

# The aggregate and distributional implications of credit shocks on housing and rental markets <sup>\*</sup>

Juan Castellanos <sup>†</sup>

Andrew Hannon <sup>‡</sup>

Gonzalo Paz-Pardo <sup>§</sup>

May 2023

## Abstract

We propose a joint model of the aggregate housing and rental markets in which both house prices and rents are determined endogenously. Households can choose their housing tenure status (renters, homeowners, or landlords) depending on their age, wealth, and income. We use our model to study the introduction in Ireland in 2015 of macroprudential policies that limited loan-to-value (LTV) and loan-to-income (LTI) ratios of newly originated mortgages. The introduction of stringent LTV and LTI ratios mitigates house price growth, but increases rents and reduces homeownership rates. As a result, middle-income households are negatively affected.

**Keywords:** House Prices, Rental Prices, Homeownership, Life-cycle, Housing Affordability, Credit Conditions, Macroprudential Policy

**JEL classification:** D15, E21, E30, E51, G51

---

<sup>\*</sup>We would like to thank seminar participants at the ECB, the EUI, the St Gallen Macro Workshop, Norges Bank, BI Oslo and Paris School of Economics for their comments, and Jesus Bueren, Russell Cooper, Andrea Gazzani (discussant), Jonathan Heathcote, Ralph Luetticke, Ramon Marimon, Kurt Mitman, Ben Moll, Lukas Nord, Monika Piazzesi, Morten Ravn, Jirka Slacalek, Oreste Tristani, Gianluca Violante for helpful conversations. We are grateful to Matteo Crosignani for providing us with the distance data for our empirical analysis. The views expressed in this paper are those of the authors and do not necessarily reflect those of the European Central Bank.

<sup>†</sup>European University Institute, Department of Economics, Email: juan.castellanos@eui.eu.

<sup>‡</sup>University of Cambridge, Darwin College, Email: ah901@cam.ac.uk.

<sup>§</sup>European Central Bank, DG Research, Email: gonzalo.paz\_pardo@ecb.europa.eu.