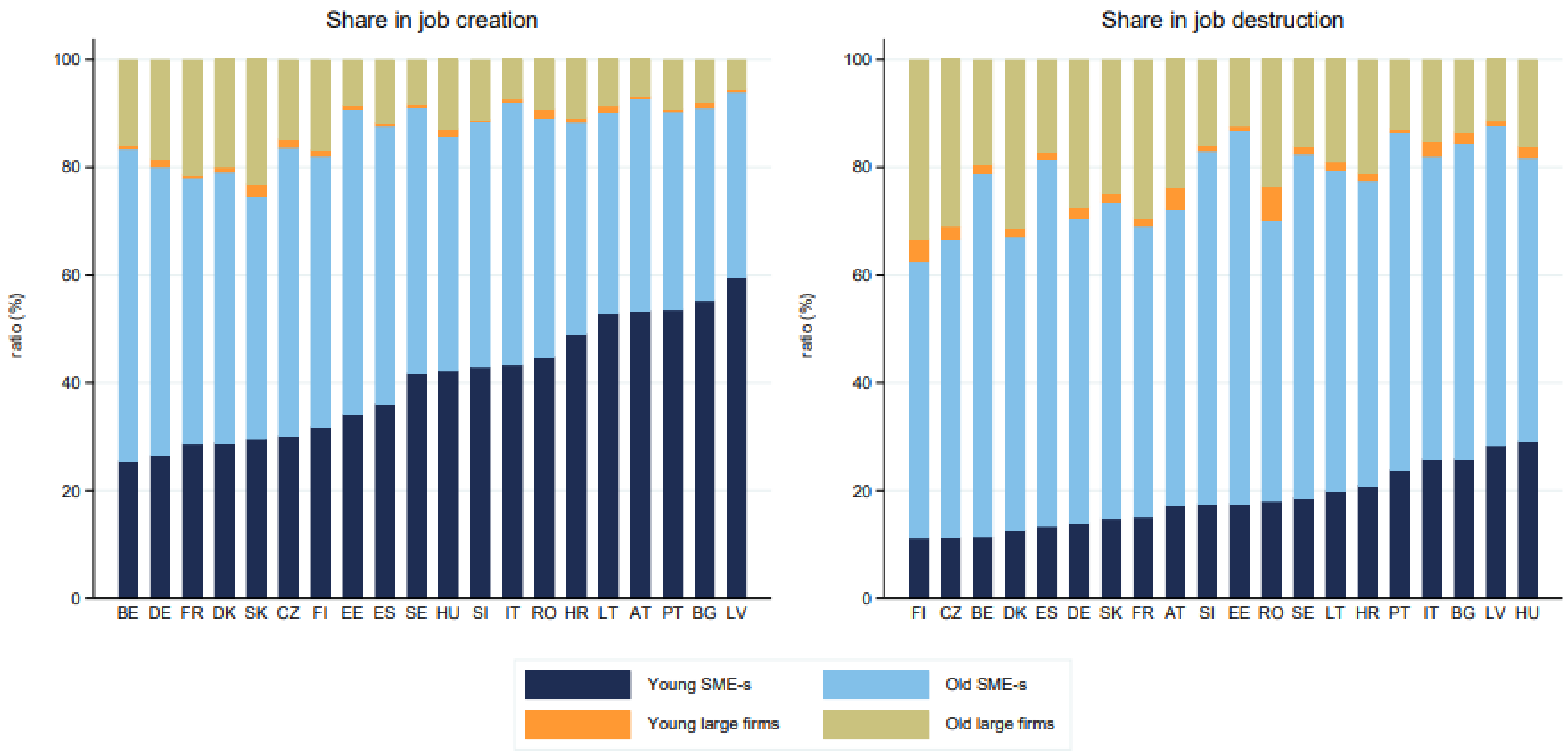
*High-Growth Firms and the Future of the American Economy – Kauffman Foundation - March 2010

WHY DO WE NEED KNOWLEDGE INTENSIVE COMPANIES?



Source: Business Dynamics Statistics Briefing: Jobs Created from Business Startups in the United States. Census Bureau and Kauffman Foundation, January 2009

SHARE IN JOB CREATION AND JOB DESTRUCTION IN EU
Within-country Averages



Job Creation in Europe: A firm-level analysis, 2019 , Hallak, Issam Harasztosi, PÈter

Conclusion no. 1

NEW ENTREPRENEURSHIP IS ONE KEY DRIVER FOR THE REGIONAL WEALTH

“Fostering the development of fast-growing firms in innovative sectors is an integral part of modern R&D and innovation policy. Studies show that while there are fewer fast-growing innovative firms in the EU than in the US, overall employment growth depends critically upon them given that they generate directly or indirectly a disproportionally large share of jobs, and can contribute to increased innovation investments during economic downturns”*.

*OECD (2010), "High-growth Enterprises: WhatGovernments Can Do to Make a Difference". Archibugi, D et al. (2013) "Economic crisis and innovation: is destruction prevailing overaccumulation?" Research Policy 42, 2.

WHY KNOWLEDGE INTENSIVE COMPANIES FROM THE BIOENERGY SECTOR?

Contributing to nearly 60% of RES gross final energy consumption, bioenergy is a leading source of renewable energy.

The bioenergy sector contributes to the creation of more than 700,000 direct and indirect jobs in Europe, representing 49% of all RES jobs.

Moreover, with European-based industry accounting for more than 50,000 businesses across the continent, bioenergy produces an annual turnover of nearly €60.6 billion and net export worth €5 billion, bioenergy makes a substantial contribution to sustainable economic growth.

https://bioenergyeurope.org/

TO SUM UP

- Knowledge intensive start-ups are crucial for the regions => They account for 100% of new jobs+
- Their value is based on intangible and a future cash flow
- They need money BUT they are not attractive for banks (Debt money)
- They need equity, but there is a market gap in early stages
- ESIF Co-investment facilities are a viable option

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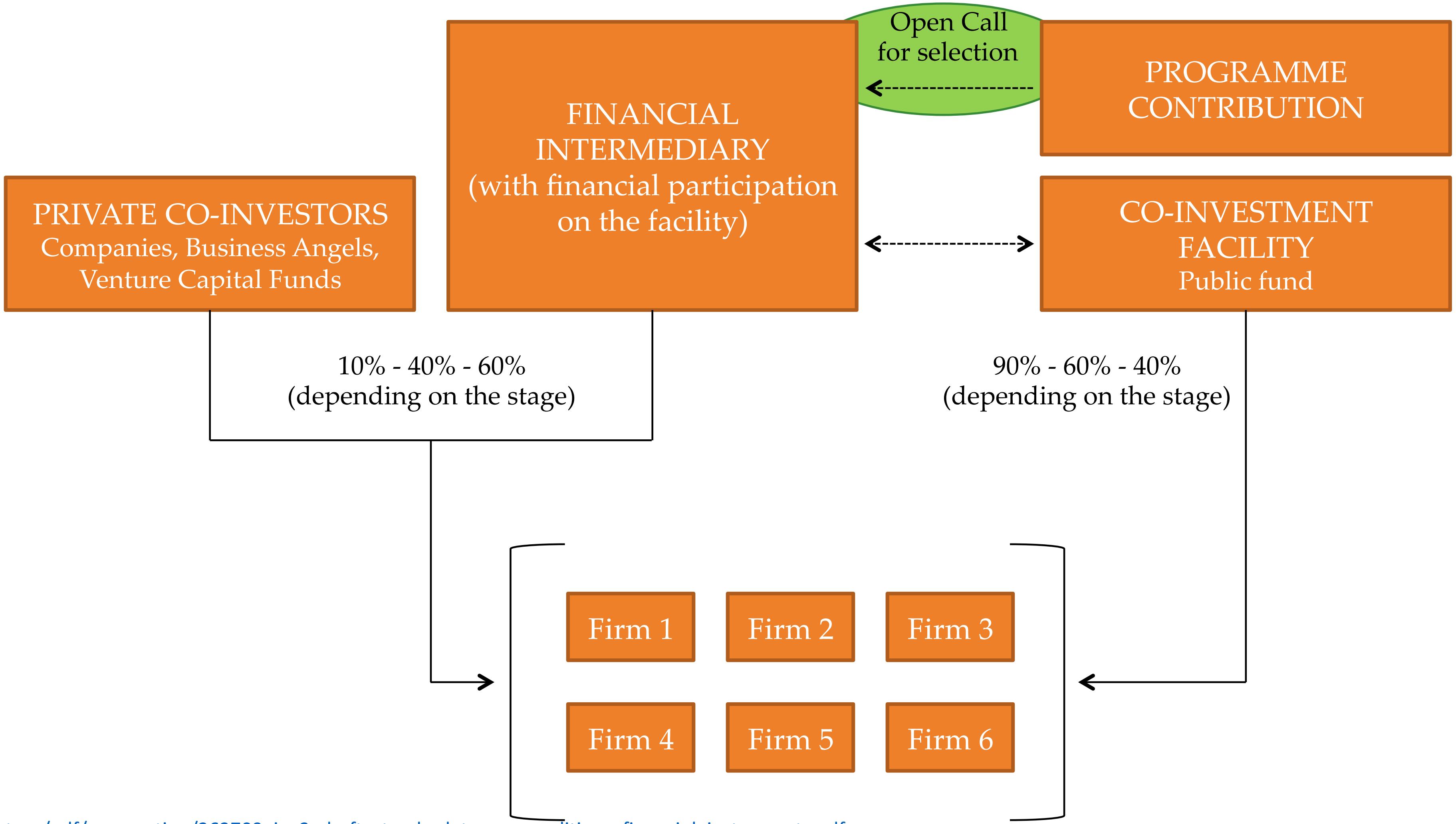
THE ESIF SOLUTION?
Equity Co-Investment Financial Instruments

How? Equity Co-Investment FI (Fund) for SMEs and start-up companies
Off the shelf equity financial instrument



https://ec.europa.eu/regional_policy/sources/what/future/pdf/preparation/262709_ia_3_draft_standard_terms_conditions_financial_instruments.pdf

Different ESIF instruments for different regions

One size does not fit all
Regional Differences

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Indicator	Emilia Romagna	Sardinia	Slovenia	Poland
Population	4.357.700	1.671.700	2.000.092	38.200.037
GDP/capita	24.396,00	15.895,00	17.500,00	9.300,00
Inhabitants/Km^2	195,8	69,4	100,0	121,9
Youth unemployment rate	18,3%	44,7%	12,4%	23,7%
Public exp in education (% GDP)	2,9	5,3	5,2	5,38
Number of Universities	4	2	4	24
Productivity Level	44.500,00	38.600,00	29.323,30	16.914,40
EU Patents applications per million inhabitants	118,64	7,16	118,85	3,5

Case studies: Regional equity funds: the Ingenium funds

THE INGENIUM FUNDS

Ingenium is an early stage co-investment risk capital fund typically built around a Region of a few million inhabitants focused on Seed and Start-up but also considering expansion phase, companies with high value of intangibles, knowledge intensive companies with high growth potential, Regional coherence of sector of activity.

INGENIUM ER I & INGENIUM ER II vs INGENIUM SARDEGNA

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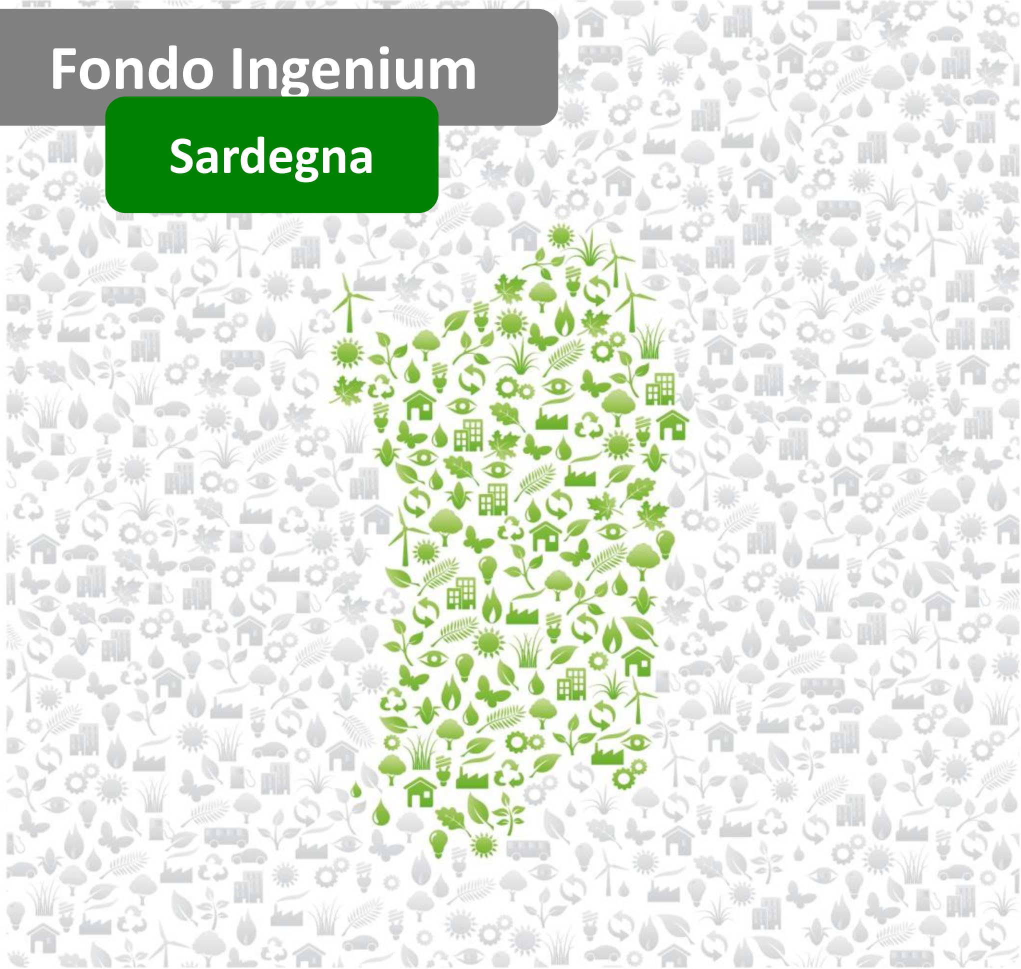

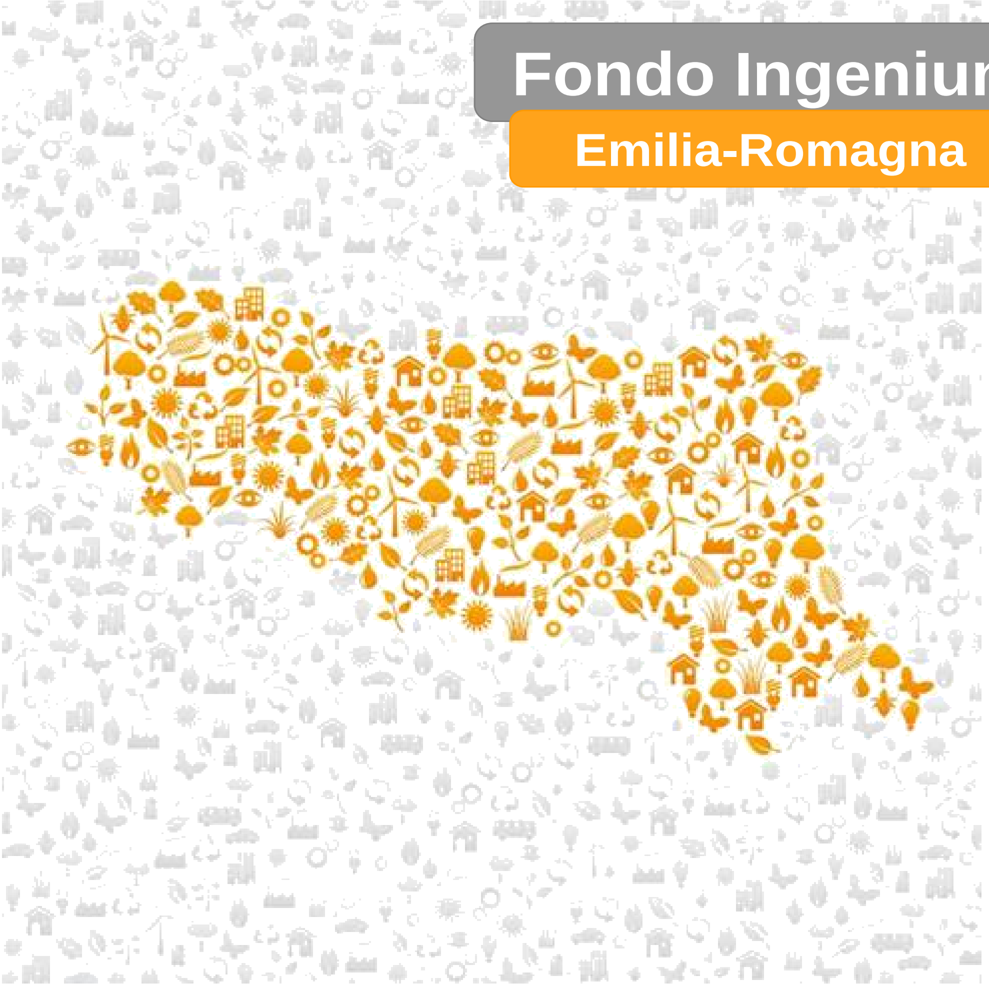

CO-INVESTMENT FACILITY

Main objective: to show world class innovation capacity of Emilia Romagna Region

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Ingenium Emilia Romagna II

50% Private Investors

50% Emilia Romagna Region

14 Meuro Total Investment

SEED FINANCING

START UP FINANCING

EXPANSION FINANCING

- **Innovative companies: preferably ICT, Biotech**
- **Based or willing to be based in Emilia Romagna**
- **Up to 2 Meuro per company per year**

Results: 14 Million invested into 13 companies: 2 exit, 3 write off

CO-INVESTMENT FACILITY

A testing bed: first regional VC fund privately managed

Ingenium Emilia Romagna I

30% Private Investors

70% Regione Emilia Romagna

9 Meuro Early stage fund

SEED FINANCING

START UP FINANCING

- **Innovative companies**
- **Based (o willing to be based in Emilia Romagna)**
- **Less than 36 months old**

RESULTS: 9 Million invested into 7 companies: 1 exit, 3 write off, 3 active

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Reasons for setting up a risk capital fund

- Fostering the creation of new knowledge based companies
- Providing (public) equity in order to fill the equity gap
- Providing Regional new and innovative Smes with managerial support
- Offering to new innovative company a business network (eg. for further round of financing,)
- Increasing the SMEs credit rate(Sme-bankability) to help them in accessing banking credit for further round of financing

CO-INVESTMENT FACILITIES

Main objective: to support the internationalization of Sardinian traditional companies

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Ingenium Sardegna

50% Private Investors

50% Regione Sardegna (ERDF)

34 Meuro Venture capital fund

SEED FINANCING

START UP FINANCING

EXPANSION FINANCING

- **Innovative companies**
- **Based (o willing to be based in Sardegna**
- **Up to 1,5 Meuro per company per year**
- **Up to 6 Meuro max**

Final recommendations

WHY EQUITY MAIN TAKEAWAYS
Lessons learnt 1

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- Equity is the suitable financial instruments for knowledge intensive companies, the engine for prosperity and job creation
- Co-investment equity facilities are suitable Financial Instruments for managing authorities willing to support High Growth companies and R&D results exploitation
- A deal by deal approach is what was missing so far and is key to leverage at its best the contribution of the private sector
- Co-investment facility (not only the fund but also services) including grants and advice to improve impact (investment readiness etc.)
- Commercially driven fund manager is necessary to align interests, take the necessary risk and build the adequate portfolio

A GOOD FUND RECIPE
Lessons learnt 2

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- The size of the fund must be consistent with the investment focus of the fund: the financial need of an early stage company generally is smaller than an expansion deal
  - A minimal size for a seed fund is around €15/20 million;
  - A good size for an early stage fund is around €30/50 million;

- “Scouting” costs could be relevant small early stage funds cannot be able to reimburse the costs to the Management Companies. MAs can provide grants to cover this costs;

- Unless there is a proven demand for a specific sector funds should be sector agnostic and a deal by deal approach is what is best to attract experienced private sector co-investors

- The co-investment instrument attracts more private investors (Bas, VCs) and contributes to professionalization of the local community of business angels and other investors.

ON TENDER AND REPORTING
Lessons learnt 3

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- A number of Managing Authorities has presented us with substantially different tender specifications often quite far from market logic
- A number of tender we participated to were far from being “open, transparent and non-discriminatory”
- A lot of Managing Authorities are not aware of the off the shelf possibility, for equity it has not been officially published yet
- A lot of managing authorities do not perceive the need for a truly commercially driven fund manager for Equity Financial Instruments as they believe is similar to loans and guarantees
- Assigning management to “in house” or similar organization ends up in investing either blindly after private investors or de facto transforming equity in low risk loan types of instrument
- In some countries reporting for ESIF and reporting for AIFMD is quite different and very expensive and in general reporting is quite heavy

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GBER – Global Block Exemption Regulation

Document: COMMISSION REGULATION (EU) No 651/2014

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0651&from=EN

CPR – Common Provisions Regulation

Document: REGULATION (EU) No 1303/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (17 December 2013)

http://ec.europa.eu/digital-agenda/en/news/eu-regulation-common-provision-regulation-cpr

CPR's DELEGATED ACTS

Document: COMMISSION DELEGATED REGULATION (EU) No 480/2014

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0480&from=EN

CPR's IMPLEMENTING ACTS

Only for portfolio risk sharing loan (RS Loan); capped portfolio guarantee and renovation loan

Document: COMMISSION IMPLEMENTING REGULATION (EU) No 964/2014 (11 September 2014)

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.271.01.0016.01.ENG

Thank you for your attention!

Francesca Natali
META Group
f.natali@meta.group.com

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