## Upgrading Housing: The Potential and Limits of Borrower-Based Measures

Pierre Monnin, Reiner Martin, Ádám Banai, Kristīna Bojāre, Ján Klacso, János Szakács

Discussant: Alessandro Chiari, Czech National Bank

NBS Conference, 2025

#### Goals and Context

- Climate urgency in housing: Buildings account for 40% of EU energy use and 30% of GHG emissions (European Commission, 2020). Upgrading housing stock energy efficiency is crucial for EU climate targets.
- **Investment gap:** An estimated €275 billion per year in additional investment is needed for building renovation through 2030 (European Commission, 2020). Public funds alone are insufficient, highlighting the need for private financing.
- Role of households & banks: Households must undertake renovations or purchase energy-efficient homes, often requiring bank loans. However, strict borrower-based macroprudential limits (e.g., loan-to-value (LTV), debt-to-income) may constrain green lending.
- Paper's goal: Explore whether a targeted relaxation of borrower-based measures (BBMs) for "green" housing loans can unlock private financing for renovations while maintaining financial stability.

#### Methodology and Approach: Analytical Framework

- Analytical framework: The study identifies conditions under which easing BBM limits (e.g. higher LTV/DSTI caps) for energy-saving home improvement loans can be risk-neutral for banks.
  - Energy upgrades lower utility bills, effectively increasing borrowers' disposable income - this offset can support higher debt service without raising default risk.
  - Improved energy efficiency can enhance property values or reduce future value depreciation (mitigating transition risk), offsetting higher loan-to-value exposure.
  - Public support (grants or guarantees) alongside BBM easing can further reduce credit risk by sharing costs and encouraging prudent borrowing.

## Methodology and Approach: Case Studies & Risk Assessment

- Case studies: The paper reviews early implementations of "green" BBM adjustments in Europe.
  - Slovakia (2023): Allowed slightly higher debt-service limits and longer loan maturities for renovation loans.
  - Latvia (2024): Raised debt-to-income and debt-service ratios for mortgages financing energy efficiency improvements.
  - Hungary (2025): Increased maximum LTV (from 80% to 90%) and DSTI limits for green housing loans.
- Risk assessment: Using these examples and model calculations, the authors evaluate credit risk impacts, ensuring any relaxation remains consistent with macroprudential stability mandates (Monnin et al., 2025).

## **Key Findings**

- Unlocking renovation finance: Targeted BBM relaxation can modestly increase bank lending for energy-efficient renovations.
- Risk-neutral design is feasible: Energy cost savings and better collateral values offset the higher permitted borrowing, keeping default risk roughly unchanged.
- Limited scope so far: Measures adopted to date are narrow in reach. This limited scope means the observed effect on overall renovation activity has been small.
- Marginal incentives: The reduction in borrowing constraints, while directionally helpful, is not enough to drive mass renovation uptake in absence of other support.

#### Strengths of the Paper

- Original contribution: Introduces a novel link between financial stability tools and climate action
- Timely relevance: The research addresses the EU Renovation Wave objectives and Green Deal targets by suggesting how central banks/regulators can facilitate the necessary private investment (European Commission, 2020).
- Policy and research synergy: Aligns with emerging views among regulators (e.g., ESRB, 2022) that climate risks warrant macroprudential responses. The paper provides practical insight into how such responses can be designed without compromising core mandates.

## Limitations of the Paper

- Modest impact observed: Initial implementations of green BBM relaxations have shown only a minimal uptick in renovation lending. The paper acknowledges that the scale of the climate challenge dwarfs the small effects seen so far.
- Dependency on other policies: The effectiveness of BBM easing is heavily contingent on complementary measures. Without subsidies, tax incentives, or guarantee schemes, many households still find deep retrofits unaffordable and banks remain cautious.
- Calibration uncertainty: Determining how much to relax prudential limits (e.g., how many extra percentage points on LTV or DSTI) is complex. The optimal calibration likely varies by country and is sensitive to assumptions about energy savings and borrower behavior.
- Long-term risk unknowns: While presented as risk-neutral, there is some uncertainty in how these loans will perform over time. If energy savings or property value benefits are lower than expected, the assumed risk neutrality could be challenged.

## Methodology: Critique

- Very recent evidence base. Survey run right after (or even before) implementation; many answers are expectations, not outcomes.
- Self-reported risk metrics. Banks' own PD/LGD with many "similar/ don't know"; no loan-level triangulation.
- No causal counterfactual. Impact not separated from concurrent grants/guarantees/programs; DiD or event-study with admin data needed.
- Calibration: Slovakia. Energy-bill savings assumed to support 5-10k extra with "virtually no change" in delinquency risk; sensitive to energy prices, weather, rebound, heterogeneity.

- Calibration: Latvia. Flat +5pp DSTI from EPC ( $F\rightarrow C$ ) simulations.
- Calibration: Hungary. Back-of-the-envelope loan-growth; no equilibrium feedbacks (house prices, credit cycle).
- Selection & additionality. Marginal take-up noted: not shown loans are additional vs. infra-marginal borrowers.
- Cross-country comparability. Different BBM baselines/mandates in SK/LV/HU.

# Constructive Criticisms & Suggestions (I)

- Broaden empirical analysis: Expanding data collection on green-loan performance (default rates, energy savings realized, property value changes) would strengthen the empirical foundation and policy confidence.
- Improve policy calibration: Develop guidelines for calibrating green BBMs. For example, more precise estimates of average utility cost savings per renovation could inform how much extra debt service capacity to safely allow. Engaging in pilot programs with rigorous monitoring can aid calibration.
- Integrate with fiscal support: Policymakers should design green BBM schemes alongside fiscal incentives. Combining relaxed lending limits with grants, tax credits, or interest rate subsidies would make green loans more attractive, boosting uptake while containing risks.

# Constructive Criticisms & Suggestions (II)

- Enhance borrower inclusion: Consider ways to extend benefits to a wider circle of borrowers. Current measures often target those already able to borrow; future schemes could incorporate provisions for lower-income or credit-constrained households (possibly via public guarantee programs) to ensure broader impact.
- Coordinate policy efforts: Encourage collaboration between macroprudential regulators, government agencies, and even monetary authorities. For instance, central banks could support green lending via preferential refinancing facilities, amplifying the effect of BBM adjustments in a synergistic manner.

## Conclusions and Policy Implications

- Macroprudential role in climate: This work illustrates that financial stability tools can be innovatively leveraged to contribute to climate objectives. Easing borrower-based limits for green loans emerges as a promising idea to channel private finance into energy renovations.
- Not a silver bullet: Green BBM measures alone are insufficient to meet the enormity of Europe's housing retrofit needs.
- Policy uptake and scaling: Going forward, a key question is how to scale up these measures effectively. Policymakers must consider how to widen eligibility and incentive strength without introducing excessive credit risk.
- Open research questions: What is the long-term effect of green loan favoritism on financial stability? How do we ensure additionality (that these policies lead to renovations that wouldn't happen otherwise)? Addressing such questions will be vital as central banks and regulators refine their approach to aligning prudential policy with climate goals.

#### References

- Monnin, P., Martin, R., Banai, Á., Bojāre, K., Klacso, J., & Szakács, J. (2025). Upgrading housing: The potential and limits of borrower-based measures. Forthcoming working paper.
- European Commission (2020). A Renovation Wave for Europe Greening our buildings, creating jobs, improving lives. Brussels: European Commission Communication COM(2020) 662 final.
- ESRB (2022). The macroprudential challenge of climate change. European Systemic Risk Board report.