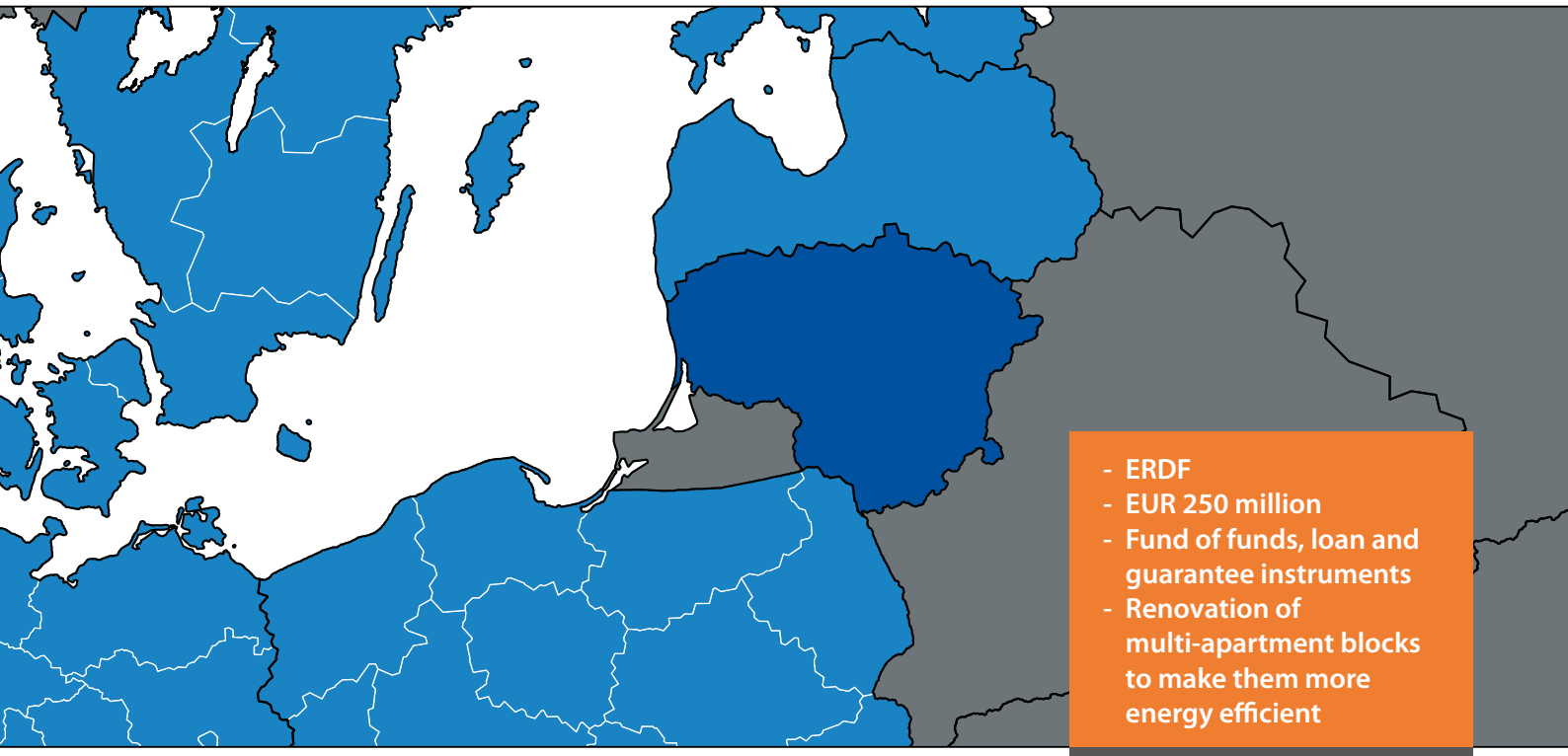


Residential energy efficiency financial instruments in Lithuania

Case Study

European Commission

European Investment Bank The EU bank

DISCLAIMER

Abbreviations

Abbreviation	Full name
BETA	VšĮ 'Būsto energijos taupymo agentūra' (Housing and Energy Saving Agency)
CPO	Central Procurement Office
CPR	Common Provision Regulation
CPVA	VšĮ 'Centrinė projektų valdymo agentūra' (Central Project Management Agency)
DNMF	Daugiabučių namų modernizavimo fondas (Multi-Apartment Buildings Modernisation Fund
EC	European Commission
ECJ	European Court of Justice
EIB	European Investment Bank
ELENA	European Local ENergy Assistance
ERDF	European Regional Development Fund
ESIF	European Structural and Investment Funds
EU	European Union
FA	Funding Agreement
HF	Holding Fund
IB	Intermediate Body
IFI	International Financial Institutions
JESSICA	Joint European Support for Sustainable Investment in City Areas
MA	Managing Authority
NECP	National Energy and Climate Plan
OP	Operational Programme
VIPA	UAB 'Viešųjų investicijų plėtros agentūra' (Public Investment Development Agency)

Table of contents

1. Residential energy efficiency financial instruments in Lithuania

1.1 Executive Summary

The **Jessica II fund of funds** was set up by Lithuania's Ministry of Finance and Ministry of Environment early in the ERDF 2014-2020 programming period **to fund loans** to support investment in energy efficiency in apartment block buildings in Lithuania. It followed the successful implementation of financial instruments in the sector during the previous programming period under the **JESSICA** initiative. The financial instruments have supported the development of a single product for homeowners known as the 'Modernisation Loan' which forms the centrepiece of the Lithuanian government's programme to improve energy efficiency in residential properties. The Modernisation Loan programme is also supported by a programme of capital and technical assistance grants and a 'one stop shop' service arrangement that has been key to the successful delivery of the financial instrument.

The success of these initial loan financial instruments has led to the subsequent development, during the period, of the **Lithuanian Leveraged Fund**, with **loan and guarantee instruments** that use ERDF and aim to attract even more financial support from banks and a number of International Financial Institutions (IFIs), including the European Investment Bank (EIB).

Table 1: Main characteristics of residential energy efficiency financial instruments in Lithuania

Funding sources

Almost EUR 1 billion of funding made up of EUR 250 million ERDF resources from the Operational Programme for EU Structural Funds Investments for 2014-2020 and up to EUR 705 million co-investment from financial intermediaries and third party investors.

Type of financial products

Loans and guarantees.

Thematic focus

Supporting the shift towards a low-carbon economy in all sectors (Thematic Objective (TO) 4)

Timing of implementation

2015-2023

Partners involved

Managing authority
Ministry of Finance of the Republic of Lithuania
Implementing authority
Ministry of Environment of the Republic of Lithuania
International Financial Institutions
European Investment Bank (EIB)
Other entities
VšĮ 'Būsto energijos taupymo agentūra' (Housing and Energy Saving Agency) (BETA)
Other governmental agencies responsible for implementing the programme
Financial intermediary
AB 'Šiaulių bankas'

The financial instruments support investment in energy efficiency in **privately owned multi-block housing apartments**, which make up approximately 66% of the housing in Lithuania. Built before 1993, the apartments are characterised by low energy efficiency standards compared to more modern housing types. Thus the improvement of the energy performance of these buildings provides significant potential to improve energy efficiency in the country's housing sector as well as delivering improved standards of living for residents.

The fund of funds, managed by the EIB, aims to mobilise through banks and IFIs more than EUR 700 million of private finance to invest in measures to improve the energy efficiency of privately owned apartment blocks in the country.

Capitalising on the experience of the JESSICA initiative in the 2007-2013 programming period, the managing authority, together with the Ministry of Environment, were able to make a quick start with the financial instrument in 2014, and ensure a smooth transition from the previous period and instruments. Following completion of the ex-ante assessment in November 2014, the 'Jessica II fund of funds' was **set up in May 2015**, running a selection process for intermediaries and signing the first funding agreement with a financial intermediary in August 2015.

The implementation of the 'Lithuanian Leveraged Fund' guarantee instrument followed after a first update of the ex-ante assessment in 2016. The first loans backed by this guarantee fund were made in mid-2019. Another review of the ex-ante assessment, carried out in June 2019, led to the establishment of an investment platform within the Lithuanian Leveraged Fund. This has been designed to attract private investment through a layered structure implemented through a selected financial intermediary. The first loans backed by the investment platform are expected to be issued in 2021.

The financial instruments provide residents with **low cost, long term, low interest loans**. No deposit or collateral is required to be provided by the borrower. The works undertaken typically include the replacement of doors and windows, exterior cladding of the building and installation of new more efficient heating systems. The renovation work is carried out on all units within an apartment block at the same time and the government has implemented a specific legal framework to facilitate the coordination of this work with the provision of loans to individual residents or administrators of the apartment blocks. A government agency under the Ministry of Environment - the Housing Energy Efficiency Agency (BETA) - has been given the responsibility to manage the process and provides also grant support linked to the improvements in energy usage.

The success of the energy efficiency financial instruments in Lithuania can largely be attributed to the fact that they are implemented in **combination with grants,** both in the form of technical assistance, interest rate subsidies and (mostly from non-ESIF resources) as capital rebates. As well as supporting awareness raising, grants funded by ERDF and national resources are made available to meet project preparation and project administration costs incurred by and on behalf of project promoters and to meet the cost of energy audits and energy certificates in relation to projects supported by the financial instruments. Interest rate subsidies help reduce the cost of borrowings for households, and capital rebates funded from national resources are provided also to reduce the overall cost of the renovation works. An additional capital rebate is also made available to incentivise home owners to maximise energy savings, allowing the capital rebate amount to be increased where specified higher energy efficiency targets are achieved.

1.2 Key components of the residential energy efficiency financial instruments in Lithuania

ERDF operational programme resources have been successfully used to establish **loan and guarantee** financial instruments to support energy efficiency improvements to apartment blocks in Lithuania. The **guarantee instrument,** in particular**,** has secured significant additional leverage of private sector finance (by a multiple of five). The **investment platform** being established as part of the Lithuanian Leveraged Fund is also expected to secure significant additional leverage in the future. The financial instruments are implemented through **local banks with a strong presence in the community** allowing for the instruments to be well established and understood in the market as the flagship funding mechanism for works of this nature.

The financial instruments support the Modernisation Loan programme which provides **low interest loans with a long duration** to final recipients, without the need for collateral. An **integrated project delivery process** has been established which allows residents of a single block (i.e. the final recipients), working through their building administrators, to receive **support from the government agency BETA** to prepare their renovation project. This leads in turn to the works being delivered in a single package for the whole building, with the **contractor receiving payment directly from the financial intermediary** on behalf of all final recipients. The legal and technical support provided to facilitate this process has been a key contributor in the development of a robust pipeline of investment ready projects.

The use of **grants in combination with the financial instruments** has also made an important contribution to the success of the scheme. ERDF grants have been made available through a separate operation implemented alongside the financial instrument to support the **preparation of the project, including technical advice and energy audit work**. A separately administered non-ERDF, grant programme effectively provides **capital rebates** to incentivise the delivery of projects which meet defined energy performance targets. These grants are paid directly to the banks by BETA, so that they can be applied as loan prepayments.

Throughout the implementation of the financial instruments the managing authority, the Ministry of Environment and the EIB as fund of funds manager, have worked in close partnership with the government agency BETA and municipalities to **proactively identify and overcome barriers** to the delivery of the programme of investment. A good example of this is the approach taken to ensure that **State aid compliance** was embedded in the delivery process with appropriate measures put in place to allow BETA to administer the State aid register for the amounts of aid provided.

Kosmonautų St. 2, Marijampolė

Renovation Project of the Year 2019

Year of construction: 1993

Number of apartments: 54

Heating, kWh/m², (before and after): 140.19 and 27.71

Decrease in CO2 emissions: 94.67 t/year

Energy efficiency class, (before and after): 'E' and 'B'

Investment cost per m2 before subsidy: EUR 262

Renovation of this apartment building includes both the main energy-saving measures (insulated walls and roof, replaced windows, glazed balconies, changed heating system, etc.) but also additional energy solutions - geothermal and solar heating system, which allows for the achievement of high energy saving output indicators. The project is in the city of Marijampolė which has the potential to become the 'renovation capital' of Lithuania with over 10% of buildings already renovated.

2. Design of the financial instruments

2.1 Context

Lithuania is one of the Baltic States located in north-eastern Europe and borders with Latvia, Belarus, Poland and the Russian territory Kaliningrad. With a population of approximately 2.8 million, the most important sectors of Lithuania's economy in 2018 were wholesale and retail trade, transport, accommodation and food services (32.2%), industry (21.9%) and public administration, defence, education, human health and social work activities (14.3%)[1].

Energy efficiency plays an important role in Lithuania's National Energy and Climate Plan (NECP). The energy intensity of the economy is significantly higher than the average in the EU. Lithuania is also highly dependent on gas and petroleum imports from Russia, which presents a challenge to the country's energy security and trade balance. Energy consumption by households is also significantly above the EU average.

Modernisation of multi-apartment and public buildings is one of the two priority areas identified by the NECP in order to help save 5-6 TWh of energy by 2030. In line with the European Green Deal and Renovation Wave, a refurbished and improved building stock in Lithuania is considered vital for the transition to a decarbonised and clean energy system.

The Lithuanian multi-fund Operational Programme (OP) for the 2014-2020 ESIF programming period includes energy security as a key priority alongside supporting economic development and tackling social exclusion. Almost 15% of the OP has been allocated to TO4, to support the shift to a low-carbon economy, financing a range of interventions in public infrastructure and buildings as well as the financial instruments for energy efficiency in privately owned apartment blocks.

2.2 The JESSICA initiative in Lithuania

The experience in Lithuania with ERDF financial instruments during the 2007-2013 programming period paved the way for a more ambitious fund of funds set up in the 2014-2020 period. In 2010 the managing authority entrusted EIB to set up financial instruments under the JESSICA initiative[2], committing EUR 137.7 million of ERDF and national public co-financing of EUR 35.7 million. The EIB, in its role as 'holding fund'[3] manager appointed four financial intermediaries to mobilise loan investments to improve energy efficiency in apartment blocks and student dormitories.

The financial instruments ultimately proved to be highly successful with demand for loans significantly exceeding supply and all funds were disbursed during the implementation period. However, initially several barriers had to be addressed in order to develop a robust project pipeline. A number of important lessons were learnt during this period which helped inform the development of design of the subsequent Jessica II fund of funds and the Lithuanian Leveraged Fund financial instruments.

1 https://europa.eu/european-union/about-eu/countries/member-countries/lithuania_en
2 JESSICA: Joint European Support for Sustainable Investment in City Areas.
3 The term used in the 2007-2013 period for a fund of funds.

For example, a government subsidised heating bill compensation scheme, that helped cover the cost of heating meant that many low-income residents did not have a financial incentive to undertake energy efficiency works. The restructuring of this scheme was a key factor in incentivising renovation works and unlocking demand for the financial instruments to improve the energy efficiency of the residential blocks. Another important lesson learnt was the role and significance of municipalities in the identification and development of a robust pipeline of projects for investment.

At the end of the programming period, the financial instruments had financed the renovation of more than 1 000 buildings across Lithuania's 60 municipalities. A total investment of approximately EUR 275 million was eventually mobilised through the initial ERDF programme contribution of EUR 173 million, including EUR 80 million of co-investment from the financial intermediaries' own funds and EUR 22 million of financial instrument reflows that were reinvested within the period. This provided the managing authority with a strong base from which to create successor financial instruments, to maintain and enhance the financing available to support further renovation.

2.3 Ex-ante assessment

The financing gap and investment needs for the residential energy efficiency sector was considered as part of a wider ex-ante assessment that also included within its scope street lighting and buildings owned by central government and municipalities.

The ex-ante assessment was conducted in two stages. The first stage was a study aimed at evaluating the continuity of the JESSICA financial instruments, which was completed in May 2014. This study was conducted by EIB advisory services under the direction of the managing authority. The second phase was carried out by the managing authority in the close co-operation with the Lithuanian Public Investment Development Agency (VIPA).

The investment needs for apartment blocks was estimated in the ex-ante assessment to be in the region of EUR 1.35 billion. As the ERDF resources allocated to the programme totalled EUR 314 million, the ex-ante assessment identified the importance of leveraging more private finance in order to scale-up investment in the sector to meet these needs. In addition the ex-ante assessment identified several non-financial barriers to investment and the need for grant support combinations to maximise the impact of the financial instruments. Upon completion of the ex-ante assessment in November 2014, the managing authority moved quickly to set up **the Jessica II fund of funds,** again with EIB**,** as well as separately implementing measures to support investment in public infrastructure and buildings.

The ex-ante assessment has been reviewed and updated twice during the 2013-2020 period in order to support the subsequent development of the Lithuanian Leveraged Fund. The first review was completed in 2016 and identified the potential for a guarantee instrument to mobilise significant private investment, from banks, into the sector. This led to the creation of the Lithuanian Leveraged Fund as a **guarantee financial instrument**. A further review in 2019 reflected on the experiences to date of the implementation of the guarantee instrument and recommended the creation of a further financial instrument - **the investment platform** - within the Lithuanian Leveraged Fund to provide an alternative financing model to crowd in public and private investment to support the Modernisation Loan programme.

2.4 The Jessica II fund of funds

The Jessica II fund of funds was conceived as a financial instrument that could be implemented quickly to maintain the supply of finance to meet the demand built up from the previous programming period. In order to ensure there was no gap in the flow of funding the managing authority also implemented a transitional financial instrument, known as the Multi-apartment Building Modernisation Fund (DNMF), managed by VIPA.

The EIB was entrusted to act as the fund of funds manager of the Jessica II financial instruments in May 2015. Following a competitive selection process the financial institution, AB Šiaulių bankas, was appointed to act as financial intermediary.

A key requirement of the selection process was the ability of the financial intermediary to commit its own resources alongside the ERDF programme resources contributed by the fund of funds. A minimum leverage of two was expected with the financial intermediary at least matching the ERDF investment in each project.

Under their proposal Šiaulių bankas demonstrated both a strong local presence in the market, with customer service points situated in residential areas across the country and the capacity to contribute significant co-investment from its own resources. Following a successful participation in the JESSICA financial instruments in the previous programming period, Šiaulių bankas had developed a good understanding of the market, including the likely demand and opportunities created under the programme.

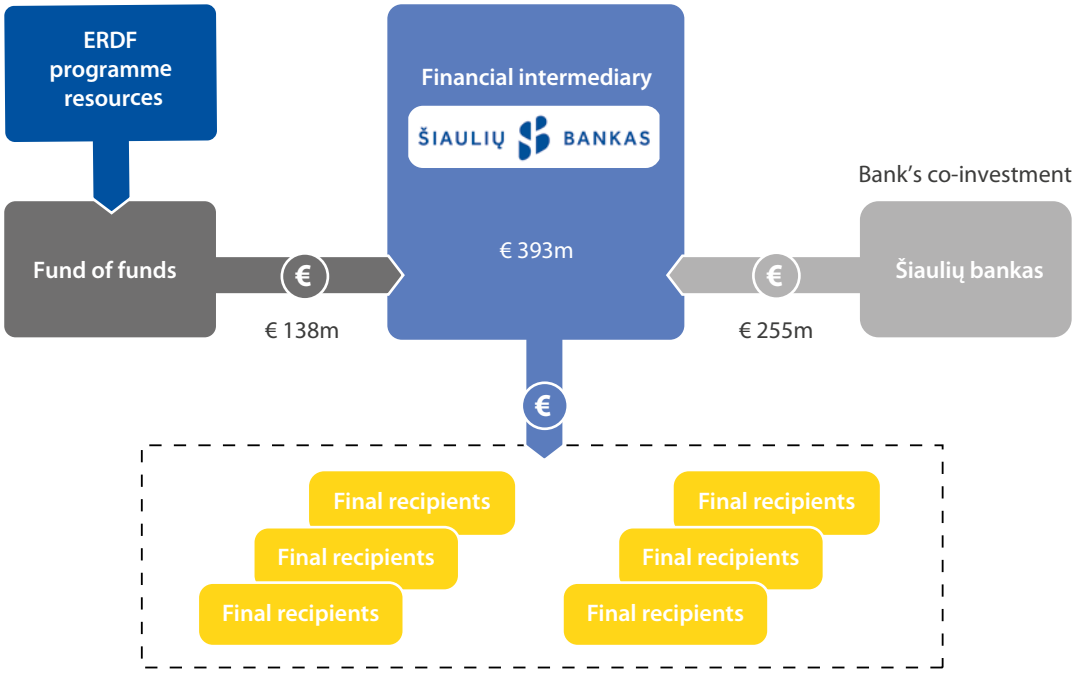
Šiaulių bankas

ŠIAULIŲ BANKAS

Šiaulių bankas is the largest domestic bank, a steadily and consistently growing financial partner, paying special attention to business financing and consumer financing solutions. Šiaulių bankas serves its clients in 60 client service units in 37 cities and towns throughout Lithuania. The Bank was established in 1992. Šiaulių bankas Group includes subsidiaries, which operate in the fields of leasing, life insurance and real estate.

Following two selection rounds, two agreements totalling EUR 138 million of ERDF was committed by the fund of funds, complemented by a commitment by Šiaulių bankas to contribute a further EUR 255 million of its own resources. The structure of the financial instrument is shown at Figure 1.

Figure 1: the Jessica II fund of funds



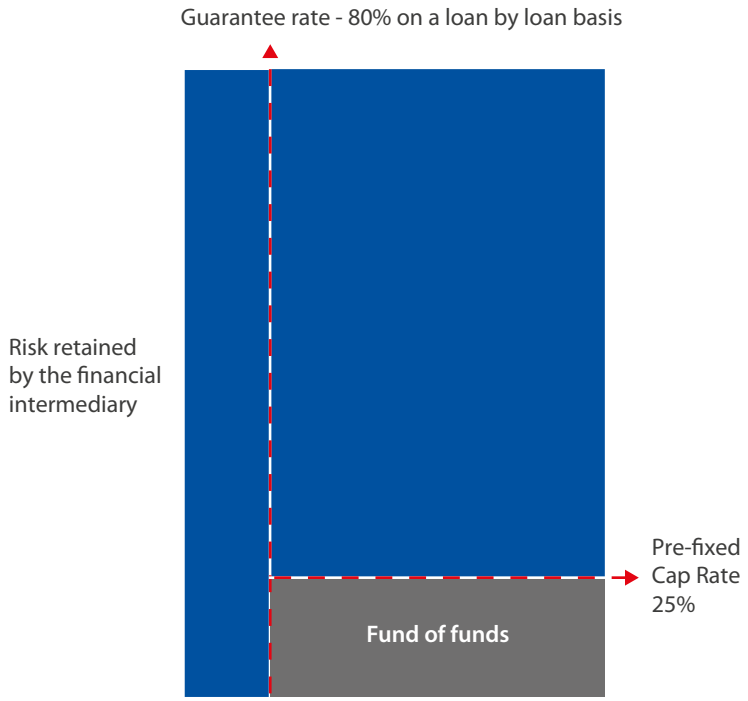
2.5 The Lithuanian Leveraged Fund

The Lithuanian Leveraged Fund comprises two ERDF backed financial instruments that achieve greater leverage of private resources, through the use of guarantees and layered structures. Its development reflects the growing maturity of the market for energy efficiency investment in Lithuania, which is now better understood by financial intermediaries who are more willing to commit more of their own financing resources in support of renovation investment. The managing authority and the Ministry of Environment committed a further EUR 100 million to the EIB to implement the Lithuanian Leveraged Fund and two financial instruments have been developed from this - a **guarantee instrument** and an **investment platform**.

2.5.1 Guarantee Instrument

The potential to use guarantee instruments was identified following the first review of the ex-ante assessment in early 2016.The structure of the Lithuanian Leveraged Fund first loss portfolio guarantee instrument is shown in Figure 2.

Figure 2: the Lithuanian Leveraged Fund first loss portfolio guarantee



Feedback received from the financial intermediaries during the market testing was taken into account when developing a detailed product term sheet. The first-loss portfolio guarantee covers 80% of the losses incurred by participating banks in respect of each defaulted Modernisation Loans, and up to a maximum amount of cumulative losses across the portfolio of Modernisation Loans at 25%.

This instrument has been running since December 2018, following a competitive selection process after which an operational agreement with Šiaulių bankas was signed. Although the instrument was designed to attract several financial intermediaries, the competitive process and associated market engagement identified that some banks in the market lacked the capacity required under the guarantee scheme, to act both as providers and as distributers of the funds. This deficiency eventually led to the development of the investment platform model (outlined below). In the meantime, lending commenced under the guarantee instrument in 2019, supporting the continued roll out of the Modernisation Loan programme. As at September 2020, approximately EUR 40 million had been committed (25% of the instrument) of which EUR 20 million had been disbursed.

2.5.2 Investment Platform

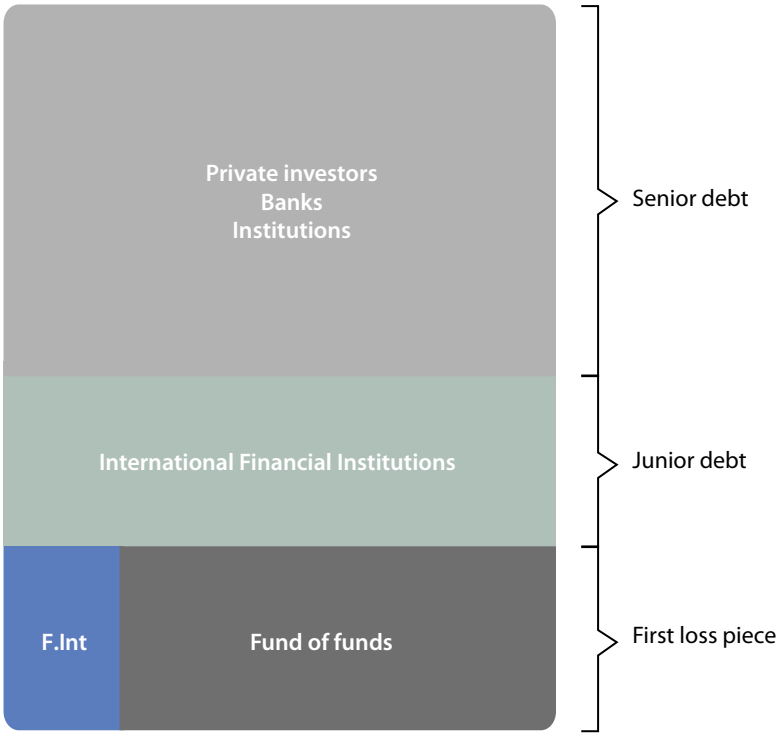
In view of the limitations of capacity in the market to support the guarantee instrument at this stage, a second review of the ex-ante assessment, carried out in 2019, identified the potential to develop an investment platform with a layered structure that would allow private investors the opportunity to contribute lower risk, and therefore more affordably priced, senior debt to the platform, with the protection of a first loss piece made up of ERDF resources and co-financing by the financial intermediary.

The structure is designed principally to attract several new public and private investors to the market, allowing them to provide finance within a structure that benefits from the expertise of a specialist financial intermediary in originating and managing Modernisation Loans.

The structure of the investment platform is shown at Figure 3. It shows how the layered investment platform is made up of different tranches as follows:

- the **first-loss piece** made up of contributions from ERDF and the financial intermediary (on pari passu terms). This tranche has the highest risk level since all the defaults in the underlying Modernisation Loan portfolio would first result in losses for this layer of funding;
- the **junior debt** (e.g. from International Financial Institutions). This is a lower risk layer but acts as a further credit enhancement protection for the senior debt layer; and
- the **senior debt** (e.g. from commercial banks). The lowest risk layer since any losses would only be incurred in the relatively unlikely event that the defaults in the Modernisation Loan portfolio exceeded both the first-loss piece and junior debt layers.

Figure 3: the Lithuanian Leveraged Fund investment platform



The investment platform is expected to become established in 2021, following completion of the operational agreement with the selected financial intermediary.

2.6 Timetable for set-up and implementation

The steps taken to implement the financial instruments are described in Table 2.

Table 2: Timeline of implementation of the residential energy efficiency financial instruments in Lithuania

Time period	Actions taken
November 2014	Approval of ex-ante assessment
May 2015	Jessica II fund of funds established and funding agreement signed between the managing authority, the Ministry of Environment and EIB
June 2015	Commencement of procurement of financial intermediaries for the Jessica II fund of funds
August 2015	Signature of the operational agreement between the Jessica II fund of funds manager and the financial intermediary
November 2015	Commencement of procurement of financial intermediaries under the second selection procedure
May 2016	Signature operational agreement with the Financial Intermediary under the second selection procedure
September 2016	Updated ex ante assessment – first revision
January 2018	Commencement of procurement of financial intermediaries under the guarantee financial instrument
December 2018	Signature of guarantee agreement with the financial intermediary
September 2019	Updated ex ante assessment – second revision
December 2019	Commencement of procurement of financial intermediary under the investment platform
Q4 2020 (estimated)	Signature of operational agreement with the financial intermediary under the investment platform

3. Combination of financial instruments and grant

3.1 Grants to support Modernisation Loans

The use of grants to maximise the impact of the Modernisation Loan financial instruments was developed during the 2007-2013 period. The ex-ante assessment carried out in 2014 also confirmed the importance of such support to help address the funding gap in the market. At the same time the Common Provisions Regulation (CPR)[4] for the 2014-2020 ESIF programming period made **specific provision for the combination of grants and financial instruments** which influenced the implementation of the scheme.

Combination of grants with financial instruments

The 2014-2020 CPR contains detailed provisions on the possibilities and conditions for combination of financial instruments with other forms of support from EU budget resources in Article 37(7) to (9) . The Regulation differentiates between two different forms of combination:

- Combination of certain support (including technical support, interest rate and guarantee fee subsidies) within a single financial instrument operation (Art 37(7) CPR); and
- Combination of other types of support at the level of the final recipient (combination of two separate operations) (Art.37(8) CPR).

Thus the use of grants combined with financial instruments in a single operation was limited to support directly linked to the financial instrument. The purpose of such support should be to facilitate and enhance the implementation of the financial instrument.

Under the 2021-2027 CPR[5], the limitations are further removed providing significant additional flexibility for managing authorities wishing to set up combined grant/financial instrument measures in sectors including energy efficiency.

The new framework under Article 52(5) of the draft 2021-2027 CPR will allow all types of grants to be combined financial instruments in a single financial instrument operation, including capital rebates such as that which applies in this instrument. In such case the rules applicable to financial instruments shall apply to that single financial instrument operation. This will allow for financing of the project cost via a loan financial instrument, with specific rules then governing how a predefined portion of the loan be subsequently treated as a grant to allow for that portion of the loan to be effectively be 'written off' by the intermediary bank.

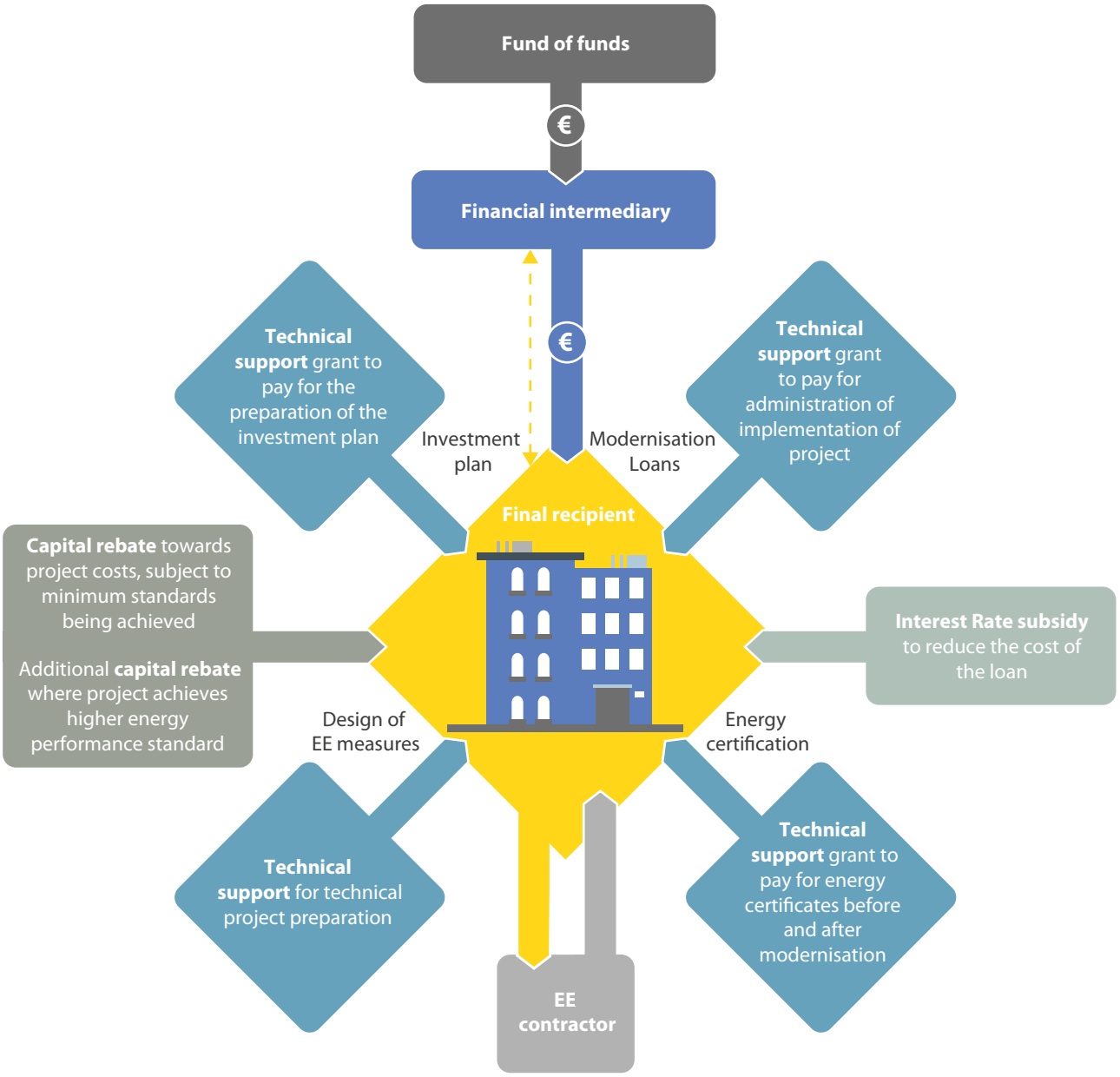
4 REGULATION (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006.

5 Proposal for a Regulation of the European Parliament and of the Council laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument COM/2018/375 final - 2018/0196 (COD).

Different types of grant support were developed in relation to the residential energy efficiency financial instruments as follows:

- **Technical support** to meet the cost of:
  - preparation of investment plan;
  - preparation of energy audits before and after modernisation;
  - technical project preparation; and
  - the administration of the implementation of the apartment block building modernisation project;
- **Interest rate subsidies** to help reduce the cost of borrowing for the final recipients;
- **Capital rebates** of 30% of the project cost, to enable early repayment of part of the loan in cases where minimum energy performance standards are achieved; and
- An **additional 10% capital rebate** of the project cost where additional energy efficiency measures are achieved.

Figure 4: Grant support for Modernisation Loans in Lithuania



3.2 Technical support to project promoters

Responsibility for delivery of the programme of technical support was given to BETA, the agency set up by the government under the Ministry of the Environment. The principal targets for the technical support are building administrators, who initiate the project on behalf of the residents of an apartment block, as well as municipalities that support the implementation of the modernisation programme in their regions.

The establishment of BETA to provide technical and methodological assistance to promoters of the projects was established as part of a **package of legislation** implemented by the Lithuanian government. The legislation defines the eligible final recipients and sets out a procedure whereby a majority vote of owners in an apartment block is sufficient to authorise the building administrator to commit to a Modernisation Loan for works on behalf of all the residents of that entire building.

Applications for support are made to BETA which evaluates and approves proposals against the requirements of the national support package and the financial instrument's investment strategy and business plan.

Building administrators

Building administrators act for the benefit or on behalf of individual apartment owners that act as final recipients under the Modernisation Loan programme. An administrator may be one of the following:

- association established by apartment owners;
- entity appointed by municipality; or
- person authorised under a joint-venture agreement of the apartment owners.

80% of projects are implemented by administrators appointed by the municipalities.

BETA's role includes the evaluation and approval of submitted project proposals including investment plans and procurement documents and fostering cooperation in relation to the programme with key stakeholders, including municipal authorities, engineering consultancy companies, educational institutions and non-governmental organisations.

Further, BETA participates in EU-funded international projects, which strengthens cooperation with housing partners from other countries, and enhances skills and experience in developing projects related to the application of alternative energy resources in apartment block buildings (such as the construction of passive houses). It is also responsible for undertaking promotional activities to promote the programme and encourage homeowners to renovate their apartment block buildings.

The **importance of the role of BETA** providing technical support was recognised in the ex-ante assessment. The package of support, which was originally developed during the previous programming period under the JESSICA initiative, is recognised as being a key success factor in the implementation of the programme, allowing for the practical resolution of complex technical issues to ensure the delivery of Modernisation Loans.

3.3 Interest rate subsidies

Grant support is provided to final recipients in the form of interest rate subsidies to **reduce the cost of borrowings**. The low cost of the loans is an important feature that makes the Modernisation Loan attractive to apartment owners. During the first phase of the programme, when the loans were substantially publicly funded, borrowers were able to benefit from loans with a fixed, low interest rate throughout the duration of the contract. As the scheme has expanded and attracting private finance has become increasingly important, the use of grant in the form of interest rate subsidies has been developed to maintain a fixed interest rate of 3% p.a. on loans for the first five years.

The interest rate subsidy element is managed by BETA using national resources. The financial intermediary is responsible for calculating the amount of subsidised interest due. Payment requests are submitted to BETA for each eligible loan on a monthly basis.

3.4 Capital rebates

The Modernisation Loan financial instruments also benefit from a programme of capital rebates, funded by non-ESIF resources, which subsidise a part of the final recipient's borrowings in cases certain minimum standards of energy usage performance are achieved. Up to 40% of the loan amount can be repaid under this programme depending on the levels of energy savings achieved.

Under the CPR 2014-2020, there was uncertainty as to whether it was possible to use ESIF funded capital rebates in combination with ESIF financial instruments. This uncertainty has been removed under the **CPR 2021-2027, which provides clarity (and increased flexibility) permitting the use of capital rebate grants in combination with financial instruments as part of a single operation**.

In the meantime, during the 2014-2020 period, the managing authority implemented a scheme using national resources that provides capital rebates as a separate operation to the financial instruments. Following completion of the building works, an energy audit of the works is carried out by a certified expert. Where BETA is satisfied that specified energy performance targets are achieved, a lump sum payment of up to 30% of the implementation cost will be made by BETA to the financial intermediary which in turn writes off an equivalent part of the final recipient's borrowing. An additional 10% capital rebate is triggered where **additional energy efficiency measures are undertaken**. These can include a separate automated heating plant (or modernised existing non-automated heating plant), balancing valves on heating and/or hot water systems with individual heat metering devices or heat distribution system and/or thermostatic valves.

A further capital rebate grant programme has been implemented under the management of the local authorities using non-ESIF resources. This aims to support low income households participating in an energy efficiency scheme supported by a Modernisation Loan. Qualifying low income households are entitled to a capital rebate of 100% of the cost of the works and all other relevant costs. Similar to the scheme operated by BETA, once the energy audit has certified that the energy performance targets have been met the local authority will make a payment to the financial intermediary, which is then used to prepay the loan completely.

Žiburio St. 9, Alytus

Heat pumps and geothermal heating technologies

Year of construction: 1967

Number of apartments: 55

Heating, kWh/m², (before and after): 255 and 33.91

Decrease in CO_2 emissions: 130.49 t/year

Energy efficiency class, (before and after): 'D' and 'C'

Investment cost per m² before subsidy: EUR 327

The apartment owners installed heat pumps in the apartment during the renovation.

In this building, the heating and ventilation system works by combining three energy sources: solar, heat pumps and geothermal energy. In this way, a unique air circulation system is created, which cools the premises using geothermal energy.

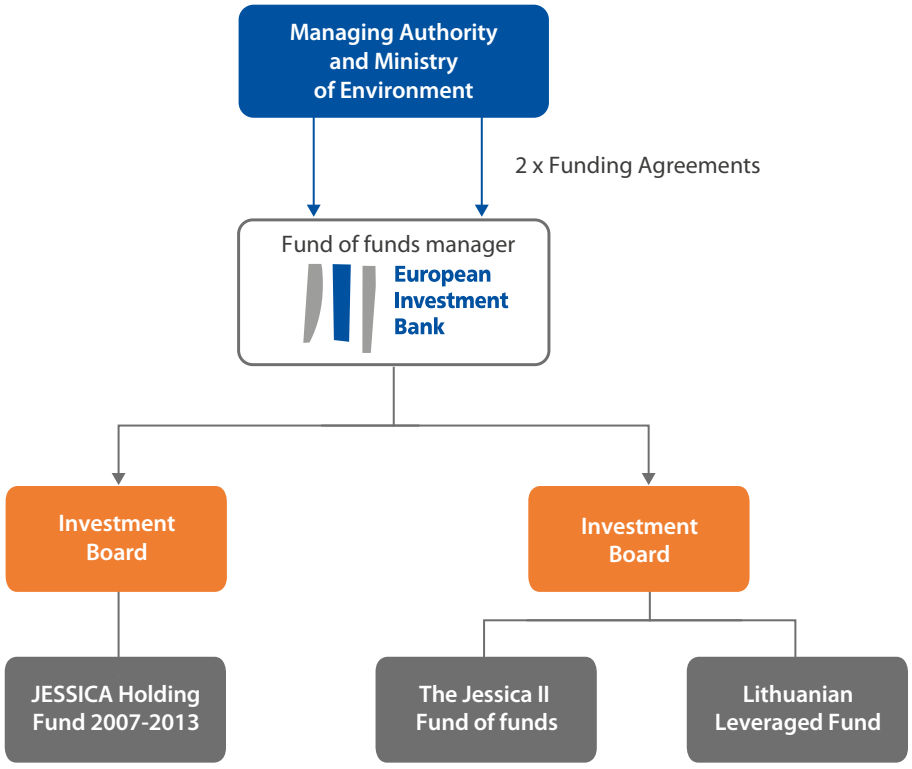
4. Set-up of the residential energy efficiency financial instruments

4.1 Governance structure

A governance structure has been established by the managing authority and the Ministry of Environment to allow the management of the ERDF financial instruments entrusted to the EIB. The key elements to the structure, which is shown at Figure 5 below are:

- The managing authority and Ministry of Environment, which is responsible for allocating resources, entrustment of responsibilities to the EIB and reporting to the EC in relation to the financial instruments;
- The two Investment Boards set up under the funding agreements to oversee the delivery of the financial instruments' Investment Strategy and Business Plan; and
- The EIB as Holding Fund/Fund of funds manager which is responsible for the implementation of the financial instruments including selection and management of the financial intermediaries, monitoring and reporting.

Figure 5: the governance structure of the residential energy efficiency financial instruments in Lithuania



There are **two funding agreements** in place to govern the relationship between the managing authority, Ministry of Environment and the EIB. The first relates to the JESSICA I financial instrument established in the 2007-2013, the second for the 2014-2020 programme.

The two Investment Boards, established under the funding agreements, play a key role in the management and monitoring of the activities of the EIB in its role as Holding Fund/Fund of funds manager. Governed by the two funding agreements the Investment Boards are made up of representatives from the following institutions:

- The managing authority
- The Ministry of Environment (the implementing authority)

The EIB monitors the activities of the financial intermediaries and the progress of projects through a framework of desk based reviews, questionnaires and on-site monitoring visits/verifications. It provides the managing authority and Ministry of Environment with monthly, quarterly and annual reports on the performance of the financial instruments, which are considered at the relevant Investment Board meetings. Representatives of the EIB attend Investment Board meetings as observers and participate in the discussions. However, they do not have a vote in the decision making process. From time to time other third parties are invited to attend to participate in the meetings, such as representatives of BETA and the financial intermediary. This allows the Investment Board to also function as a forum for an exchange of views to aid the ongoing development of the managing authority and Ministry of Environment's strategic thinking regarding the further development of the Modernisation Loan programme and its financial instruments.

4.2 State aid

The financial instruments and associated grant support are targeted at financing the improvement of housing. As a result, the vast majority of final recipients are **natural persons who are not considered to be undertakings carrying out economic activity** and therefore fall outside the scope of the State aid rules. This, together with the **pass on of benefit of the public support by the financial intermediaries** (by way of reduced interest rates, extended duration and reduced collateral, for example) is relied on by the managing authority for the vast majority of loans.

The Marinvest decision

The *fi-compass* Knowledge Hub: State aid discussed the case of *Marinvest & Ponting v Commission*[6]. The case concerned public support to a small business and the ECJ concluded in relation to the state support, "even if some marginal distortion of local competition cannot be completely excluded, the alleged measures are not liable to affect trade between Member States". As a result, the support was not contrary to EU State aid rules. The discussion at the Knowledge Hub considered whether a similar approach could be taken in assessing potential State aid in the context of energy efficiency financial instruments and small businesses. Where it can be determined that support to the participating small businesses is not likely to affect trade between Member States due to the size and local nature of the businesses, costly and time consuming administrative measures can potentially be avoided.[7]

6 fi-compass Knowledge Hub – State aid. Notes of workshop: https://www.fi-compass.eu/publication/factsheets/fi-compass-knowledge-hub-state-aid-notes-workshop

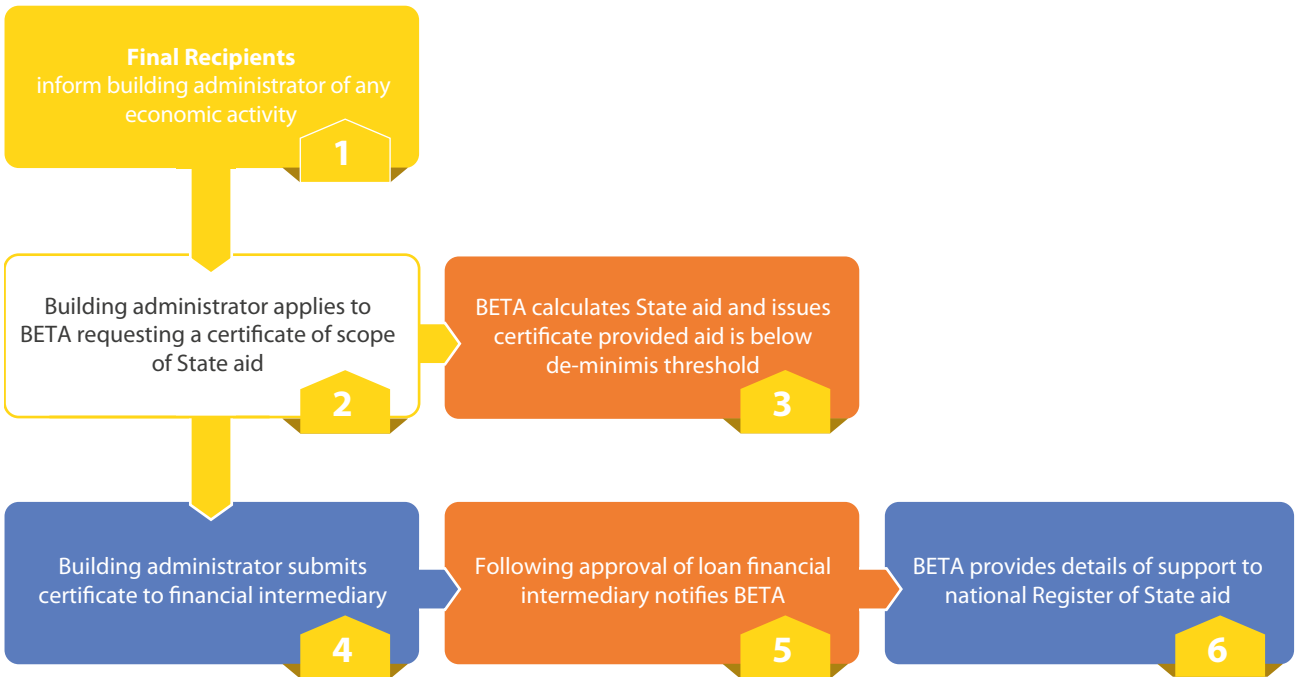
7 When assessing whether such an approach can be adopted, promoters of ESIF financial instruments must ensure they take appropriate specialist advice based on the specific factual circumstances. This note recommends that the approach adopted in the Marinvest case is considered by promoters of ESIF financial instruments in appropriate circumstances. However, whether it can be applied to a specific financial instrument can only be determined by reference to the particular facts of the operation concerned.

The position is more complex, however, in cases where economic activity is undertaken in one or more unit(s) of the apartment block. Examples of economic activity include small retail shops and businesses such as convenience stores and hairdressers, small businesses operated from residential units such as book-keeping or secretarial services and commercial letting of units by landlords.

In such cases the final recipient is an undertaking and, therefore, the aid is accounted for under the ***de minimis* rules**[8]. The *de minimis* aid element will be the Gross Grant Equivalent (GGE) of the support over the duration of the loan calculated by reference to the difference between **the preferential interest rate** and the **appropriate market price** of the loan that the final recipient would pay, calculated in accordance with the EC's **reference rate communication** (**or** in the case of the guarantee instruments **the market interest rate specified by the financial institution** for the applicable market conditions). The GGE of the financial instrument support is added to the grant support provided to the final recipient as part of the project when assessing the total amount of support provided.

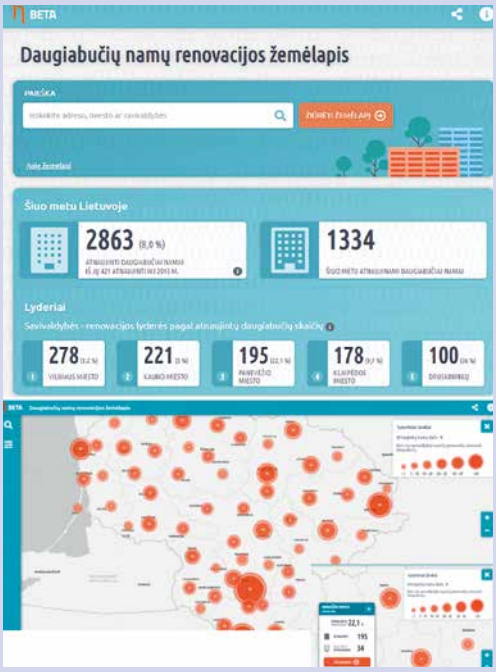
Although the size of the loans and grant support are usually well within the threshold of EUR 200 000, the requirement to record *de minimis* support to the small number of undertakings within a building creates an administrative challenge. To prevent this becoming a barrier delaying or preventing delivery of projects, BETA developed the in house capability to **proactively manage the State aid assessment** of each project. A structured approach to the State aid assessment was developed, as shown in Figure 6.

Figure 6: State aid assessment for the residential energy efficiency projects in Lithuania



8 COMMISSION REGULATION (EU) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to *de minimis* aid.

The Renovation Map



GIS based mapping tool

The aim of this tool is to create a modern and efficient application based on geographic information system (GIS):

- The tool stimulates interest in renovation, by providing data and information in an understandable and visual way, to offer tools to assess the value created by renovation by comparing the before and after results of individual municipalities;
- The tool communicates the most important information about the renovation of multi-apartment buildings, its progress, clarifies the processes and involves residents and specialists of the interested institutions in monitoring the progress of the renovation; and
- The tool helps BETA specialists perform spatial analysis, to study the causal relations of the accumulated renovation indicators, to monitor the ongoing processes, to look for more effective ways to communicate the benefits of renovation with the help of interactive maps.

Municipal employees and residents can evaluate the indicators (progress, status, values) of the municipality and compare it with the results of other municipalities in the country.

The map allows the following:

- choose navigation tools and navigate the map;
- search by address, city, municipality;
- see how the renovated apartment buildings look from street view; and
- filter to view selected indicators for renovated or buildings currently being renovated.

5. Implementation

5.1 Modernisation Loans

Final recipients of the financial instruments are supported through a Modernisation Loan on the following terms:

- Loan duration of up to 20 years (plus a grace period to not pay accrued interest during the construction period);
- Fixed interest rate of 3% per annum for the first 5 years (maintained by an interest rate subsidy), and a floating interest rate in line with the financial intermediaries' terms and conditions for the remaining 15 years;
- Capital rebate of up to 30% of the loan principal amount, subject to achieving the minimum energy performance threshold, with a further rebate of 10% of the loan principal amount payable, subject to achieving specified higher standards of energy efficiency;
- For low-income persons entitled to compensation for heating, 100% of all renovation costs are covered from budgetary resources; and
- No collateral requirement.

Renovation works

Typically a Modernisation Loan will fund a range of renovation works in the apartment block to improve its energy efficiency. These include:

- Thermal insulation of facade walls, including the removal of any defects in wall structures and exterior foundation walls;
- Glazing of balconies and loggias and strengthening their existing structures or installing new ones;
- Replacement of lobby doors and windows in all apartments with more thermally resistant ones;
- Insulation of basement ceilings;
- Renewal of elevators;
- Renovation of other engineering systems of common use; and
- Other measures directly related to works being performed, including the introduction and installation of renewable energy technologies in the buildings and ordinary repair of staircases in common areas.

To be eligible for support, the renovation project must result in the building being classified at least as 'Class C' in terms of energy performance following completion of the works. Further, not less than 80% of the expenditure must comprise energy efficiency measures such as those listed above. For cultural heritage buildings there is a specific derogation that permits lower energy efficiency requirements (at least 25% energy savings).

Another extremely important feature of the Modernisation Loan is that the terms of the loan permit the borrower to **assign the agreement in the event that the property is sold** or transferred to a third party. This feature which is underpinned by the Lithuanian national legislation ensures that there is a straightforward way for home owners to **pass on the benefit and outstanding cost of the loan to successors** in the event of the sale of the property, maximising the attractiveness of the product.

5.2 Integrated project delivery concept

The **integrated project delivery** concept was developed to reflect the specific local conditions in Lithuania which affected the preparation, approval and carrying out of energy efficiency works in apartment blocks. It addresses a number of potential barriers including:

- Securing the buy in, approval and coordination of a large number of residents of apartment blocks to carry out the works;
- Designing the technical measures required to improve the energy efficiency of the buildings; and
- Procurement and management of the construction contractors.

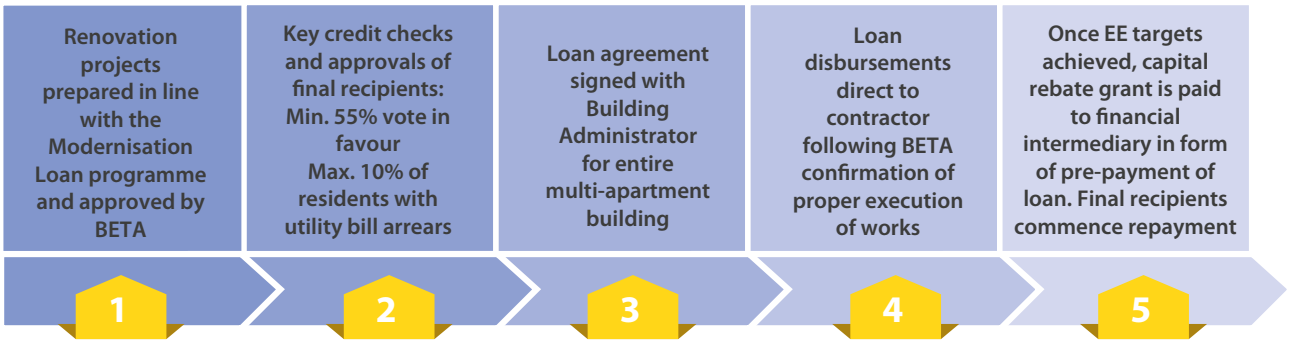
The measures, which are implemented through BETA provide residents with a clear and defined procedure, underpinned by legislation introduced to support the programme, together with the support they need to secure the design and delivery of the renovation works.

An important part of the integrated project delivery concept is the support provided by the government's Central Procurement Office (CPO), established under the Ministry of Economy. The CPO has procured a **framework of suitably experienced contractors** that can be accessed by residents and administrators. This provides assurance for residents that the design and implementation of the energy efficiency renovation measures will be carried out in accordance with industry best practice.

In order to provide residents with flexibility to respond to specific market conditions in different parts of the country, project promoters also have the option to (1) use an independent procurement process when use of CPO framework fails, and (2) hold an additional procurement process, through the CPO, to enlarge the framework of available contractors.

The project delivery structure is shown at Figure 7.

Figure 7: Residential energy efficiency financial instruments in Lithuania – integrated project delivery concept



Building administrators interested in promoting a project contact BETA who carry out an initial assessment of eligibility. Projects that pass this stage then receive free technical advice and support from BETA to prepare the project proposal for consultation with the residents of the apartment block.

A key milestone is the approval of the renovation project by the residents of the multi-block apartment building, undertaken through a **vote of residents**. The legislation introduced to support the programme provides that where the majority of residents (50%+1) vote in favour of the project, the building administrator may proceed and take out the loan for the benefit of or on behalf of all apartment block residents. The threshold for approval is reinforced by the requirement under the financial instrument's lending criteria which require a minimum vote of 55% of the residents in favour of the scheme.

Once a project has been approved, the residents must then separately apply to the financial intermediary for financing approval. At the same time, BETA gathers the relevant State aid information from residents of the building.

A single credit agreement is signed with the building administrator to fund the project, with a bank account being opened in the building administrator's name to receive the loan. Construction contracts are entered into, by the administrator, with the contractor for the works. Payments to the contractor are made directly by the financial intermediary on achievements of milestones certified by BETA, and through the administrators account.

The loan principal and interest is repaid by the building administrator to the financial intermediary by monthly instalments and the building administrator is responsible for collecting the repayments from each final recipient. In practice this is done through a 'service charge' billed by administrators to residents. Typically as this includes energy costs, the cost of the lending is likely to be less than the benefit of the energy savings, resulting in the **residents receiving a net positive reduction in the service charge**.

5.3 Role of municipalities

Municipalities in Lithuania play an important role in achieving the main objectives of the programme through the identification and development of proposals to renovate buildings in their area, significantly contributing to the financial instrument's project pipeline. Municipalities develop, approve and supervise the implementation of municipal programmes in accordance with the programme objectives and tasks and coordinate the process of apartment building renovation in the municipal territory, linking it with municipal territory planning, renovation and management.

The role of municipalities has developed since the launch of the initial JESSICA I programme. Before 2013, although the programme required municipalities to play an active role in renovation projects, homeowners were ultimately responsible for the entire decision-making process, from the preparation of required documentation to project implementation. By facilitating greater involvement of municipalities in the programme, the number and quality of proposals has increased. Currently, municipalities are responsible for preparing renovation projects and for appointing programme administrators to implement and manage those projects, the procurement and loan administration process.

5.4 Communication

At the beginning of the programme under the JESSICA I initiative, the level of knowledge of the potential benefits of energy efficiency improvements and the potential to use the programme as a source of affordable financing was very low. A survey conducted in 2011 indicated that only 5% of residents of large cities believed in the need for modernisation works to improve the energy efficiency of their homes, while 93.4% were sceptical about the renovation processes.

In order to address this a pro-active approach to communication has been necessary to ensure projects were developed and the necessary support secured from residents to allow work to proceed. Seminars and training courses targeting apartment owners and building administrators have been key tools in raising awareness of the programme and financing available. By October 2020, over 1 200 seminars have been hosted by BETA in support of the programme

In addition, BETA have also run a number of nationwide publicity campaigns, making use of different media channels, such as TV, radio, national and local press, and the Internet. The campaigns aimed to encourage municipalities to take a more active role in the promotion of the apartment block building renovation programme by reporting on the advantages and process of the implementation results of the programme.

The communication activities have been successful in raising the awareness of the benefits of the programme. According to the latest public opinion poll organised in 2019, 77% of residents of apartments that were planned to be renovated supported the decision.

6. Achievements

The financial instruments supporting residential energy efficiency in Lithuania represent a significant development of the successful JESSICA I fund model previously established in the country. In particular the managing authority and the Ministry of Environment have successfully deployed the ERDF OP resources to mobilise significant private finance from the financial intermediary, and potentially now from other private and institutional investors. As a result almost EUR 1 billion is expected to be mobilised to address the market failure in the sector by the end of the financial instruments' investment period in 2023.

The impact of the financial instruments on the **strategic objectives to reduce energy consumption and increase energy security** has been significant. The loan products, coupled with grant support, offered by the financial intermediaries are **well established as the primary financing source** for apartment block energy efficiency renovations. Investments implemented through the Jessica II fund and the Lithuanian Leveraged Fund represent approximately 15% of last year's total construction sector activity in Lithuania. Some 300 construction companies participate in apartment block renovation work, corresponding to around 7 000 new jobs (including short term roles).

By the end of September 2020 the instruments established in the 2014-2020 period have achieved the following outputs:

- Total amount signed with final recipients: ~EUR 435 million
- Total amount disbursed to final recipients: ~EUR 390 million
- Number of loans provided for renovation of apartment block buildings: 1 456
- Number of apartments affected: ~50 000
- Total apartment block area renovated: ~2.4 million m^2
- Average energy savings per building: 64.5% or ~72.2 kWh /m2
- Average amount of thermal energy saved: 410 GWh per annum
- Average reduction in carbon emissions of 95t CO_2 per annum.

Marijonų St. 31, 31a Panevėžys

Solar heating system

Year of construction: 1958

Number of apartments: 35

Heating, kWh/m², before and after: 302.42 and 103.57

Energy efficiency class, before and after: 'E' and 'B'

The first apartment house in Lithuania with solar heating systems, the building is insulated using external thermal insulation an integral partitioning plaster system. The multi-apartment housing association, which was the first to launch a new multi-apartment modernisation program under the JESSICA programme in 2010, completed the project in early 2012. It allowed the overhaul of two houses built in 1958, whose heat energy demand was extremely high. The project has become an example of modern renovation in Lithuania. It is considered one of the most successful projects in the Baltic region and Europe.

7. Lessons learned

7.1 Main success factors

Combination of financial instruments with grant

A key feature of the residential energy efficiency financial instruments in Lithuania is the way **grants and financial instruments have been integrated into a single package of support** to maximise the impact of the financing. Technical support grant has been deployed to support project development, ensuring a robust pipeline of investment ready eligible projects designed to meet the required standards of quality and energy performance. This has been complemented by interest rate subsidies and capital rebates that reduce the cost to final recipients and incentivise design and delivery of high energy performance measures.

Strong and consistent political support for the programme

The Modernisation Loan programme to improve energy efficiency in residential premises has been **viewed as a national priority by successive governments** and the financial instruments are at the heart of the initiative. The **legislative framework approved by Parliament** has proved robust and has facilitated the implementation of the investment, both through the support of agencies such as BETA and by providing an equitable framework for approval and delivery of projects. As a result the programme and associated financial instruments have been supported through **several stages of development** allowing the scale up of the support as private sector investment is increasingly attracted to the programme.

Supporting project delivery by addressing key barriers

The managing authority and its partner public agencies have implemented a number of important initiatives to address technical and regulatory barriers. **The role of BETA**, which was established to support the Modernisation Loan programme is at the heart of the success of the scheme. The agency has taken responsibility for addressing several key issues through its **integrated project delivery approach**. These include the organisation of the calls for modernisation projects, the administration of the technical assistance grant, provision of specific project delivery support, supporting the energy audits and approval of works for the financial intermediary. In addition, the agency prepares and maintains the State aid register for each project as well as acting as the first point of contact for project promoters. By taking responsibility for these key issues, the managing authority and its partners have allowed financing partners such as the EIB and the financial intermediaries to focus on the mobilisation of resources, streamlining the implementation of the financial instruments.

The **role of municipalities has also been important** factor in the success of the programme. The renovation of apartment block buildings is a huge financial and organisational task. Although most apartment block buildings are privately owned, it is public authorities, and specifically municipalities, that are the key actors in providing assistance and for facilitating renovation activities on behalf of homeowners in apartment block buildings. Better coordination and closer cooperation between the main renovation stakeholders helps improving the renovation process.

Developing financing products to respond to changing market conditions

The evolution of the financial instruments to support the Modernisation Loan programme in Lithuania shows how **ERDF supported loans and guarantees can help develop the financing market** for the sector in EU Member States. The initial JESSICA financial instruments were financed primarily by ERDF OP resources. The 2014-2020 financial instruments have been able to leverage significant private sector investment to scale up the finance available to support projects. As market conditions have improved, the Lithuanian Leveraged Fund has successfully attracted additional private sector resources. The managing authority, the Ministry of Environment and the EIB in its capacity as Holding Fund/Fund of funds manager, have adopted an agile approach to the design and development of the financial instruments in order to respond to emerging market opportunities.

7.2 Main challenges

The maintenance of the **State aid register** for the small businesses located in buildings being renovated, was a significant administrative challenge, particularly at the beginning of the implementation during the previous programming period. Compliance with State aid rules was an important issue that had to be addressed at the outset. Although the risk of breach of State aid was low, due to the relatively low amounts of support given per final recipient, the obligation to maintain the register generated significant administrative work, requiring resources and time to resolve with a potential negative impact on the timeliness of delivery.

The experience of the JESSICA I instrument also highlighted the **importance of ensuring that the financial instrument support was not crowded out, but instead complemented,** by other grant assistance schemes. By aligning the available grant support with the financial instrument financing, residents are incentivised to see the financial instrument as the 'one stop shop' for financial support for energy efficiency works in apartment blocks.

As the volume of Modernisation Loan supported projects increased, some of the **construction companies involved in the projects have experienced difficulties**. Some smaller companies failed to manage their project pipeline and resulting liquidity needs adequately. The EIB, as fund of funds manager, maintains close communication with the Ministry of Environment and financial intermediaries to assist in dealing with these cases. Under the legal framework for the modernisation programme, in the event of insolvency of a contractor, administrators may appoint a new contractor to finalise the project.

There have similarly been challenges regarding construction quality and performance. In order to improve the construction quality supervision and inspection system, certain control measures were implemented during the period. BETA now has authority to investigate complaints received from administrators in relation to a renovation project and, where needed, involves officials from the State Territorial Planning and Construction Inspectorate in the process.

7.3 Outlook

The success of the residential energy efficiency financial instruments means that Lithuania is well placed to **capitalise on its existing model** in future **ERDF programming periods** and the EC's **Renovation Wave** strategy. The Modernisation Loan programme, which encourages energy savings and investment, **creates jobs as well as enhances the quality of life**. When combined with the JESSICA I fund, the residential energy efficiency programme is considered to be the largest energy efficiency programme (per capita) in Europe.

Looking into the future, the managing authority, in conjunction with the EIB is implementing **a new investment platform for energy efficiency in apartment blocks**, which will hopefully also form part of the COVID-19 crisis response in Lithuania. The new investment platform, which builds on the lessons learned from the current financial instruments, will allow activity in the sector to be further **scaled up and provides a replicable model** that could be adapted to be implemented in other Member States.

The Renovation Wave

The European Commission launched its **Renovation Wave** strategy in October 2020. As part of the European Green Deal it aims to at least double renovation rates of buildings in the next ten years and make sure renovations lead to higher energy and resource efficiency. This will enhance the quality of life for people living in and using the buildings, reduce Europe's greenhouse gas emissions, foster digitalisation and improve the reuse and recycling of materials. By 2030, **35 million buildings** could be renovated and up to 160 000 additional green jobs created in the construction sector.

The strategy is made up of a package of measures including new regulatory measures and standards, **capacity building** and **the development of new design and construction products and solutions**. A key part of the strategy is the use of EU funds including **Cohesion funds** and resources from the 'Renovate' and 'Power Up' flagships in the European Commission's **Recovery and Resilience Facility** under NextGenerationEU to incentivise the mobilisation of private resources to invest in this sector.

As buildings are responsible for about 40% of the EU's energy consumption, and 36% of greenhouse gas emissions from energy, effective action in this sector is crucial to making Europe climate-neutral by 2050. Furthermore, measures that reduce heating bills help tackle fuel poverty issues and contribute to the health and wellbeing of residents. The *fi-compass* study[9] 'The potential for investment in energy efficiency through financial instruments in the European Union' highlights the investment needs in each Member State and the potential for financial instruments using EU shared management funds as a tool to address the funding gap.

Lithuania's National Energy and Climate Plan is already aligned with the European Green Deal and Renovation Wave strategy. The ERDF financial instruments aim to mobilise the finance necessary to achieve the target of renovating all multi-apartment buildings to modern energy efficiency standards by 2050. This will in turn deliver a refurbished and improved building stock in Lithuania will help pave the way for a decarbonised and clean energy system.

9 https://www.fi-compass.eu/erdf/potential-investment-energy-efficiency-through-financial-instruments-european-union

The pace of the programme is already high. Currently, roughly 500 multi-apartment buildings are renovated each year. This is expected to accelerate significantly in the future so that more than 1 000 buildings per annum are renovated during the period of 2031 – 2040, increasing to 1 400 per annum during the period of 2041 - 2050. Ultimately, if this ambitious, yet achievable target is met it will lead to savings of 60% of current energy consumption and decrease CO_2 emissions by 80%.

www.fi-compass.eu
contact@fi-compass.eu

European Commission
Directorate-General
Regional and Urban Policy
Unit B.3 "Financial Instruments and IFIs' Relations"
B-1049 Brussels

European Investment Bank
Advisory Services
fi-compass
98-100, boulevard Konrad Adenauer
L-2950 Luxembourg