HSLU Hochschule Luzern

The role of financing in energy renovations of single- & multi-family houses:

Findings, solutions, open questions

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Key takeaways

1. Hypothesis: Lack of access to financing is a major reason why there is too little investment in energy renovation.
   - Little empirical evidence available
   - Our survey indicates that there are homeowners who cannot afford financing.

2. Banks have recognised the relevance of the issue
   - Financial products for financing energy-efficient renovations are available at preferential conditions.
   - Banks have limited options for action

3. "Energy loans" with state guarantees as a possible solution (public-private partnership).

4. Effect of "energy loans" as new financing instrument is controversial
   - Expert discussions and literature: feasible instrument
   - Key questions: - Impact on demand for renovation (depending on design)?
     - Consequences for the macro economy and the public sector?

Hypothesis and possible solution

Hypothesis

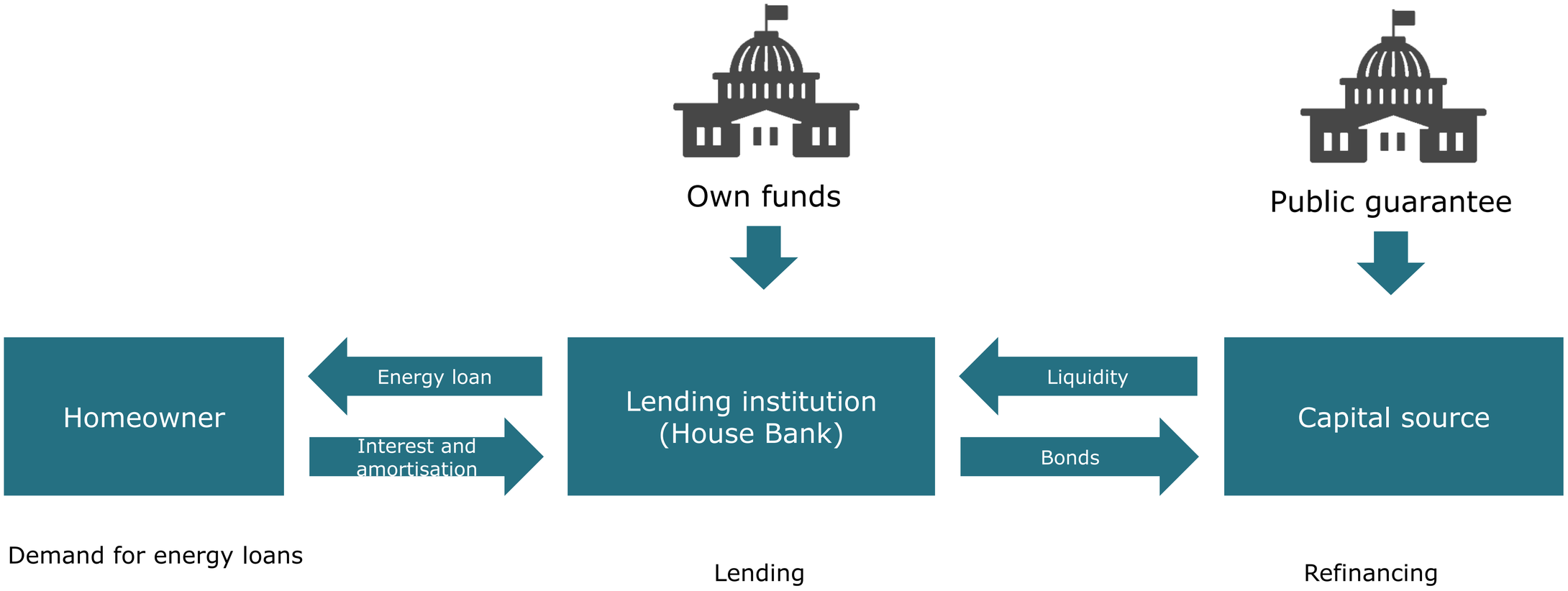
- Lack of access to financing is a major reason why not enough is invested in energy renovation.
  (Other reasons: lack of knowledge, lack of motivation).
- New financing instruments based on a public-private partnership can facilitate access to financing and contribute to an increase in energy renovation.

Possible solution: «energy loan»

- Specifically for energy retrofit measures
- *Amortisation (loan term) is based on the lifetime of the measure (lower annual burden due to longer term)*
- Preferred model: loan provided by bank
- Guarantee from the public sector
- *Possibly easing the affordability and loan-to-value requirements*

Basic concept of an «energy loan»

The concept: public-private partnership between banks and the state.
The state covers part of the risk.



Findings from the expert interviews: Banks' view

Banks have recognised the relevance of the topic

- **Specific products** already existing (e.g. ZKB, Zuger Kantonalbank). Limited success so far. Further products in development (e.g. LUKB).
- **Exception-to-policy** creates the necessary flexibility for banks. But somewhat untransparent.
- Consensus: Combination of **advice and financing necessary**

Opinion about the instrument of "energy loans”

- **Demand** for (long-term) energy loans controversially estimated, **little empirical evidence.**
- From the banks' point of view, the question of **risk sharing** is central for the attractiveness of the instrument.
- **Refinancing** of energy loans is no concern
- **Individual risks**, as well as **systemic risks**, are considered to be low (→ supported by risk model calculations).

Survey: questions and procedure

Research questions

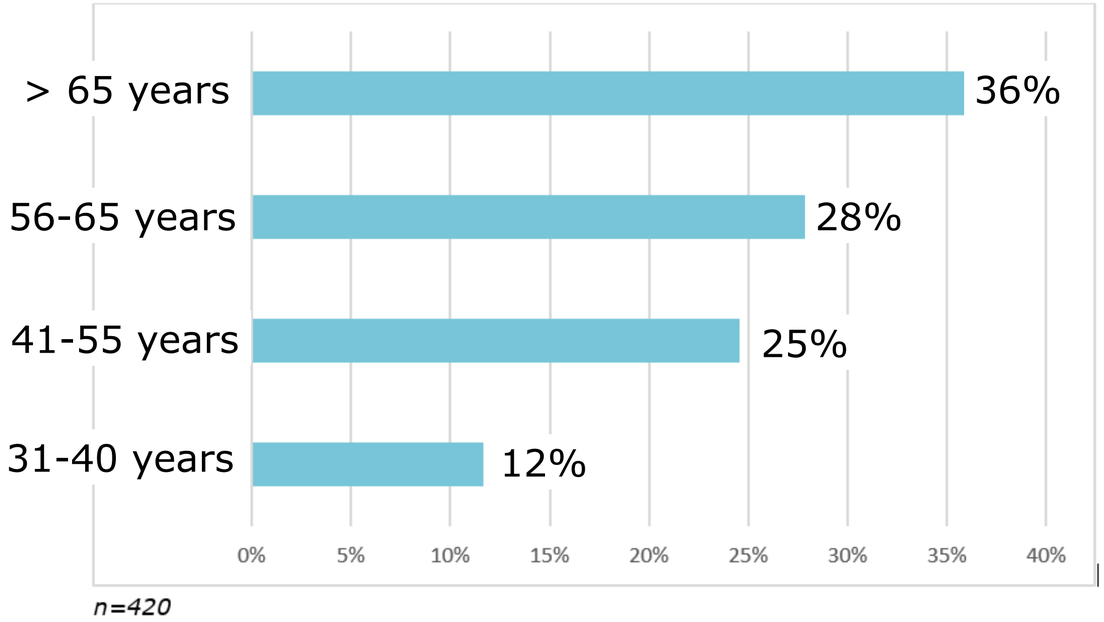
- To what extent does financing represent a significant barrier to more, or to more extensive, energy-efficient renovations?
- How do the financial obstacles rank among the various reasons for or against energy efficiency measures?
- Which homeowners have financing difficulties (age, building type)?
- How are complementary financing instruments assessed?

Survey implementation

- Voluntary electronic survey
- In cooperation with HEV (Homeowners' Association) and Casafair (Association for Environmentally Conscious and Fair Homeowners), as well as individual cantons.
- Survey period: December 2022 - January 2023
- Total of 427 evaluable responses

Sample

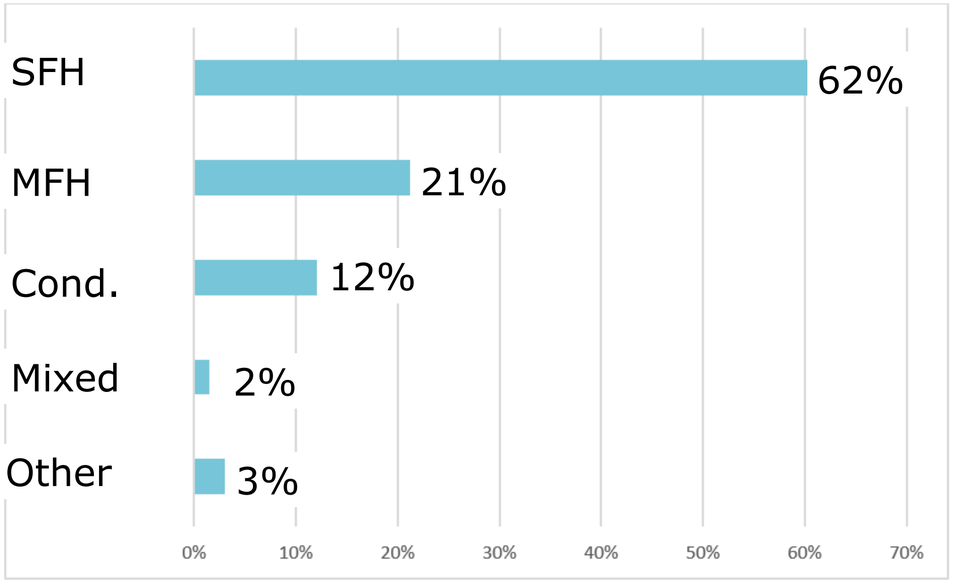
Age of homeowners



n=420

Around 1/3rd of the Swiss privately owned flats are owned by people older than 65 years.

Building type

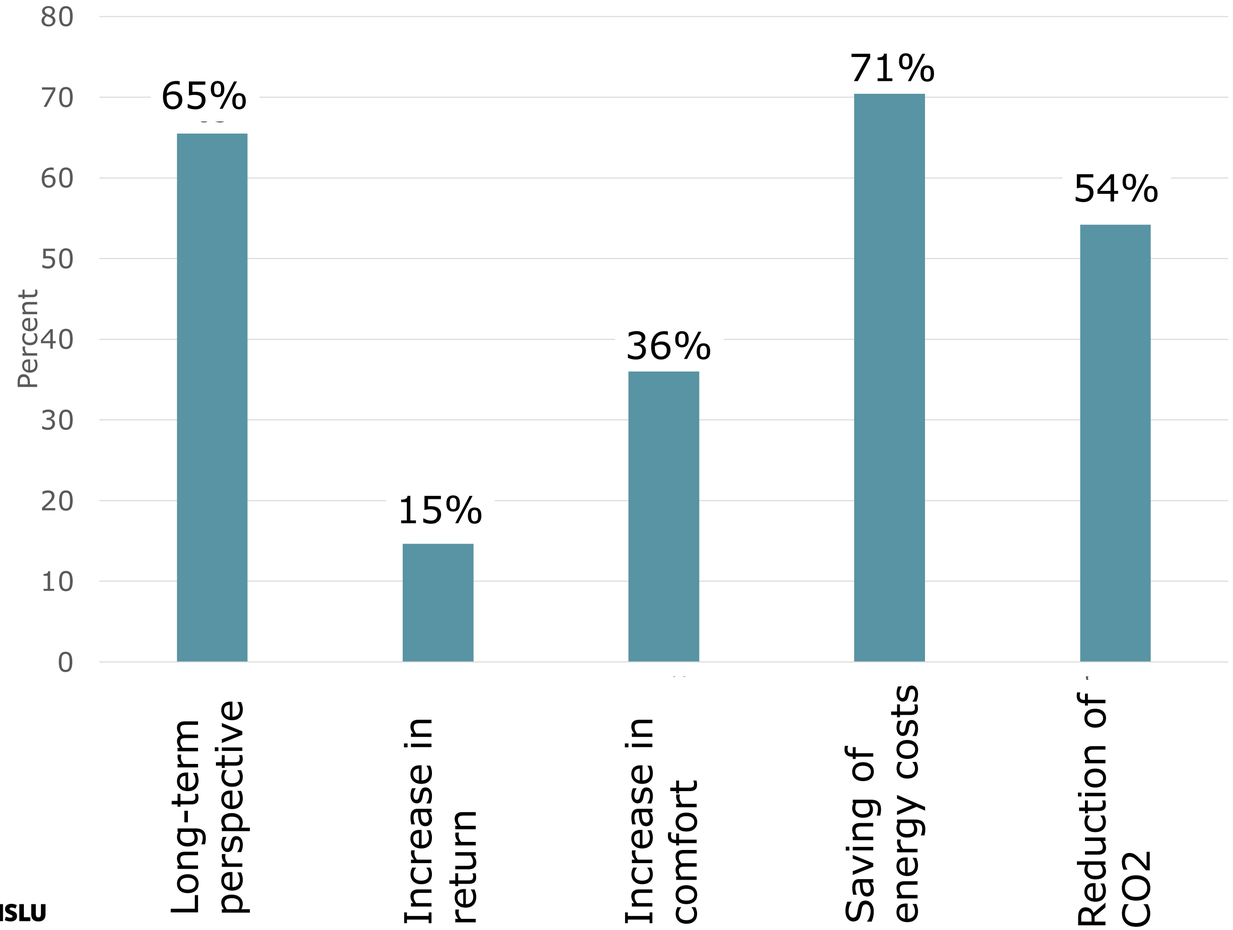


n=426

62% single-family homes, 21% multi-family homes, and 12% condominiums.

Objectives in investment decisions for buildings

As a homeowner, when you consider possible investments in your building, how important are the following goals to you?



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n = 478, Response «important»

- Priority: Long-term perspective and saving of energy costs
- Less important: Increase in living comfort and increase in value/return

Challenges for homeowners planning measures

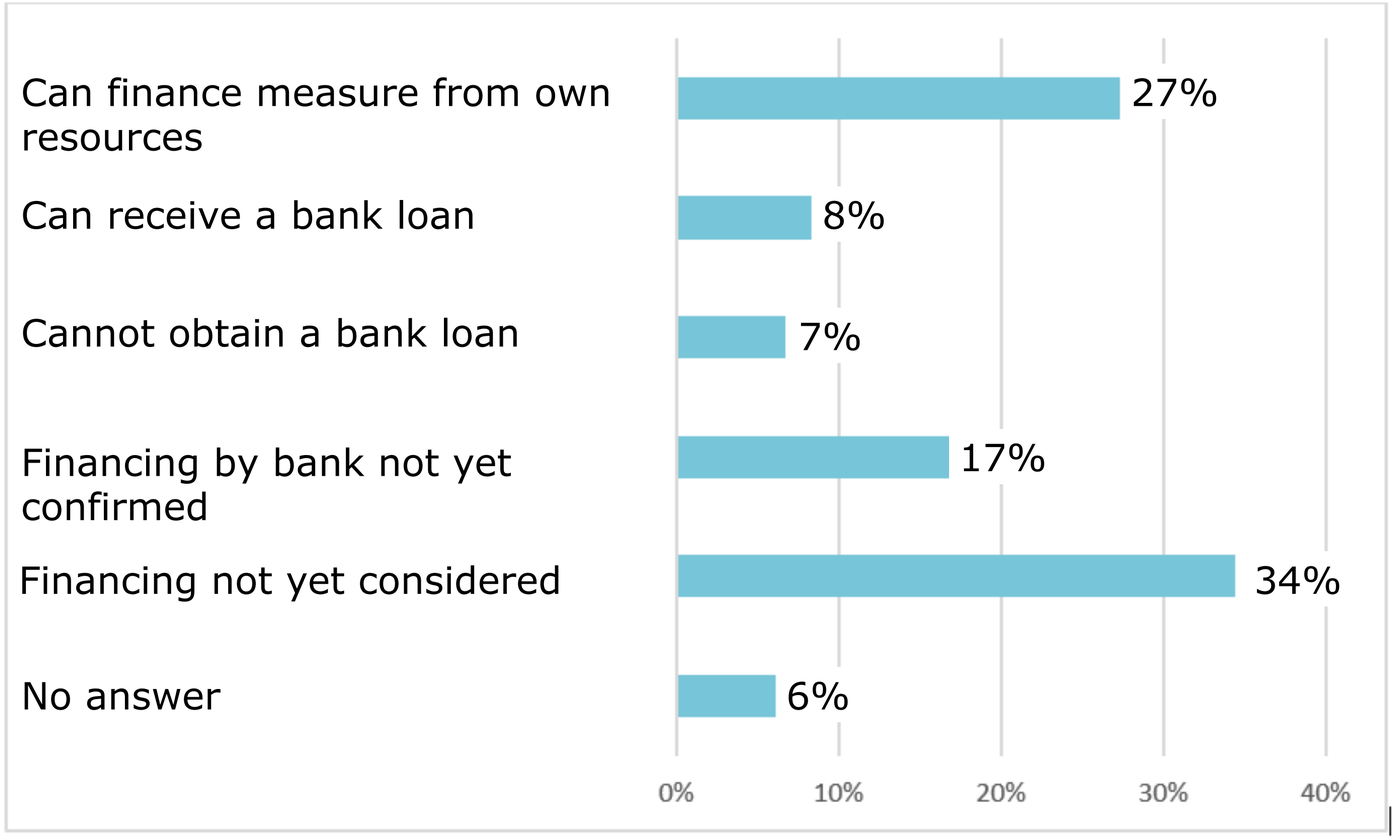
Single-family homes

- **Primary challenges:** complexity (57%) and access to finance (56%), followed by lack of return on investment (51%).
- **Significantly less important:** Investment competition (32%) and uncertainty about future use of the building (24%).

Multi-family homes

- **Primary challenges:** problems with passing on the investments on rent (65%) and complexity (64%), followed by lack of return (53%).
- **Slightly less important:** Lack of access to financing and building regulations (44%).

Information and financing



n=311

About one third ...

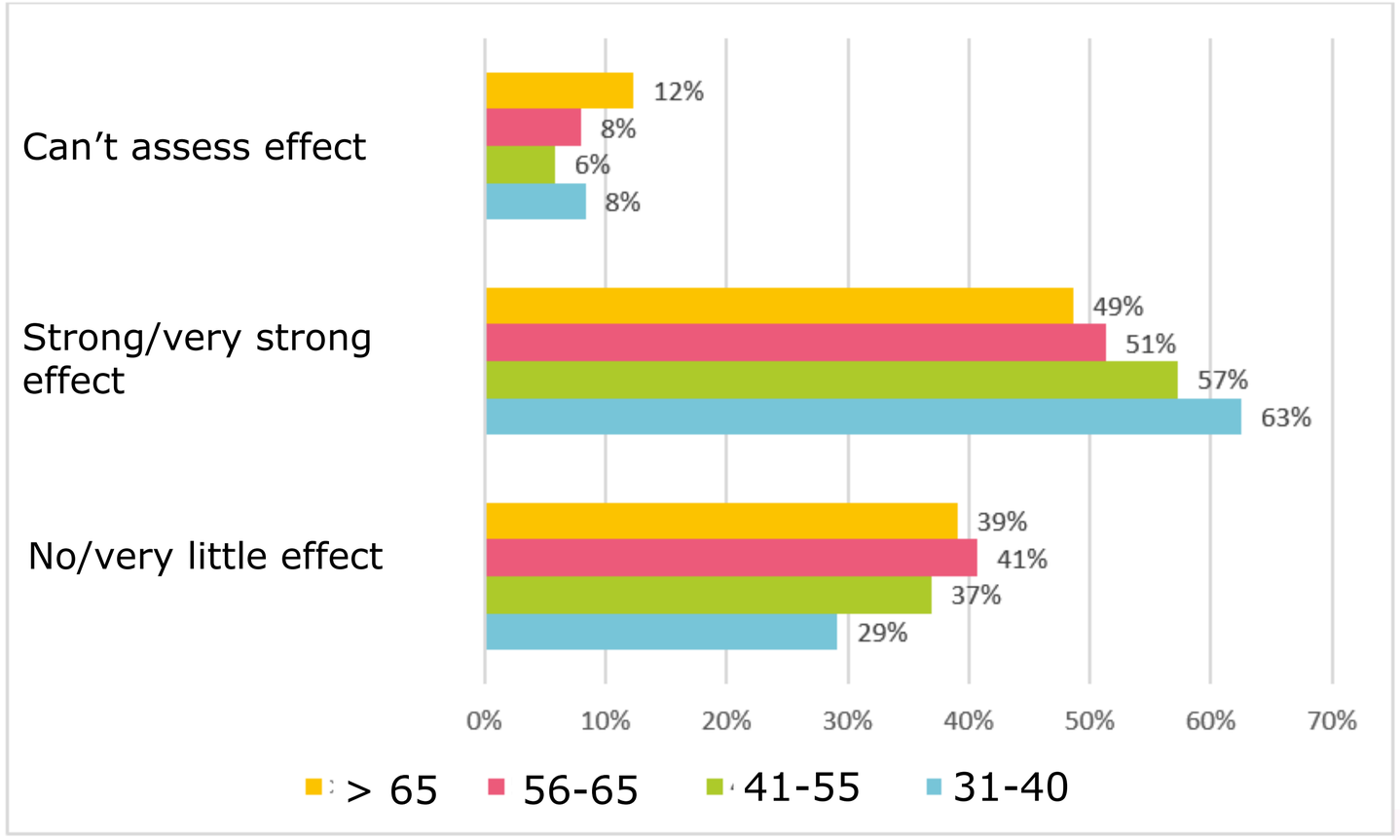
... can finance the measure from their own financial resources

... have not yet considered the possibility of financing

... need a bank loan

There are owners who cannot obtain a loan from the bank.

Easier access to financing thanks to “energy loans”



n=410

- Majority for strong/very strong
- Slight minority for none/very little
- “Energy loans” with greatest effect for younger homeowners

Survey: Conclusion

Is access to finance a significant obstacle?

- Survey indicates that financing is a crititcal issue
- Loan-to-value critical in some cases
- Financing clarified and secured in only about half of the cases
- Requests for loans have been rejected by banks in some cases

Financing in comparison with other barriers

- Complexity is the most important barrier, followed by financing.

Which homeowners have difficulties financing the measures?

- Caveat "negative financing decisions": small sample, reasons for refusal unknown
- Younger owners and older buildings overrepresented

Supplementary financing instruments ("energy loans")

- No preferences regarding time horizon (and thus no clear rejection of long-term loans)
- Energy loans would tend to support younger owners more strongly

Flexibility of the banks in lending for more energy-efficient renovations?

Questions

- What can the banks already do with existing practice (energy mortgages, exception-to-policy, advising)?
- How could the lending practices be adapted to correctly account for the financial effect of energy retrofits and thus facilitate their financing?
- Options for the public sector to facilitate/enable this financing (risk taking, guarantees)?

Cooperation with partners in the Renowave project

- Raiffeisen Schweiz
- PostFinance

Option 1: Adequate calculation of maintenance and ancillary costs

Affordability

- Criteria for bank calculation: maintenance & ancillary costs, depending on building age, construction quality, condition of the building.
- Owner-occupied properties: 0.7 - 1.5% of the house value[1].
- Determined without taking into account actual costs (e.g. energy costs).

Insights:

- Adequate reflection of energy cost reduction facilitates financing properties renovated for energy efficiency relative to properties renovated for energy efficiency. Proposal for discussion: Use GEAK classes
- Energy efficiency retrofits increase affordability requirements (additional credit requirements dominate energy savings).
- Risk management view: Banks are interested in realistic affordability calculations (ancillary costs, energy costs, maintenance costs and provisions for refurbishment and modernisation)
- Competitive environment: Banks do not take energy and modernisation costs into account on their own initiative (some customers would have to be put in a worse position and could switch to competitors).

[1] Value considered by the bank in the lending process

Option 2: Financial products

Current status of the directives

SBVg Guideline on Energy Efficiency, Article 3

*The providers of mortgages **may structure their conditions** in the dimensions of loan-to-value, affordability, amortisation and interest rate **within the framework of the applicable self-regulations** in such a way as to **distinguish financing of sustainable properties from financing of non-sustainable properties**. They can further **develop additional offers** that serve the goal of improved energy efficiency.*

- Mandatory for SBVg members from 2024, and voluntary compliance by Raiffeisen.
- Example: Eco-discount for mortgages at Raiffeisen and other banks

Option 3: Valuation and loan-to-value

- Property value is determined using hedonic pricing models that reflect market valuation.
- Modernisations do not lead to increases in value on the market equal to the investment sum
  - Measures correspond to preferences of the current owners
  - Only part of the investments are value-increasing

Insights

- The loan-to-value criteria ensure that the mortgage provides the mortgage lender with sufficient security. Alignment with market valuation therefore makes sense.
- Questionable whether future risks related to climate change are adequately reflected (regulatory changes, increase in energy prices, topic of financed CO2 emissions, etc.).

New instrument: «energy loan»

Current findings

- Expert discussions and literature show that such an instrument is feasible.
- Model calculations show that the reduction of risk costs due to guarantee is limited - as is the associated risk. But: Relevant (and expensive) for high-risk/hardship cases.

Key questions

- For whom is the instrument intended?
- For "high-risk/hardship cases"? How are these defined?
- How does the design of an "energy loan" affect demand for energy retrofit and what would be the consequences for the national economy and the public sector?

Next steps

- In-depth analysis of which owners can afford to finance energy-efficient renovations, and which cannot.
- Investigate solution designed for “high risk/hardship cases” (definition, effects).
- Further considerations are necessary to show how the design of an "energy loan" affects demand, and the consequences for the national economy and the public sector.
- Classification of the instrument "energy loan" in the framework of public law solutions for new state tasks and derivation of possible solutions
- Assessment of the "energy loan" instrument from a public law perspective as a potential way to tackle new state tasks and identification of possible solutions.