



FINANCIAL INSTRUMENTS IN ENERGY RENEWAL OF BUILDINGS

Action plan on financial instruments within BUILD2LC project prepared for Regional Energy Agency of Nord – West Croatia.

dr.sc. Damir Juričić

Alternative models of procurement and
innovative financing of public investment expert

damir.juricic@amn.hr

www.amn.hr

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Glossary of terms and abbreviations

APM	Alternative Procurement Model – public-private partnerships, concessions, energy performance contract, buy and lease back, operational leasing and similar.
MRDEUF	Ministry of Regional Development and EU Funds
MoE	Ministry of Economy
CBRD	Croatian Bank for Reconstruction and Development
AIK	Agency for Investments and Competitiveness
EIB	European Investment Bank
EC	European Commission
Guarantee	Commitment to support all or one part of the capital and interest due in the event of default on a loan granted by a banking establishment.
FIs	Financial Instruments. Investment fund vehicle as defined in EU regulations for the deployment of ESIF or other EU resources by way of investment or the provision of guarantees.
PD	Procurement Documentation
TPM	Traditional Procurement Model
EPC	Energy Performance Contract
PPP	Public-Private Partnerships
PSC	
EU	European Union
CPR	Common Provision Rules
ESIF	European Structural and Investment Fund
EFSI	European Fund for Strategic Investment
PWC	Pricewaterhouse Cupers
FRR	Financial Rate of Return
ERR	Economic Rate of Return
VfM	Value for Money
WLC	Whole life costs

Executive summary

In this study we propose two measures and five activities in purpose to establish efficient system and procedure in using financial instruments during current as well as next EU financial perspective. Also, we offer some proposals for solutions in selecting optimal financial instruments related to specific industries but also the criterion for selecting institutions in charge for delivering financial instruments. There is also notice on additional needs in analysis of concrete energy efficiency projects in operation to determinate final structure of optimal financial instruments related to specific kind of buildings.

Proposed MEASURES and ACTIVITIES:

MEASURE 1: Establishment of FIs on national levels

ACTIVITY 1.1: Criteria for determining the FIs structure on the basis of the EE's projects in running phase;

ACTIVITY 1.2: Defining methods for calculating grants and combining grants with financial instruments at the level of a concrete project;

ACTIVITY 1.3: Update ex-ante assessment with new instrument FI UC guarantee.

MEASURE 2: Establishment of platform and pipeline of concrete projects

ACTIVITY 2.1: Preparation of pipeline projects with revision of energy audits and introducing a unique system for measuring actual consumption;

ACTIVITY 2.2: Establishment of national and local EE investment platforms projects.

1. Introduction

The European Commission (EC) consumes its annual budget within a seven-year financial perspective in four ways: to settle its own costs, for procurement of works, for goods and services, for grants and awards, and for financial instruments (Harsanyi, 2015). Financial instruments are, in the nature, classical financial instruments with this difference, which, unlike commercial market financial products, have the role of taking over the risks of public and private projects that commercial market products would not take over. Thus, it is about loans, guarantees and equity financing (equity products) with a price lower than that on the market.

The appropriateness of the purpose of the financial instruments derives from an identified market failure, ie the situation in certain EU markets where certain financial products are not developed (and are not sufficiently used in practice), which would make the total market more efficient and more propitious . In this sense, each structuring of financial instruments is preceded by so- ex-ante evaluation of the use of financial instruments. Also, one of the most important functions of financial instruments is multiplying the total available funding sources. Namely, financial instruments originating from certain EU funding sources (eg ESIF) are public sources which, taking over a certain volume of market risks, encourage and mobilize other commercial sources of financing public and private projects. This is the effect of multiplying the total required funding sources.

Within this study, the focus will be on the analysis of the possibilities of structuring and using financial instruments in the area of energy efficiency projects of buildings, especially in the case of alternative models of procurement (AMP) such as EPC contract, operational leasing, buy-and-lease-back model, concession as well as public-private partnerships.

2. EU legal framework for application of FIs

In the framework of the EU legislative framework with regard to the possibilities of using financial instruments, this chapter will focus on the basic regulations enabling the use of financial instruments and initiatives that enable the application of instruments, and will encourage participants to intensify and more effectively involve energy projects efficiency.

2.1. EU legal framework

The basic EU regulation defining the use of financial instruments in the EU financial perspective 2014-2020. is the Common Provision Rules (CPR), Regulation (EU) No. 1303/2013, European Parliament and of Council, 17 December 2013. The use of financial instruments is governed by Articles 37 to 46. This Regulation determines the scope and purpose of financial instruments in such a way that they are products in support of investments that are expected to be financially viable and for which it is not possible to raise enough financial resources from market sources (Art. 37.1 CPR). More details on EU legal framework in Annex 1.

2.2. EU most important platforms (initiatives) for EE financing and promoting

Smart Finance for Smart Buildings (SFSB) is one of Clean Energy for all Europeans initiatives. The objectives of this initiative are: (i) to increase the importance of implementing energy projects at the highest level, (ii) leadership in the production of renewable energy sources, and (iii) achieving appropriate conditions for energy efficiency users. The initiative seeks to increase the share of energy-rejuvenated buildings, stimulate funding sources to more actively participate in energy efficiency projects and incorporate the effects of ICT technology in order to increase the efficiency of implementing such projects¹.

3. Croatian legal framework and basic obstacles for application of FIs

The domestic and EU legislative framework has also provided opportunities for the use of financial instruments in the Republic of Croatia. However, for efficient and effective use of financial instruments, it is necessary to identify the current obstacles to maximize the use of the existing EU financial perspective, and to better prepare for the new EU financial perspective.

3.1. General national obligations preceded by the use of financial instruments

¹ For more details see annex 1.

EU regulations also provide frameworks for the preparation and implementation of financial instruments for particular areas in the Republic of Croatia. The underlying obligation that precedes any preparation and implementation of financial instruments is the ex-ante assessment of market failure for specific markets. In the area of energy efficiency, sustainable urban development and private-sector investment in RDI in support of innovative and competitive business and research environment, for the purpose of assessing market failures, was created in 2015 "Assessment of potential future use of financial instruments in Croatia A study in support of the ex-ante evaluation for the deployment of EU funds during the 2014-2020 programming period ". The analysis has been made by Pricewaterhouse Coopers (PWC) for the European Investment Bank (EIB) and the Ministry of Regional Development and EU Funds of the Republic of Croatia (MRDEUF).

3.2. Basic obstacles for efficient implementation of FIs

The consulting firm Ernst & Young carried out an independent evaluation (Ernst & Young, 2016) on the effectiveness of the implementation of the European Fund for Strategic Investment (EFSI) for the period from July 2015 to June 2016, which among other reasons cited the reasons for the reduced use of these resources in the new Member States (EU-13) compared to the old Member States (EU-15). Without going into the issue of EFSI's utilization of the EFSU quotas, the focus here is on the reasons of reduced fund use in the newer Member States (EU13) in order to more efficiently and effectively prepare domestic entities from the public and private sectors of the Republic of Croatia to use existing financial instruments, the next EU financial perspective since 2021. For this reason, it is considered justified and rational to ask questions: How to make the most of the financial instruments from the current financial perspective? How should you prepare for a new financial perspective? Which instruments are available to us for better exploitation of existing and future EU sources? Moreover, the Government of the Republic of Croatia² calls for this document, citing (inter alia) that *"the state's success in obtaining EFSU support depends on the capacity for project development, experience in work with public-private partnerships (hereinafter referred to as text: PPP), as well as the size of projects and markets "*. Two other reasons mentioned in the original analysis regarding the inadequate development of the domestic equity market and the competitiveness of ESIF and EFSU sources can be added to

² Drugo izvješće o provedbi Plana ulaganja za Europu u Republici Hrvatskoj za razdoblje 1. kolovoza 2016. do 31. srpnja 2017. (Klasa: 022-03/17-07/375, Urbroj: 50301-25/06-17-3) od 31. kolovoza 2017. godine.

this statement.

The following indicates the reasons for the reduced use of financial instruments:

1. Competition of ESIF and EFSI sources;
2. Reduced capacity to prepare major projects;
3. Reduced experience in using the PPP model;
4. Insufficient developed equity financing market
5. Relatively lower capital value of projects.

Since EFSI sources are based on funding instruments and guarantees, these reasons are likely to be found also in some ESIF sources that relate to financial instruments, since member states, using ESIF sources, are allowed to use financial instruments.

3.2.1. ESIF and EFSI competitiveness

In the Republic of Croatia, sources from ESIF and EFSI funds are available at the same time. In addition, non-refundable grants and financial instruments are available from ESIF sources. Of course, subjects from the public and private sector are more inclined, this is rational behavior, with grants against financial instruments. However, taking into account cases where some of the projects are not eligible for co-financing, attention could be directed more to available financial instruments from both sources. It should also be expected that these procedures are allowed by Regulation (EU) 1303/2013, in order to combine financial instruments and grants with increased efficiency and effectiveness.

3.2.2. Reduced administrative capacity in preparation of projects

The process of preparing public projects, regardless of whether it is a social or economic infrastructure, is a complex and lengthy process. The process of preparation is therefore more significant than the sustainability of a public project in its overall life span depends on the quality of preparation. In recent years, this process has yielded several, for ours, new concepts that become increasingly important factors for appropriate preparation. It is about the total cost of living, the identification, quantification and allocation of public project risks and the criterion of value for money. For many public purchasers in the Republic of Croatia, these terms are relatively new, although they have been used in developed countries for

decades. Understanding these terms and their frequent use can certainly contribute to a significant increase in the ability of public contracting authorities to prepare larger and more complex projects.

For example, determining the value of building (construction costs) a public project today is no longer sufficient, although a significant number of public contracting authorities are directing to this part of the project. Construction costs are one (smaller) part of the total living expenses (Juričić, 2016) defined by the norm HRN ISO 15686-5:2009 which besides construction include other expenses incurred in the overall lifecycle of buildings such as maintenance, financing, replacement of worn-out materials, risks, management, end of lifetime construction, and the like. It is not possible to make an optimal cost estimate of the project without including these costs.

Furthermore, preparing a public project that will be exploited for 20, 30 and more years without risk inclusion in the preparation is sub-optimal, primarily because each economic-financial-technical parameter can be displayed solely by binding a certain probability of its future value. It is about identifying and quantifying the risk (AIK, 2014a) of certain parameters of a public project³. Also, different project entities (public contractor - project owner, contractor, insurance company, public service users, creditors and others) have different capacities in taking certain risks and hence a reasonable allocation according to the principle that the individual risk is allocated to that the subject in the project that manages them most effectively makes it reasonable and rational to contribute to a better proportion of the benefits and costs of all subjects in the project. Such project risk considerations can significantly contribute to increasing administrative capacity in preparing more complex public projects.

Finally, there is also the term "value for money" (AIK, 2014b). It is a criterion that developed countries are obliged to use in public procurement procedures especially in cases where there are different technical-technological variants as well as different project procurement models. The aim is to choose the investment option that will, at an acceptable degree of probability, result in the highest value for the money of taxpayers. Most recently, the money paid by taxpayers (most often end-users of public services delivered through a concrete public

³ For example, in the street lighting projects, there are possible to identify more than 150 specific risks, while in the education projects (eg. schools) there are possible to identify more than 200 specific risks.

project) are the source of financing public projects, so it is politically and economically correct to deliver the value of the public service that suits the money paid.

3.2.3. Reduced experience in using alternative procurement models

Experience in the preparation and implementation of public projects by alternative procurement models is important for several reasons. Firstly, the preparation of alternative procurement models is comprehensive and the contracting authority is obliged to elaborate the project proposal in detail, including drafting of a contract proposal, such as PPP, risk allocation matrix, calculation of total cost of living, calculation of value for money, standards space and service, payment mechanism and the like. Unfortunately, such comprehensive preparation of public projects may be absent in cases where public procurement agents apply another procurement model, such as a traditional procurement model for public buildings. In this sense, a team of public purchasers who has at least once completed the process of preparing the project on an apprenticeship model has increased capacity in preparing more complex projects.

Second, an alternative procurement model provides a wider range of options for applying different financial instruments. It is not only financial instruments that combine non-refundable assistance, financial instruments, and domestic aid to combine more efficiently with such a financing and procurement organization.

3.2.4. Underdeveloped equity market

The equity instrument for investment in projects acquired under one of the alternative procurement models could attract additional resources and achieve an efficient division of operational risk⁴. It is well-known that the Croatian economy is predominantly based on debt sources of public and private investment financing. This state of affairs also has an effect on the restraining of creditors from investment financing. Also, domestic performers do not have enough resources to partially finance their investments. A financing instrument of equity

⁴ Sažetak preliminarne analize mogućnosti korištenja sredstava ESI fondova u Republici Hrvatskoj provođenjem financijskih instrumenata u investicijskim područjima energetske učinkovitosti i korištenja obnovljivih izvora energije, održivog urbanog i teritorijalnog razvoja te investicija privatnog sektora u istraživanje, razvoj i inovacije (<http://www.strukturnifondovi.hr/UserDocsImages/Za%20web/3%20%20Sa%C5%BEetak%20preliminarne%20analize%20TO1%20TO4%20TO7.pdf>)

financing could put domestic traders and investors in a better position by removing market failure of that type.

3.2.5. Relatively small capital value of the projects

One of the obstacles to more intensive investment in the public sector is the relatively small capital value of public projects. One of the reasons is the economics of volume. The cost of project preparation per unit of capital value is higher for smaller capital projects. In addition to this factor, it is important to point out the number of public procurement procedures that, if smaller, are implemented independently. The preparation of a public project, especially when value is estimated based on total cost of living, risk analysis and money value calculation, has its own rules and procedures as well as that for each independent project it has to prepare tender documents in accordance with the regulations in the field of public procurement.

3.3. Possible measures to overcome the obstacle

The review of possible measures to overcome obstacles mentioned above are presented in table 1

Table 1: Review of obstacle and their measure for overcome

Obstacle	Measure	Institution is in charge for delivering measure
Competition of ESIF and EFSI sources	Stronger political support in application of FIs, organization of seminars and workshops, application of procedure of combining of PPP with ESIF and RFSI (AIK, 2017).	MRDEUF, AIK
Reduced capacity to prepare major projects	Seminars and workshops on project preparation	Expert and academics entities
Reduced experience in using the PPP model	Stronger political support to making of templates of PPP contracts, PSC and PD	MoE, AIK
Insufficient developed equity financing market	Establishment the PPP Equity Fund	CBRD, EIF, EIB
Relatively lower capital value of	Stronger political support to	MoE and Local governments in

projects	bundling smaller projects	cooperation with REGEA
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4. Financial instruments available in programming period 2014.-2020.

ESIF policy frameworks emphasise the need for more use of financial instruments in 2014-2020, particularly in a context of fiscal retrenchment: the overall aim is therefore to deliver more ESI funding through financial instruments in future. Activities supported by financial instruments must be judged by the financial intermediary or managing authority to be able to repay the investment. For the ESF, they must be used on the basis of the final recipients' capacity to reimburse the loan. Synergies and complementarity should be sought – financial instruments through ESIF should take account of and work together when justified with ESIF grants, other EU instruments (financial instruments and grants) and national public programmes.

There are, facultatively, two kind of financial instruments: payment and guarantee instruments and instrument sin the formo f technical assistance in the purpose for prepare some specific instruments, programs or projects.

4.1. Payment and guarantee financial instrumens

Payment and guarantee financial instrument are those financial product wich aim is to financie some specific projects in cash under custom market conditions or guarantee to financial source for their loan under relatively higher risks which are not acceptable to commercial lenders.

4.1.1. The purpose and definition of financial instruments

Financial instruments are generally referred to as financial products, such as proprietary and debt financing sources, and guarantees with this difference in relation to commercial financial products that they represent from public funding sources in order to take over certain risks of public (and private) projects to strengthen financial sustainability of projects. In this sense, the justification of the application of financial instruments precedes economic viability.

The purpose and importance of financial instruments from ESIF sources is determined by the CPR (point 34) in a way that they are important because of the leverage they have on ESI

funds and because of their ability to combine different forms of public and private funds to support public policy goals as well as Reasons for being renewable forms of financial resources, making such support more sustainable in the long term.

The definition of financial instruments in the broadest sense derives from the provisions of Article 140 of the Financial Regulation and foresees the forms of financing used in accordance with the principles of sound financial management, transparency, proportionality, non-discrimination, equal treatment and subsidiarity. The application and structuring of financial instruments is preceded by analysis of market failures or suboptimal investments that do not achieve satisfactory investments from market sources. Financial instruments do not violate the legality of competition and strive, by taking specific project risks, to achieve a leverage, ie multiplier effect by more substantial involvement of private market sources.

The benefits linked with financial instruments can be: leverage resources and increased impact of ESIF programmes; efficiency and effectiveness gains due to revolving nature of funds, which stay in the programme area for future use for similar objectives; better quality of projects as investment must be repaid; access to a wider spectrum of financial tools for policy delivery and private sector involvement and expertise; move away from “grant dependency” culture; and attract private sector support (and financing) to public policy objectives (EC, 2014).

4.1.2. Basic effects of using the financial instruments

Financial instruments differ from non-grant grants and commercial financial products. The main effects of financial instruments are:

- a) Effect of multiplication
- b) Revolving effect
- c) Lower price of product
- d) Reduced collateral requirement
- e) Longer repayment period

Financial instruments can be used in projects with a high value of economic justification, but market and commercially uninteresting financial justifications. In that sense, financial instruments take over certain risks that commercial funding sources would not take over.

After taking over these risks, a higher likelihood of remaining funding from commercial sources of funding is expected. This is the essence of the multiplication effect. For projects with better financial justification (but still insufficient for commercial sources), the share of financial instruments in the overall structure of the project funding source will be smaller (higher multiplication), while projects with lower financial profitability will expect higher share of financial instruments (smaller multiplication). Financial instruments, unlike grants, are refundable and charged financial products. A returned financial instrument (or just part of it) can be used to re-finance a new project. Improving financial viability means achieving a reduction in the average weighted average cost of capital and, therefore, the finishing instruments carry a lower price or fee depending on the type of instrument. For the granting of a financial instrument, collateral is not required to cover the total default risk, and the repayment period may be significantly longer than the commercial sources of financing.

4.1.3. Types of financial instruments

There are many different types of specific financial instruments but here is focus on those instruments which could be applied to energy efficiency projects depending on type of project as well as model of procurement.

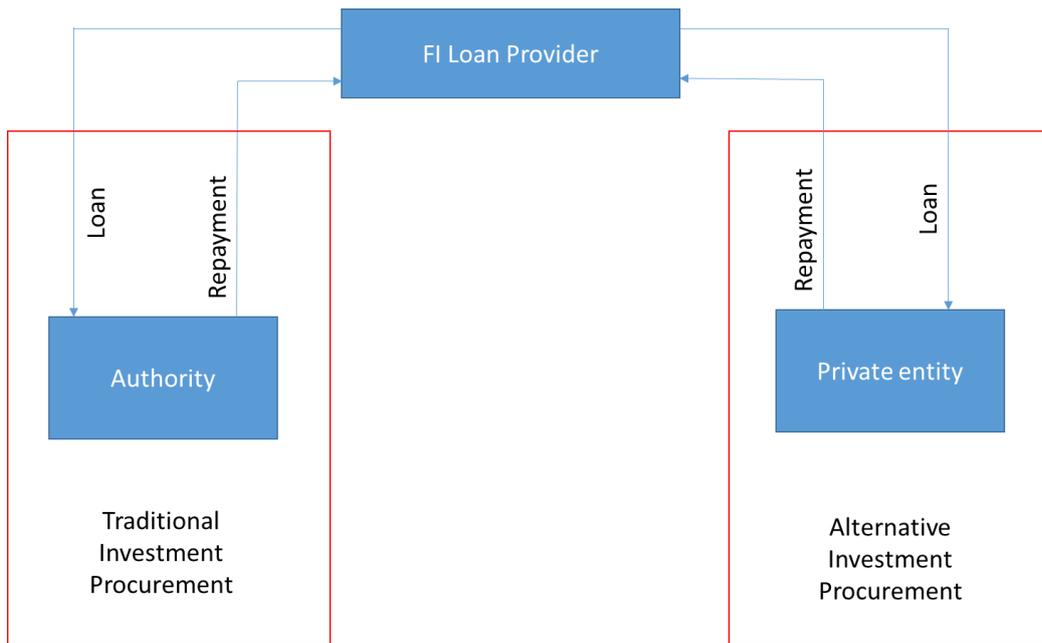
4.1.3.1. FI Loan

This financial instrument (EIB, 2015) is defined as⁵ “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 financial instruments, 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.

Relationships between different stakeholders in different procurement options is described in Figure 1:

⁵ <https://www.fi-compass.eu/info/Glossary>

Figure 1: Using FI Loan in different procurement options



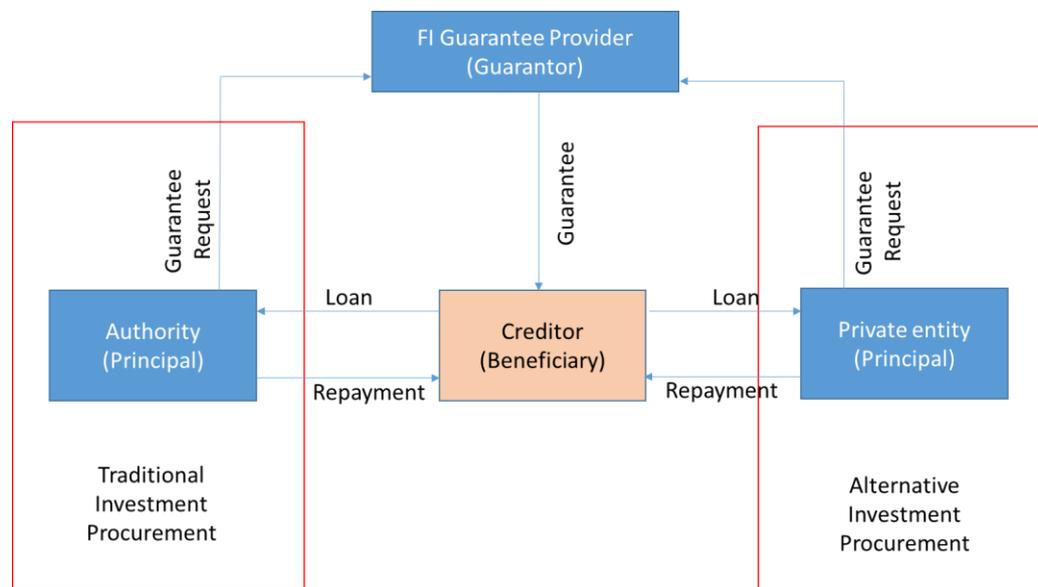
Source: Author

In both cases, in traditional as well as alternative procurement options user of FI Loan is or authority or private entity where authority procure services of availability (eg. in streetlighting service of lighting or in retrofit of buildings service of savings and/or availability of space conditions).

4.1.3.2. FI Guarantee

This financial instrument is defined as (EIB, 2015) “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. Stakeholders relationship is described in Figure 2:

Figure 2: Using FI Guarantee in different procurement options



Source: Author

In both procurement options authority and private entity (principals) request the guarantee issuing from FI Guranatee provider (Guarantor) to issue the guarantee in benefit of creditor (Beneficiary).

4.1.3.3. Mezzanin finance or Quasy equity

This instrument is defined as 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 (EIB, 2015). The risk-return profile typically falls between debt and equity in a company’s capital structure.

The different forms of mezzanine financial product are classified as closer to equity or debt capital according to the level of ownership acquired and the exposure to loss in the event of insolvency. The risk profile will also change with the duration of capital commitment and the remuneration conditions. There are three possible forms of mezzanine: subordinated loans, convertible bonds and preferred stocks. Subordinated loans have a lower repayment priority

than normal (senior) loans. In the event of default all other lenders are repaid before the holders of subordinated loans. Since the interest payments as well as the capital repayments are subordinated, the risk of loss in the event of default is substantially higher than for senior loans. In addition, generally, there is no collateral (security) required so interest rates are higher to cover the higher risks. Convertible bonds are debt where the initial investment is structured as a debt claim, earning interest. At the discretion of the investor, the debt can be converted into equity at a predetermined conversion rate. A convertible bond is essentially a bond combined with a share option where the holder may exchange the bond for a predetermined number of shares at a predetermined price. Because convertibles can be changed into shares they have lower interest rates. Preferred stocks are stocks that entitle the holder to a fixed-rate dividend, paid before any dividend is distributed to holders of ordinary shares. Holders of preferred stock also rank higher than ordinary shareholders in receiving proceeds from the liquidation of assets if a company is wound up.

With regard to the features and functions of mezzanine finance, this financial instrument could be used mainly in the application of alternative procurement models by financing part of capital costs in the area of risk between superior debt and equity. Given the relative underdevelopment of the financial market in the Republic of Croatia, this financial instrument has not been taken into consideration for possible application in practice. Organization of subjects in the project using such instrument is similar to Figure 2.

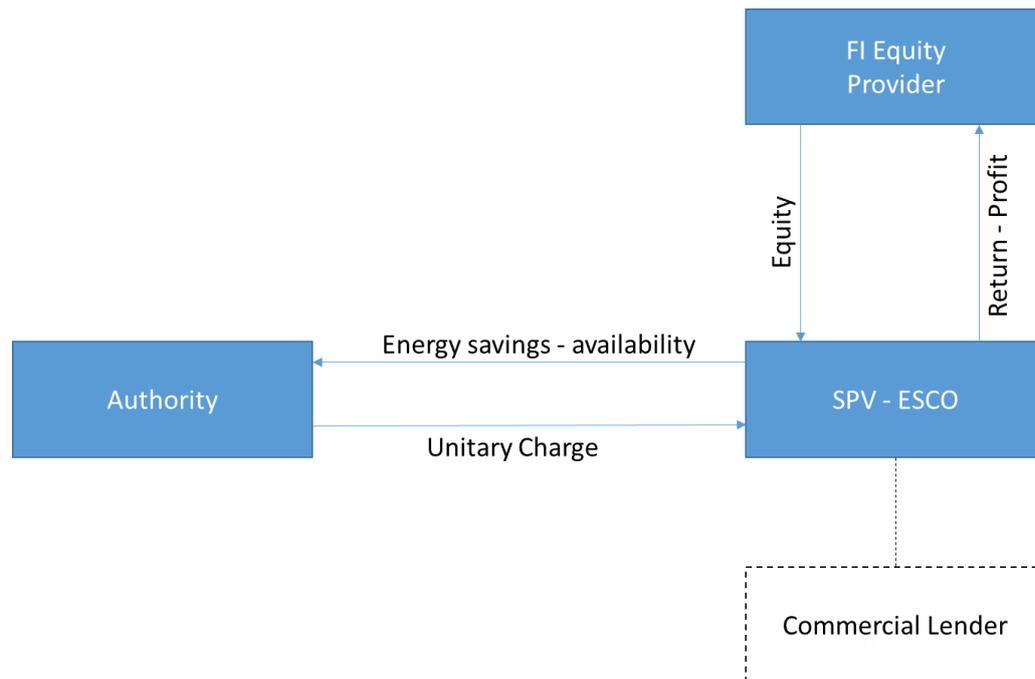
4.1.3.4. Equity

European Investment Bank and European Commission (EIB, 2015) define this financial product as 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 or on the sale of the shares to another investor. This instrument is appropriate for new and growing green economy enterprises in energy efficiency, renewable energy, environmental protection and the promotion of sustainable urban development.

Regarding energy efficiency projects, this financial instrument could be particularly suitable for EE projects that are purchased under one of the alternative means of procurement (SPV)

through alternative procurement models. Within the framework of such a project implementation project, a equity instrument would take on part of the risk that would reduce the other risks of the project to the level of eligibility for commercial creditors, with the probable lower commercial cost of such a loan. The subjects' relationships are shown in Figure 3:

Figure 3: Using FI Equity in EE projects



Source: Author

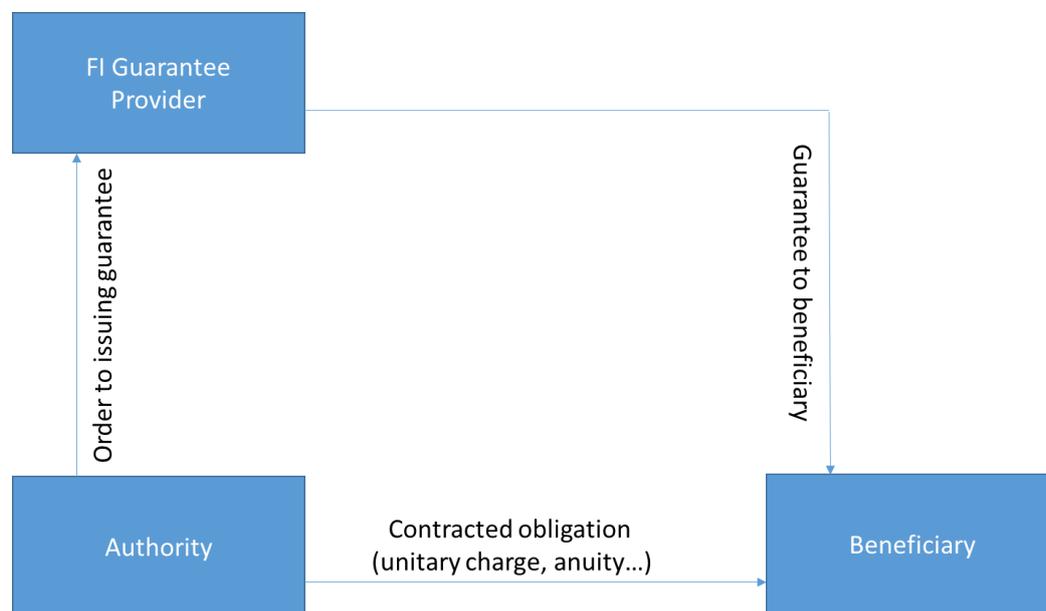
The user of the FI Equity instrument is a private entity in the form of a special purpose vehicle (SPV) or an ESCO company separated from a parent company. Remaining financial resources could be provided by commercial lenders. In this way, multiplication effect could be significant.

4.1.3.5. Unitary Charge Guarantee

In the circumstances of the increased risk of payment of the contractual obligation on the basis of which the public project was delivered, ie the payment of the public buyer's obligation on the basis of the energy service fee, the availability fee (in the case of alternative purchasing models), ie annuities in the case of applying a traditional public procurement model of the project, it would be justifiable to reduce the perceived risk of collecting the

claims of the payer or creditor from a public contractor. The perception that a public contractor (a payer or annuity payer) will not make his / her commitment at a contracted value or within the agreed time period contributes to an increase in overall public project risks and consequently to an increase in the price of any source of funding. For the purpose of reducing this risk and reducing overall project risks and the cost of financing sources, from the ESIF or EFSI sources, a financial instrument with the title ‘‘The Guarantee for regular client’s payments’’ (AIK, 2017) could be created. The organizational scheme of the proposed instrument is shown in Figure 4:

Figure 4: Organizational scheme in case of Unitary charge guarantee



Source: Author’s simulation

However, in relation to the operational preparation and implementation of such a very important instrument, the question of the criteria under which such a guarantee would be granted to the public contracting authorities should be resolved. It is useful to refer to the results of the EU project recently implemented in the Republic of Croatia. It is about the project "Instruments for combining European Structural and Investment Funds with Public Private Partnerships - a methodological framework for calculating the required capital assistance in public projects with PPP compensation adjustment procedures and combining capital assistance with financial instruments" (TF / HR / P2 -M2-O6-1601) in whose component 1, point 1 with the title "Creating a methodology for determining the payment capability of JLP (R) S in PPP projects", proposed a basic system for assessing the ability of

a public contractor, creditworthiness of a public contractor. Such a system would be useful to further develop in order to establish a logical system of rating criteria for granting FI guarantees more easily and quickly. In this regard, it is recommended to identify a project that would elaborate in detail the system of credit rating of a public contractor, on the basis of which the approval processes of such guarantee financial instruments would be carried out faster and more easily. Positive experience in applying energy efficiency projects guarantees Lithuania⁶. Namely, this Member State took advantage of the possibility of creating a guarantee for energy efficiency projects based on the effect of reducing the total cost of project funding sources. This effect also reduces the need for non-grant co-financing (grants) with this effect of reducing the price of finishing sources due to the take-over of part of project risk by FI guarantee providers.

In the further and operational development of this instrument, it is necessary to state the provider of the guarantee, ie a public or private body which will assign the guarantee to the applicant on the basis of professional criteria.

4.1.4. Combination of funds and co-financing

The Regulation 1303/2013 makes it clear that all types of combination will be possible (European Commission, 2014): combination of different programme contributions and different funds in one financial instrument, combination of financial instruments and grants and other forms of assistance. Combination of funds from different sources in one financial instrument can achieve advantages of economies of scale. For the combination of ESIF financial instruments with ESIF grants, there are two possibilities: it will be possible for certain types of grants and financial products to be combined within the same operation and to be treated as a financial instrument. It is possible for the grant and financial instrument operation support to be combined to finance the same investment at final recipient as separate investment. Also, the same costs cannot be present twice. Grants shall not be used to reimburse support received from financial instruments and financial instruments shall not be used to pre-finance grants.

Additional flexibility is here whereby national public and private cofinancing may be provided at the level of the financial instrument. National co-financing does not have to be

⁶ https://www.fi-compass.eu/sites/default/files/publications/presentation_20160317_vilnius_ESIF_Ruta-Dapkute.pdf

paid to the financial instrument in advance but may be provided later on financial instrument implementation. In many financial instruments a private contribution will be present and is encouraged to increase leverage.

Since the CPR is allowed to combine ESIF grants with financial instruments from ESIF and EFSI, it would be of particular importance to continue with the process of combining financial instruments with grants, taking into account the specificity of energy efficiency projects. In cases where projects are procured by alternative models, the development of the procedure may be linked to the procedures for combining the public-private partnership model with the grants and financial instruments of the European Structural and Investment Funds (AIK, 2017).

4.2. Financial instruments – initiatives and platforms

Beside financial instruments which present specific payments (loans, equity) or guarantees, there are different kind of financial instrument in the form of technical support as consultancy services to managing authorities or final recipients in their process of preparation of the programs, platforms or specific projects. Here are some of them related directly or indirectly to energy efficiency projects. Some of these initiatives and platforms are: JESSICA, URBIS, Urban development Network, JASPERS, URBACT and similar. More details about initiatives in annex 2.

5. Legal and financial specifics of EE project in context of application of FIs

From the legislative framework and the financial characteristics of energy efficiency projects, there are also basic guidelines for defining the type and structure of financial instruments that could, given the procurement model and the type of project, provide the optimal structure of EE funding sources in the Republic of Croatia.

5.1. Legal framework in energy efficiency project delivering

The Basic Act (MGIPU, 2017) that transposes the provisions of the Energy Efficiency Directive (EU, 2012, 2016) is the Energy Efficiency Act (OG 127/14) regulating the area of efficient energy use, making plans at local, regional (regional) national energy efficiency

improvement, energy efficiency measures, energy efficiency obligations, regulatory energy body responsibilities, transmission system operators, distribution system operators and energy market operators in connection with transmission, ie energy transport and distribution, energy distributor obligations, energy and / or water suppliers, and in particular energy services, energy saving, and consumer rights in the implementation of energy efficiency measures. The Ministry of Economy, Entrepreneurship and Crafts is in charge of the preparation and implementation of energy efficiency policy and the Ministry of Construction and Physical Planning and the Ministry of Environmental Protection and Energy. The National Coordination Body for Energy Efficiency and the Fund for Environmental Protection and Energy Efficiency. MGIPU participates in the drafting of the National Energy Action Plan and reporting on the implementation of the National Action Plan and prepares a long-term strategy to stimulate investment in the reconstruction of the National Fund of the Republic of Croatia by 2050. The strategy includes an overview of the national building fund, establishing a cost-optimal approach to building renovations, policies and measures to encourage cost-effective large building renovation works, long-term investment guidelines, and estimates of expected energy savings and widespread use.

Within the framework of this study are important provisions of the Energy efficiency Act regulating the energy service defined as the method of implementing the energy efficiency project under which the energy performance contract with the guarantee that in the reference conditions leads to a verifiable and measurable or estimable improvement in energy efficiency and / or saving energy and water⁷. The contract is concluded between the contracting authority and the energy service provider. This provides the possibility of applying an alternative procurement model known as the energy performance contract.

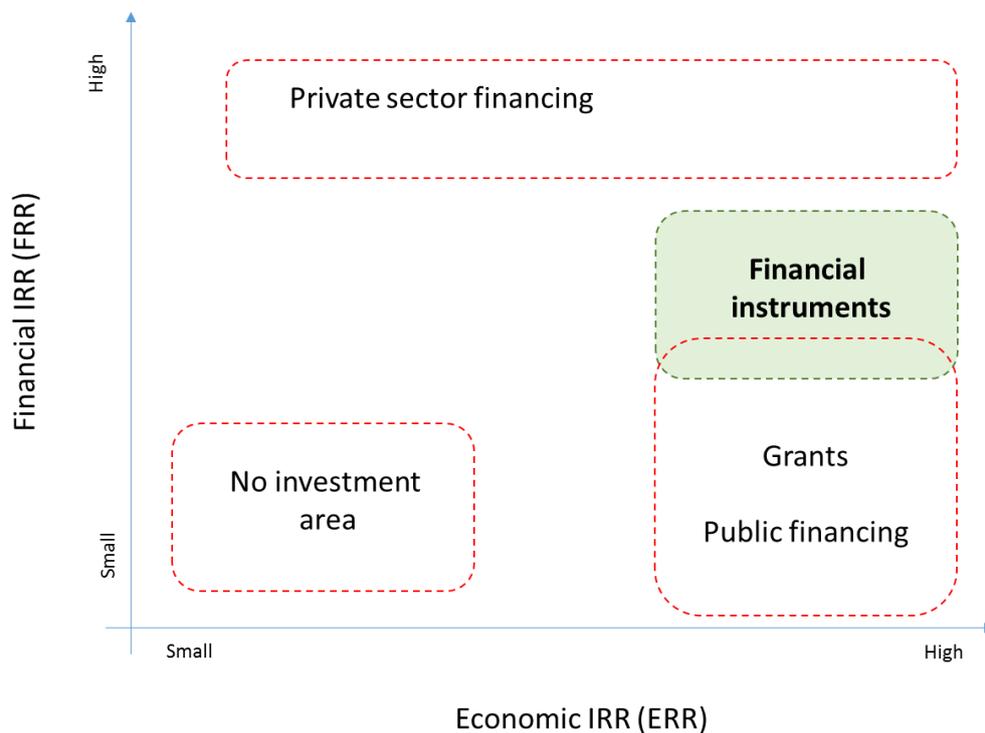
In addition to the Energy Efficiency Act for the implementation of the Energy Performance Contract, the Regulation on the Contracting and Implementation of an Energy Service in the Public Sector (OG 11/2015) is in force when the energy service is provided to public contracting entities.

5.2. Areas of application of financial instruments

⁷ Article 25.1. Energy efficiency Act.

As derived from the definition of financial instruments, they can't be applied in all types of public and private projects. On the contrary, there are fundamental criteria for determining the justification and scope of the instruments. These criteria are shown in Figure 5:

Figure 5: Areas of application of financial instruments



Source: adapted on EIB (2015)

Projects with a relatively small ERR and FRR are unlikely to survive because there are no economic or financial reasons for investing. For projects with relatively high economic rationality (ERR = High), but whose income can't fully benefit from full life costs (WRC) (FRR = Small), it is justified to finance from public sources for achieving general social benefits, ie so-called. positive extranets. Projects with a relatively high financial return rate (FRR = High), no matter what kind of economic justification, will most likely be financed from commercial and market sources, because the expected revenue can fully cover whole life costs. However, there is also an investment area in which it is possible to expect a relatively high value of the economic rate of return but also insufficient value of financial justification for financing from market sources. In such an investment area, it is possible to

use financial instruments from public sources precisely to cover the gap between a relatively small and acceptable financial return rate (FRR). There is the role of financial instruments to take on certain risks whose materialization would contribute to the achievement of a relatively small financial return rate.

5.3. Financial and risk specifics of energy efficiency projects

Financing of the Energetic Efficiency Projects depends on the risks of the specific project, the creditworthiness of the project subject to which the risks are allocated and the procurement model of the project. Accordingly, the prices, types and structures of the funding source will be aligned. Also, different projects with regard to investment priority will differ according to the above characteristics. Financing from financial instruments should also correspond to this structure. For relatively higher risk projects, financial instruments with higher risk absorption capacity will be required. For projects with a lower savings effect, higher grant values will be required. Some of the most significant identified risks in the project of energy efficiency are shown in Table 2:

Table 2: Significant risk matrix in EE projects in TPM and APM

Goup of risks	Risk	Importance	Possible allocation	
			TPM	APM
Sight risk	Condition of existing building	Medium	Client	Client
	Legal situation of existing building	Medium	Client	Client
Construction	Design	High	Client	Contractor
	Budget overrun	High	Client/Contractor	Contractor
	Time overrun	High	Client/Contractor	Contractor
Savings	Energy price	Medium	Client	Client/Contractor
	Power consumption	Medium	Client/Contractor	Contractor
Demand	Demand	High	Client	Client/Contractor
CO2 Emission	CO2 Emission	Medium	Client	Client/Contractor
Measurment	Reliability of instruments	High	Client/Subcontractor	Contractor
	Monitoring	Medium	Client/Subcontractor	Contractor
	Reporting	Medium	Client	Contractor

Financing/Granting	Grant availability	Medium	Client	Client
	Financing transaction	High	Client	Contractor
	Interest rate	High	Client	Client/Contractor
	Exchange	Medium	Client	Client/Contractor
Force Majeure	Unforeseeable circumstances	Medium	Client	Client/Contractor
Termination of contract	Early termination	High	Client	Client/Contractor
Inflation	Price rising	Medium	Client	Contractor
Political	Low Change	High	Client	Client/Contractor
	Canceling the Project	High	Client	Client/Contractor
Technology	Technological obsolescence of the equipment	High	Client	Contractor
Liquidity	Risk caused by maturity of loan repayment	High	Client	Contractor

Source: Author

Identified risks from table 2 are allocated to the client (contractor) with regard to the procurement model. Since the function of financial instruments is to take over part of the project's energy efficiency risk, such structured risks could be the basis for structuring the type of financial instruments with regard to the procurement model (TPM, APM) and project type (energy retrofit of industrial buildings, public buildings, family house, street lighting and the like). The possible structure of financial instruments in the project of energy efficiency of public building retrofit is shown in table 3:

Table 3: Possible structure of FIs in public building energy efficiency retrofit

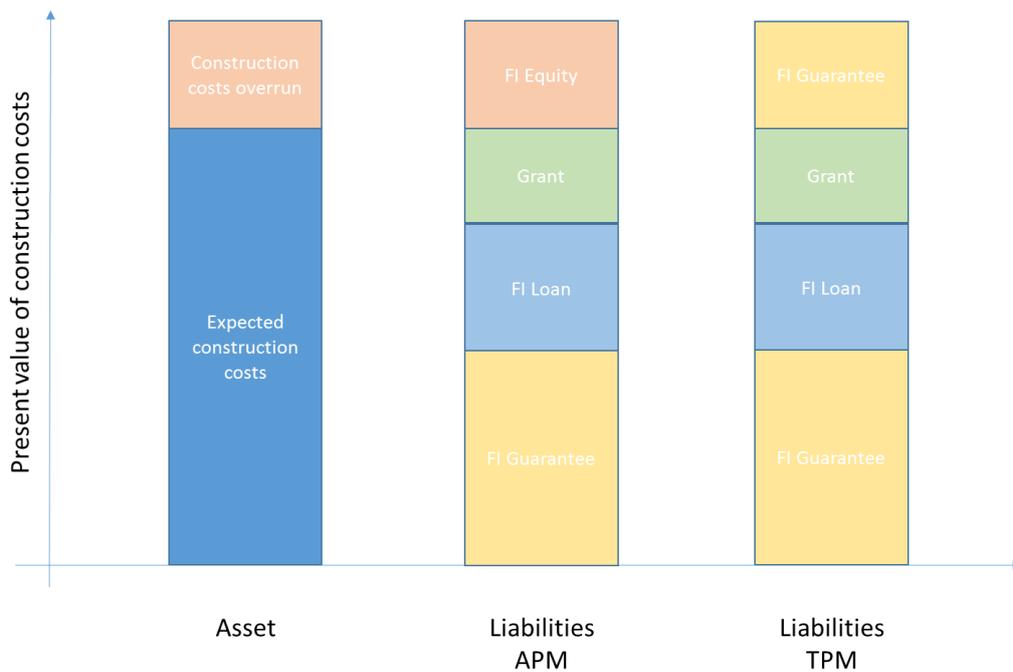
Cost	Risk	Possible FI
Construction cost covered by net revenue		Commercial loan
Construction cost partially covered by net revenue		FI Loan
Construction costs not covered by net revenue		Grant

	Construction cost overrun	FI Equity
	Construction time overrun	FI Equity
Unitary charge payment on time		FI UC Guarantee
Annuity payment on time		FI UC Guarantee
Contracted savings		FI Loan
	Reduction of contracted savings	FI Guarantee
	Inflation	FI UC Guarantee
	Liquidity caused by loan maturity	FI Loan

Source: Author

The possible structure of financial instruments to finance specific portfolios of identified graphically on Figure 6:

Figure 6: Possible structure of FIs depending on present value of capital costs and risks



Source: Author

Depending on the costs and specific risks of project energy efficiency, the overall funding sources are expected to be structured. In the traditional procurement model (TPM), FI Guarantee could be used in favor of commercial lenders, which could reduce the cost of commercial sources of financing, and the repayment period could be extended depending on the duration of the guarantee. In addition to guarantees, FI Loan could be used in combination with grants. When applying the Alternative Purchasing Model (APM) structure,

it may be similar to the difference that part of the capital costs that TPM financing with a commercial loan with FI Guarantee could use FI Equity instrument here.

ATTENTION: THE STRUCTURE IN TABLE 2 AND FIGURE 6 IS NOT FINALLY DEFINED FOR THE REASON WHICH THIS OPTIMIZATION AFTER THE ANALYSIS IS BASED ON THE DATA ON FUTURE COSTS AND RISKS OF THE PROJECT. WITH REGARD TO THIS PROJECT, IT CAN EXPECT RELEVANT DATA FOR THE IMPLEMENTATION OF SUCH ANALYSIS. CONCLUSION OF THE ANALYSIS CAN MAKE THE BEST STRUCTURE AND TYPE OF FINANCIAL INSTRUMENTS FOR PROJECTS IN THE REPUBLIC OF CROATIA.

5.4. Comment and recommendation of existing ex-ante assessment

Ex-ante evaluation of potential using financial instruments in energy efficiency market has been done in September 2015. (EIB, 2015a). This study has been created and updated under assumptions available in the period 2007-2013. Of the total identified need to invest in projects of all investment projects worth approximately € 2.3 billion, projects that were identified for investment or were ready for investment amounted to approximately € 143 million or 6.2%. In the period since ex-ante evaluation has been carried out to date, or in the implementation of several programs for the co-financing of energy efficiency projects mainly in the areas of public and private buildings and public lighting. Smaller production areas have been renewed in energy.

Regarding the identification of sub-optimal investment situations, commercial banks with low knowledge of the energy efficiency market and, consequently, the abandonment of financing or financing with relatively high interest rates were highlighted as one of the market problems. Similarly, however, as an obstacle to more efficient energy efficiency projects, it is also stated in the Decision on the Issue of Energy Renewal Public Buildings Program (MGIPU, 2017). According to the interpretation, credit institutions do not have sufficient information on the legality of financing energy efficiency projects, and loan receivers (ESCO companies) with each new loan reduce their credit rating. This is a classical risk of underinvestment, which in principle is solved by understanding the project financing technique.

Furthermore, with regard to funding sources, it is stated that due to the lack of adequate and sustainable financial products, beneficiaries in project implementation rely mainly on grants, own sources of financing and deferred payments by means of compensation payable to ESCO companies. The study points out that financial instruments could achieve added value by: providing financing under favorable conditions, in accordance with state aid rules, which could improve financial sustainability of projects; Provide access to funding sources for companies that do not have sufficient capital; to provide additional private and public funds that would, by re-use, contribute to reducing the funding gap and provide technical assistance to raise awareness of the benefits of investment in energy efficiency for the purpose of preparing sustainable projects and promoting the financial discipline needed to repay financial products.

In this respect, the analysis also suggests types of financial instruments to improve energy efficiency in the building sector and manufacturing processes in the companies, thus mentioning: medium and long-term **loans** to ensure mid-term and long-term financing under favorable conditions, thus affecting financial sustainability projects and **equity financing** for ESCO companies to improve the credit history of the company and provide business financing assistance that would enable greater investment.

It is important to mention that the need for project consolidation is particularly high in order to achieve the economy of scale effect, reduce unit costs of preparation and attract the attention of larger commercial institutional investors with lower financing prices and widespread fall in financial products.

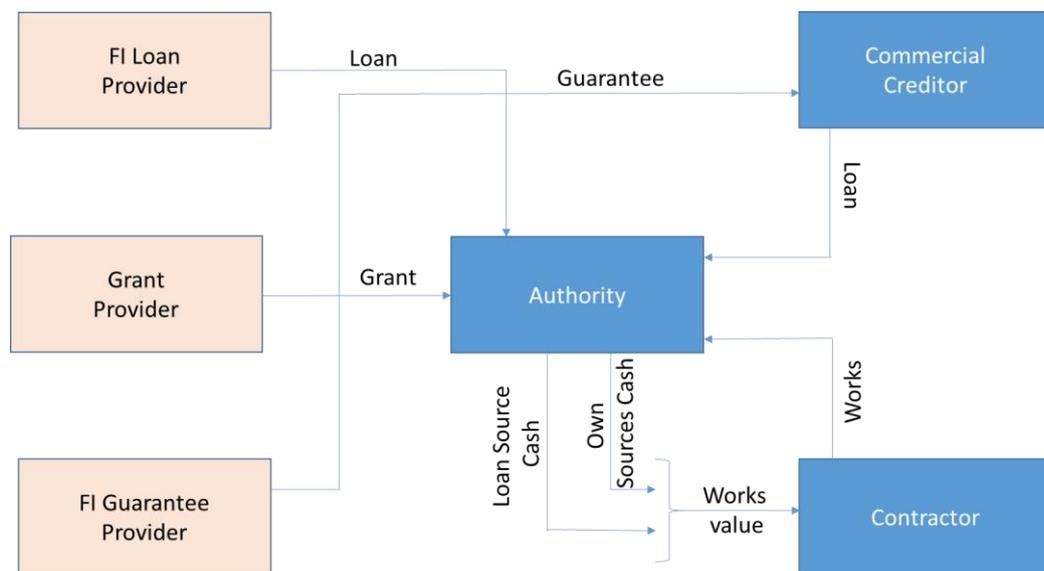
Ex-ante evaluation does not mention other, possible financial instruments such as guarantees. Particular attention is paid here to the possibility of creating a guarantee for the correct payment of fees when applying the ESCO model. A guarantee that would cover part of the payment obligation, even not in the total contract period, could significantly reduce the price of commercial sources of funding and, consequently, less need for grant grants.

6. Proposal on possible FIs in EE projects

6.1. Financial instruments in traditional procurement model

The structure of financial instruments will depend, apart from the project risks described in the previous chapter, and on the procurement model of energy efficiency project. The possible structure of the instruments in the case of the application of the traditional procurement model (TPM) is shown in Figure 7:

Figure 7: Possible FIs in TPM



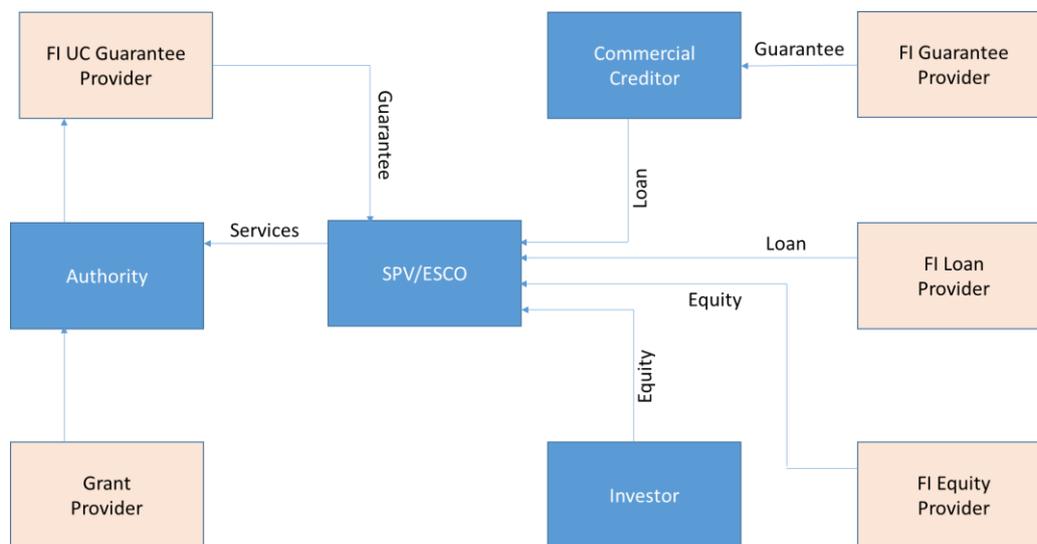
Source: Author

When applying the TPM, almost all financial instruments are linked to the customer in a way that he or she is using the loan (FI Loan) or issues a warrant for the granting of a guarantee to the creditor (FI Guarantee).

6.2. Financial instruments in alternative procurement model

However, when applying the ATM spectrum of possible instruments is significantly higher. The structure of possible financial instruments with regard to the beneficiary is shown in Figure 8:

Figure 8: Possible FIs in APM



Source: Author

In the case where an alternative procurement model (APM) is used for the procurement of energy efficiency, then there are instruments connected with the contracting authority and those that are used autonomously by the contractor or the creditor. Thus, for example, the contracting authority may, in addition to the grant, also use the Unitary Charge Guarantee (FI UC Guarantee), which guarantees ESCO that, if it supplies the contracted standard of savings, the contractor will pay the contracted energy service fee. On the other hand, on the side of the executor, there are possible guarantees for a fair refund of FI loans and FI Loan credits. Since the use of an alternative procurement model almost always connects with its own funding sources, the FI Equity instrument could be used in this case.

6.3. Institutions are in charge for implementing FIs

In the selection process of institutions responsible for allocating a particular type of financial

instrument, the following criteria should be followed:

- the institution has experience in dealing with a particular financial product;
- inactivity knows the specific risks of a project to which financial products are assigned;
- the institution has the reputation of a reliable manager;
- the institution may manage a financial statement in accordance with the CPR;
- the institution has an administrative capacity to perform tasks in terms of volume instruments.

In accordance with the above criteria, it would be possible to identify possible institutions responsible for the allocation of individual instruments in the present and future financial perspectives. Those are presented in Table 4:

Table 4: System of institutions responsible for the allocation of financial instruments

Financial instrument	Possible institutions in charge for managing the instrument
FI UC Guarantee	CBRD, MRDEUF
FI Loan	CBRD, Commercial banks
FI Guarantee	CBRD, HAMAG-BICRO, Commercial banks
FI Equity	Domestic private equity fund manager, EIF, International equity fund manager

Source: Author

Leading the principle that a financial instrument is a financial product that takes away specific project risks that commercial financing sources are not prone to take over, an important criterion in choosing the optimal institution is its knowledge and understanding of these specific project risks. In this way, the most efficient risks will be identified and quantified, and the characteristics of the financial instrument will be optimal. Also, the reputation (domestic and international) is of particular importance due to the trust of all instrument providers and final product recipients.

6.4. Comment and recommendations of possible models of procurement where FIs are involved

Energy efficiency projects can be provided by public and private (industrial and civil) contractors in two basic ways. The first is the traditional procurement model (TPM), the second being one of the alternative procurement models (APM).

The basic feature of the traditional procurement model is procurement of works, ie procurement of energy renovation works or public lighting systems. In this model, the contracting authority takes over part of the project's risk.

On the other hand, the basic feature of alternative procurement models is the provision of availability services. In energy efficiency projects the availability service is often equated with the energy savings service. However, it should be pointed out that, in practice, room availability services are somewhat broader than the energy savings service itself, as energy saving is often part of the overall standard of room availability. In this sense, space availability services can include the following standards: maintaining a certain temperature in the room, lighting levels, floor and wall conditions, the frequency of replacement of worn-out materials, energy consumption level, thermal characteristics of walls and windows, chemical-biological characteristics of the paint, bacterial properties of coatings, condition of equipment and the like. The most widely used models in practice energy efficiency projects are, depending on the countries in which they are implemented, the EPC contract and the public-private partnership. In addition to these two alternative models, Eurostat (Eurostat, 2017) also cites the operating lease model and buy-and-lease-back model. In the Republic of Croatia, the EPC model is used, while in a small number of cases (mainly public lighting) there is a public-private partnership model⁸.

With regard to the potential of using financial instruments, the procurement model may affect the type and choice of financial instruments. This difference stems from two main reasons: (i) TPM and APM differ from the risks assumed by sources of funding; and (ii) in the case of alternative purchasing models, an energy investor (energy savings provider) is expected to receive equity or junior debt. Namely, the general impression is that the credit risk of the

⁸ <http://www.aik-invest.hr/en/ppp/ppp-projects/>

client (here it is meant for public sector customers: municipalities, cities, counties, ministries or public companies) is less than ESCO credit risk. Of course, such a situation and risk perception will not be with the private and civilian contracting authorities who cite the traditional procurement model. Also, in the traditional procurement model, equity is not invested, whereas when applying alternative procurement models equity investment is mandatory because commercial financing sources will not take over the overall project risks.

A socially accountable and economically rational approach to the preparation and implementation of energy efficiency projects precedes the analysis of the justification of the application of a certain model of quotation and is therefore carried out on a regular basis in developed countries by the value analysis of money (VfM). The aim of this analysis was to determine, based on qualitative and quantitative criteria, which model would achieve the best value for taxpayers' money. In other words, it should be identified which model would achieve the lowest total cost of living.

It is also possible to create a guarantee financial instrument guaranteeing the payment of the energy service fee or availability when applying alternative purchasing procurement models and compensation from the contracting authority. Unrelated to financial instruments, part of the costs and risks that can not be recovered from grants and instruments will be required to be taken over by the contracting authority (public budget in public buildings or personal income in obituary buildings). Below are brief explanations of each of these financial instruments.

Since two financial instruments (equity and loan) have been proposed by ex-ante evaluation, it is proposed to consider further compensation guarantees (APM application) or annuity (when applying TPM) and payment guarantee for commercial credit in both APM and TPM.

7. Measures and activities

For the purpose of efficient, rapid and comprehensive preparation and implementation of the process of introducing financial instruments in the financing of energy efficiency projects, the following measures and activities are proposed:

MEASURE 1: Establishment of FIs on national levels

Within this measure, the scope of the energy efficiency market would be defined and the rules, structures and institutions - the holders of financial instrument allocation activities at the national level - would be defined. Also, the criteria for determining the exact structure and type of financial instruments in relation to the type of project being financed will be determined here.

ACTIVITY 1.1: Criteria for determining the FIs structure on the basis of the EE's legality projects

Within this activity, within Measure 1, criteria would be established on the basis of which a reliable, ie optimal structure of financial instruments for specific projects could be determined with regard to specific risks. In this sense, the types of projects could be divided into industry or sector (industrial buildings, tourist buildings, public buildings, family buildings, public lighting), geographic area (central Croatia, coastal Croatia) and the current state of the building resulting from energy audits . This makes it easier for the criteria to identify the specific risks that depend on the final structure of the total sources of funding. The result of this analysis would be a correction of the structure of possible sources of funding shown in Figure 6.

ACTIVITY 1.2: Defining methods for calculating grants and combining grants with financial instruments at the level of a concrete project

This activity logically adds to the previous one. After identifying the risks of the EE project, it is possible to identify (calculate) the required value of the grant with which, with financial instruments, the project could be sustainable in the long run. Also, within the framework of the implementation of this activity, the results of the EU project, which also set the procedures for combining grants with the ESCO model and financial instruments ("Instruments for Blending European Structural and Investment Funds with Public-Private Partnerships" IPA Allocation Instrument for Croatia: TF / HR-P2-M2-O6-1601).

*ACTIVITY 1.3: Update ex-ante evaluation with new instrument FI UC
Guarantee*

Existing ex-ante assessment of the application of FIs in energy efficiency market in Croatia covers only two proposed financial instruments: loans and equity. Given the imperative of further development of the ESCO market in the Republic of Croatia, it would be of great importance to supplement the existing ex-ante assessment with an additional instrument called Guarantee for regular payment of unitary charge in APM. The risk of charging claims based on the delivered savings service represents a market failure, which by removing significantly increased the likelihood of commercial lenders to finance EE projects delivered by APM (ESCO, EPC).

MEASURE 2: Establishment of platform and pipeline for concrete projects

Based on the activities undertaken under Measure 1, this project will be able to define project pipeline. It can be defined as one bigger pipeline at the level of all sectors (industry, family haus, public buildings, streetlighting), but also at the level of a particular sector. A good, transparent and politically supported pipeline is a prerequisite for quick and efficient implementation of projects, their funding and creating a positive climate for investing in EE projects in Croatia. The principles defined in this measure could be a good and especially needed practical example for pipeline design and for other sectors and projects (eg. education, health, urban transport and the like).

*AACTIVITY 2.1: Preparation of pipeline projects with revision of energy audits and
introducing a unique system for measuring actual consumption*

Implementation of this activity in combination with activities 1.1. is based on energy audits. Namely, the EE project implementation practice has shown that implementation of projects based on energy audits has been very unreliable. This is the case both in buildings and in public lighting. This problem is especially present if the project is delivered by APM. In such cases, contract preparation consultants (PPPs or EPCs) must periodically review and correct existing energy certificates. Also, the implementation of this activity encompasses the introduction of a unique system for measuring the actual consumption. An important

mediating effect is the measurement of the quality of the building (implemented measures of renovation) with regard to standardized energy consumption. The implementation of this effect can be further developed further through a new project.

ACTIVITY 2.2: Establishment of national and local EE investment platforms projects

Depending on the total value of potential projects as well as geographic structure, local community level (eg. county) could be defined by investment platforms to define predefined project groups, instructing structures and grants combinations, commercial sources of funding and investor groups and so on. This would significantly accelerate the implementation of EE projects at the local level.

8. Conclusion and final recommendations

The energy efficiency market is steadily growing, and given the final goals of a complete energy recovery of public buildings and public lighting, there is a high probability of further growth and development. In order for this growth to be institutionally backed up, it must accompany it with an adequate structure of financial instruments put at the disposal of public and private contractors, executives and financial institutions.

Given all the foregoing, in this subsection of the chapter, recommendations are given which acceptance and swift implementation could result in better use of financial instruments in the existing financial perspective, better preparation for the next financial perspective and faster, more efficient and effective growth of the EE market, especially that part refers to the application of an alternative procurement model, ie the ESCO market.

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ANNEX 1

EU legal framework

Source of financial instruments are ESI funds and member states - the ESI fund may be subdivided into the creation of financial instruments for which there is a market failure. Also, the same article in paragraph 2 stipulates that the creation of financial instruments is preceded by an ex-ante evaluation of the use of financial instruments (Article 37.2). Ex-ante assessment is an analysis of market failures, non-optimal investment situations and investment needs for policy areas and thematic objectives or investment priorities in order to achieve the specific objectives set out in the priorities, to provide financial support and assess the value-added of financial instruments that are considered to support ESI funds and the like. This analysis is based on the available methodology of good practice. An important part of Article 37 is the provision of paragraph 7, within which it is determined that financial instruments may be combined with grants, subsidized interest rates and subsidized guarantee fees. If ESI support is provided through financial instruments and combines in one operation with other forms of support directly linked to the same end recipients, including technical support, subsidized interest rates and subsidized guarantee fees, the provisions applicable to financial instruments apply to all forms of support within that operation. In such cases, the applicable EU State aid rules are respected and separate records must be kept for each form of aid. This provision is particularly important for the implementation of alternative

procurement models for energy efficiency projects where such projects are normally supported by more versatile sources of ESI funds as part of capital costs that can't be recovered from net income.

Furthermore, the provision of Article 38 sets out the ways in which financial instruments are implemented. In this sense, financial instruments may be designated by the European Union and by the national side, ie by the Member States.

Remaining articles, part of the CPR relating to the regulation of financial instruments, governs the procedure for managing and controlling the use of instruments, the role of the EIB, payment claims that include expenditure on financial instruments, transactions with escrow accounts, interest payments, re-use of financial instruments returned to the provider in the period of exploitation, supervision and the like.

In addition to CPR, the European Commission and other relevant institutions have also provided related documents detailing the process of preparing and dealing with financial instruments. These are various manuals and instructions on preparation of Ex-ante assessment, Guidance on Financial Instruments - Glossary, Guidance for Member States on Article 41 CPR - Request for Payment and Similar.

In addition to Regulation 1303/2013 relevant are the following regulations: Regulation (EU) No. 1304/2013 of 17 December 2013; Regulation (EU) No. 1305/2013 of 17 December 2013; Regulation (EU) No. 508/2014 of 15 May 2014; Commission Delegated Regulation (EU) No 480/2014 and Commission Implementing Regulation (EU) No 964/2014. Namely, the European Commission and other relevant institutions have provided documents - tary documents that will clarify the process of preparation and handling of financial instruments. These are various manuals and instructions on preparation of Ex-ante assessment⁹, Support to enterprises/working capital¹⁰, Guidance on Financial Instruments - Glossary¹¹, Guidance for Member States on Article 41 CPR - Request for Payment¹² and Similar.

With regard to the execution and implementation of financial instruments, provision 38.4 is important. Of Regulation 1303/2013 which decided that a Member State may implement (allocate) financial instruments:

⁹ http://ec.europa.eu/regional_policy/sources/thefunds/fin_inst/pdf/ex_ante_vol0.pdf

¹⁰ http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/guidance_support_enterprise.pdf

¹¹ http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/guidance_glossary.pdf

¹² http://ec.europa.eu/regional_policy/sources/thefunds/fin_inst/pdf/guidance_request_payment_en.pdf

- a) through a company established by the Member State by investing in capital;
- b) entrust the assignment to the European Investment Bank, the international financial institutions in which the Member State is a member of the body of public or private law;
- c) the granting of financial instruments to be carried out on an individual basis in the case of loans or guarantees.

It follows from the above that there is significant flexibility in adapting the Member States' specificities to the actual capacities and capabilities in the implementation of financial instruments. It is also important to note that the possible assignment of assignments of financial instruments to private entities should precede the procurement procedure. Thus, the implementation of financial instruments in the Republic of Croatia can be entrusted to those public and private entities that already have some experience in managing a particular form of financial product. Here, too, account should be taken of the specificity of energy efficiency projects with regard to the specific risks that are manifested differently in relation to other markets. With these risks, it is closely related to the professional profile of a potential provider of a particular financial instrument. For example, a guarantor of a due diligence obligation for a public contractor should have experience in assessing the budgets of municipalities, cities or counties. Furthermore, the Equity Provider should have experience in managing financial risk in order to evaluate the risk of equity investment in, for example, the ESCO company as well as experience in project management using project financing techniques that are not yet known in tighter projects in the field of energy efficiency.

EU most important platforms (initiatives) for EE financing and promoting

For a part related to greater incentives for funding sources to more actively participate in these projects, they relate to activities related to Smart Finance for Smart Buildings (SFSB). These activities are based on three pillars: (i) the development of financial instruments and business models aimed at more intensive involvement of the private sector and private financing; (ii) encouragement of project pipeline at the European Union level; and (iii) better understanding of risks and used in energy efficiency projects.

Within the first pillar (more efficient use of public resources and financial instrument development) several things wants to be achieved: greater volume of financial instruments use, increased efficiency of using different financial platforms (eg ESIF and EFSI),

combining them, creating tools for more efficient use of public funding sources, better understanding and intensifying use of EPC contracts more acceptable to public contracting and increasing visibility, presence in the public and better dissemination of knowledge and experience through the conference.

Within the second pillar (providing support for the development of EE projects), activities will focus on enhancing Project Development Assistant (PDA) initiatives through assistance from programs such as ELENA or EASME as well as development of one-stop shops for with developers in project preparation and implementation.

Within the framework of the third pillar (better understanding of the risks and benefits of EE projects) initiatives such as Deep Risking Energy Efficiency Platform (DEEP) have been launched, an open source database containing real performance data of more than 7,800 energy efficiency projects (Barglazan) as well as a toolkit on the value and risk assessment of energy efficiency investments.

Based on the recommendations, experiences, research and conclusions of SFSB it is concluded that efficient and effective preparation and implementation of energy efficiency projects should be covered by the following assumptions ie activities:

- (i) Identification of implemented and well-known projects (Croatian EE project pipeline in 2018-2020);
- (ii) Projects groupment - grouping multiple smaller projects into one procurement;
- (iii) Identification, quantification and potential allocation of key risks that reduce the financial viability of individual projects and prevent the private sector from becoming more intensive;
- (iv) Structuring the optimal portfolio of financial instruments with regard to identified and allocated risks;
- (v) Defining documentation (PD, EPC contract, financial model)
- (vi) Organizing workshops and seminars to support creditors and investors in procurement processes.

ANNEX 2

Financial instruments – initiatives and platforms

JESSICA

JESSICA¹³ is an acronym for Joint European Support for Sustainable Investment in City Areas, ie a joint initiative of the European Commission (EC), the European Investment Bank (EIB) and the Council of Europe Development Bank (CEB). The aim of this financial instrument is to provide support for sustainable urban development and renewal. Funding sources of this instrument come from the role of Member States from the European Structural Funds source. This fund further generates back-end financial instruments for financing specific urban projects of beneficiaries. One of the areas where the instruments are directed is also the sector of energy efficiency. Other areas where these instruments can be utilized are: urban infrastructure, cultural heritage, renovation of abandoned industrial sites, university buildings and the like.

One of the major potentials of this financial instrument is the potential of partnership.

¹³ http://ec.europa.eu/regional_policy/hr/funding/special-support-instruments/jessica

Namely, since JESSICA is a joint instrument of the European Commission, the EIB and the CEB, it can act as a powerful connecting factor for the countries, regions, cities, sources of finance and investors, by which the concrete problem of urban destination is simpler and articulate the project.

URBIS

URBIS is a new instrument that at the level of city projects could be of great assistance in speeding up the process of preparation and implementation of projects, especially in the concept of smart cities. It is also possible to conclude that this instrument is directly related to increasing the competitiveness of the local self-government unit not only in Croatian but also in the European market. The purpose of the instrument is to provide more efficient and integrated implementation of existing aid instruments with a view to better project preparation and faster implementation. In order to achieve this goal, the activities will be carried out within the framework of the existing European Investment Advisory Hub (EIAH) instrument as a roofing form of technical assistance under the Europe Investment Plan, within three activity groups: information on existing assistance programs for cities in preparation and implementation of city projects, city councils in project preparation and implementation, and assistance in finding innovative financing models for project implementation.

The first goal of the URBIS program is to raise awareness, ie to disseminate information on existing EU initiatives and programs, regulations, knowledge and funding opportunities, and support schemes. The aim is to increase the networking of cities in order to share the acquired experience and knowledge in order to prepare and implement urban projects as soon as possible and with greater efficiency. The central point of information is the One-Stop-Shop for Cities portal, which covers a whole range of topics such as the Urban Agenda for the EU, city initiatives, sharing experiences and best practices, financing city projects divided into different areas and so on. For the purpose of further dissemination of information on initiatives and programs, URBIS will use existing programs already mentioned.

Within the advisory activities, URBIS can help to improve and improve the strategies developed, defining project implementation priorities, optimizing the public projects plan for achieving set strategic goals, assessing the quality of defined project pipelines, and analyzing investment options , an estimate of the optimum procurement model of the project, mostly based on the contemporary value-for-money analysis. Also, the counseling can include technical analysis of individual projects and defining the project cycle, and generally

increasing the quality of the prepared projects ready for market offerings, ie, for the procurement process, the revision of the estimates of the overall life costs of the project etc. In the part related to economic- financial analysis, URBIS can be used to estimate the investment gap as the size required for co-financing or financing from the range of financial instruments and the European Investment Funds Fund (EFSI). Although the URBIS instrument does not imply making a grant application, it is likely that auditing the already prepared application will be possible, as well as assessing the quality of the overall project documentation.

Within the area of finding a model of innovative urban investment financing, URBIS can help find different sources of funding and combine them (for example, combining non-refundable co-financing from ESIF with EFSI guarantees, ie with its own EIB sources) Code finding optimal financing and cofinancing options, in addition to consulting on wider investment platforms, it is possible to have a tailor-made approach to funding analysis of individual projects, especially from EFSI sources. There is a particularly interesting dimension of finding those financing options that could reduce the burden on city debt. Of course, here attention is directed to the so-called. alternative procurement models city-based projects such as buy-and-lease back or operational leasing in energy efficiency projects, and the use of a public-private partnership model or concession for other economic (city rail or bus infrastructure, cableways, drainage and waste water treatment, recycling yard, etc.) or social projects (schools, health facilities, police and fire stations, security and surveillance systems, flood protection and the like).

However, the EIB and the Commission also emphasize services and activities within the overall preparation and implementation of projects, but not covered by the URBIS instrument. Such activities should be done by the local self-government units in-house or by outsourcing. These activities represent the necessary activities or tasks for the ultimate success of the URBIS instrument implementation, ie a project or group of projects. These are mostly activities that deeper, more detailed and comprehensively tackle the preparation of urban projects in order to achieve, together with the URBIS instrument, a complete, faster and more successful preparation and implementation of city projects.

These are activities such as:

- 1) Development of initial strategic development plans;
- 2) Developing complete studies on the feasibility study;
- 3) Development of studies on environmental impact;

- 4) Creating applications for grants;
- 5) Final selection of sources and funding of individual projects;
- 6) Counseling in Procurement of Goods and Services;
- 7) Preparation of ex-ante evaluation for the purpose of the need for financial instruments;
- 8) Counseling in procurement procedures for specific projects and legal services;
- 9) Interpretation of regulations governing the implementation of the ESIF program.

From this it is concluded that the purpose of the URBIS instrument is not the complete preparation of urban projects, but the support and assistance to local government units in optimizing the structuring of projects, their integration into a larger project (one procurement of several projects), the increase of the visibility of market-mature projects and the increase of funding sources tendency in the final financing of project implementation.

Urban development Network

The Urban Development Network¹⁴ is network of more than 500 urban areas across the European Union. Initiative is responsible for implementing integrated actions based on Sustainable Urban Development strategies financed by ERDF in the 2014-2020 period. The main aims are review how to implement European funds in urban projects, support information exchange among European urban entities and promote dialogue between European commission and urban entities on Sustainable Urban Development. An urban development network (UDN) is responsible for reviewing on-the-ground deployment of European funds and boosting knowledge-sharing between cities involved in integrated sustainable urban development and in Urban Innovative Actions¹⁵.

JASPERS

JASPERS (Joint Assistance to Support Projects in European Regions) is an financial instrument or technical assistance partnership between European Commission EC), European

¹⁴ http://ec.europa.eu/regional_policy/en/policy/themes/urban-development/network/

¹⁵ http://ec.europa.eu/regional_policy/en/policy/themes/urban-development/

Investment Bank (EIB) and European Bank for Reconstruction and Development (EBRD) that provides independent advice to beneficiary countries to help prepare high quality major projects to be co-financed by two EU Structural and Investment Funds (European Regional Development Fund and Cohesion Fund)¹⁶. It covers few areas as: project preparation support, from identification to submission of the request for EU grant finance, independent quality review of projects, post-submission appraisal function for all major projects submitted directly to the EC, horizontal assignments and strategic support, capacity building, including a competence centre, implementation support Connecting Europe Facility projects, mainly in the rail and road sectors and European Investment Advisory Hub (EIAH) through the screening and handling of requests. There is also the JASPERS Networking Platform who is created as complement JASPERS project advisory operations by implementing knowledge sharing and targeted capacity building activities, as well as fostering dissemination of good practices and exchange of experiences among JASPERS Stakeholders.

In energy efficiency area, JASPERS supports Managing authorities and line ministries in identification and development of energy efficiency projects and programmes in 2014-2020.

URBACT

The URBACT programme, which acts as a European exchange and learning programme promoting sustainable urban development, has been financially strengthened and expanded, enabling European cities to work together to develop better solutions to urban challenges. URBACT is a European territorial cooperation programme, cofinanced by the European Regional Development Fund (ERDF), in partnership with Member and Partner States since 2002. URBACT is made of 24 ongoing networks gathering about 200 cities and more than 2000 local stakeholders working actively to develop and implement participatory and integrated policies at local level.

URBACT is actively seeking concrete solutions to the six interlinked challenges that rank high

on the agenda of European cities: shrinking cities, more jobs for better cities, supporting young people through social innovation, divided cities, motivating mobility mind-sets, building energy efficiency (Lewis at al. 2013). The main reason and aim to exist this instruments is that relative to almost all other investments, energy efficiency retrofit –

¹⁶ http://ec.europa.eu/regional_policy/en/funding/special-support-instruments/jaspers/

installing newer energy efficiency technologies in older buildings – cost-effectively creates more distributed jobs and enhances economic activity, reduces costs for businesses and households of all income levels, reduces emissions and improves energy security.

URBACT projects focus on key urban issues: they enable cities and other public authorities to exchange experiences, identify good practices, build new local policies, and draw conclusions which they can then disseminate to urban policy-makers and practitioners. While focused on particular themes, projects can frequently offer insights and practical knowledge relevant to other themes and issues.

Covenant of Mayors

The EU Covenant of Mayors for Climate & Energy brings together thousands of local governments voluntarily committed to implementing EU climate and energy objectives¹⁷. It was launched in 2008 in Europe with the ambition to gather local governments voluntarily committed to achieving and exceeding the EU climate and energy targets. Not only did the initiative introduce a first-of-its-kind bottom-up approach to energy and climate action, but its success quickly went beyond expectations. The initiative now gathers 7,000+ local and regional authorities across 57 countries drawing on the strengths of a worldwide multi-stakeholder movement and the technical and methodological support offered by dedicated offices.

The Global Covenant of Mayors is capitalising on the experience gained over the past eight years in Europe and beyond, and is building upon the key success factors of the initiative: its bottom-up governance, its multi-level cooperation model and its context-driven framework for action.

This financial instrument could be especially useful in area of retrofit the private households. Namely, traditionally, to pay for the renovation, homeowners can either use their own savings or apply for a bank loan. Recently, in some parts of Europe, local and regional authorities have set up innovative third party financing operators or funds to facilitate access to financing, especially to low and medium income households. However, banks remain key

¹⁷ <http://www.covenantofmayors.eu/about/covenant-initiative/origins-and-development.html>

partners for local authorities with ambitious housing energy renovation programmes - their financial sources are 'unlimited', they have direct contact with homeowners and construction sector businesses who are their clients and they might have interest to support real green economy development at local level¹⁸.

CEMR

CEMR (Council of European Municipalities and Regions) is the umbrella organisation gathering 53 national associations of local and regional governments in almost 40 European countries. CEMR's members represent local and regional authorities in both urban and rural areas. CEMR has been working on the issue of energy for a long time and was involved in several EU projects on energy. Thus, it is currently involved in the Covenant of Mayors' Office.

ICLEI

ICLEI - Local Governments for Sustainability is the leading global network of more than 1,500 cities, towns and regions committed to building a sustainable future. It is focused to sustainable, low-carbon, resilient, ecomobile, biodiverse, resource-efficient and productive, healthy and happy, with a green economy and smart infrastructure. ICLEI is working also in question of smart and innovative financing of energy projects in cities especially on green bonds. The green bond market can offer much needed access to low-cost capital for cities in emerging countries to finance climate friendly infrastructure. Green bond markets offer local authority access to low-cost capital to meet their infrastructure and climate investment needs¹⁹.

fi-kompass

fi-compass is a platform for advisory services on financial instruments under the European Structural and Investment funds (ESIF) and microfinance under the Programme for Employment and Social Innovation (EaSI). It is provided by the European Commission in

¹⁸ <http://www.covenantofmayors.eu/news-and-events/events/upcoming-events/1898-covenant-of-mayors-webinar-financing-the-energy-renovation-of-housing-how-to-get-banks-on-board.html>

¹⁹ http://www.iclei.org/fileadmin/user_upload/ICLEI_WS/Documents/160825_Flyer_Green_Bonds_for_Cities_LR__2_.pdf

partnership with the European Investment Bank. fi-compass is designed to support ESIF managing authorities, EaSI microfinance providers and other interested parties, by providing practical know-how and learning tools on financial instruments. These will include “how-to” manuals, factsheets for quick reference, e-learning modules, face-to-face training seminars and networking events²⁰. The main reason to establish fi-compass is that financial instruments, co-funded by the European Structural and Investment Funds (ESIF), could be an efficient way to invest in the growth and development of people and businesses across the EU. They are set-up by Member States and regions to invest available ESIF funding through financial products such as loans, guarantees, equity and other risk-bearing mechanisms that support projects on the ground.

ELENA

ELENA (European Local Energy Assistance) is a joint initiative by the European Investment Bank (EIB) and the European Commission (EC) under the Horizon 2020 programme. ELENA provides grants for technical assistance focused on the implementation of energy efficiency, distributed renewable energy and urban transport projects and programmes²¹.

The grant can be used to finance costs related to feasibility and market studies, programme structuring, business plans, energy audits and financial structuring, as well as to the preparation of tendering procedures, contractual arrangements and project implementation units. It supports programmes above EUR 30 million with a 3-year implementation period for energy efficiency and 4-year for urban transport and mobility, and can cover up to 90% of technical assistance/project development costs. Smaller projects can be supported when they are integrated into larger investment programmes. The annual grant budget is currently around EUR 20 million. Projects are evaluated and grants allocated on a first-come-first-served basis.

Such a demand is particularly important for energy efficiency projects in the Republic of Croatia and it is of great importance to support the spread of the culture of associating several smaller projects into one larger one. An example of good practice can be found in the Energy Efficiency Project (Newlight), which is lead by the Regional Energy Agency of Northwestern Croatia (REGEA)²².

²⁰ <https://www.fi-compass.eu/>

²¹ <http://www.eib.org/products/advising/elena/index.htm>

²² <http://www.regea.org/vijesti/stigao-ugovor,-po%C4%8Dinje-veliki-posao!.html>

