MortgAge Premia in the Euro Area

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Talk overview

- Very preliminary and incomplete
- I like the idea
- Informative for understanding how mortgage spreads relative to risk-free rates vary across borrowers' age groups

This paper

- Research Questions:
  - *How does the cost of purchasing a home change over time for euro area households?*

- How?
  - Using a loan-level data set, authors document how mortgage spreads relative to risk-free rates vary across borrowers' age groups.
  - examining the implications of time-invariant age effects on mortgage spreads, controlling for cohort and time effects, as well as a rich set of borrower (e.g., loan-to-value ratios, income, mortgage maturity) and lender (e.g., issuing bank) characteristics.
  - relaxing the assumption of time-invariant age effects by allowing them to vary over time and analyse the evolution of life-cycle mortgage spread profiles.
  - exploring potential drivers that have caused the flattening of the age-related spread curve over time

Comment 1 – Results

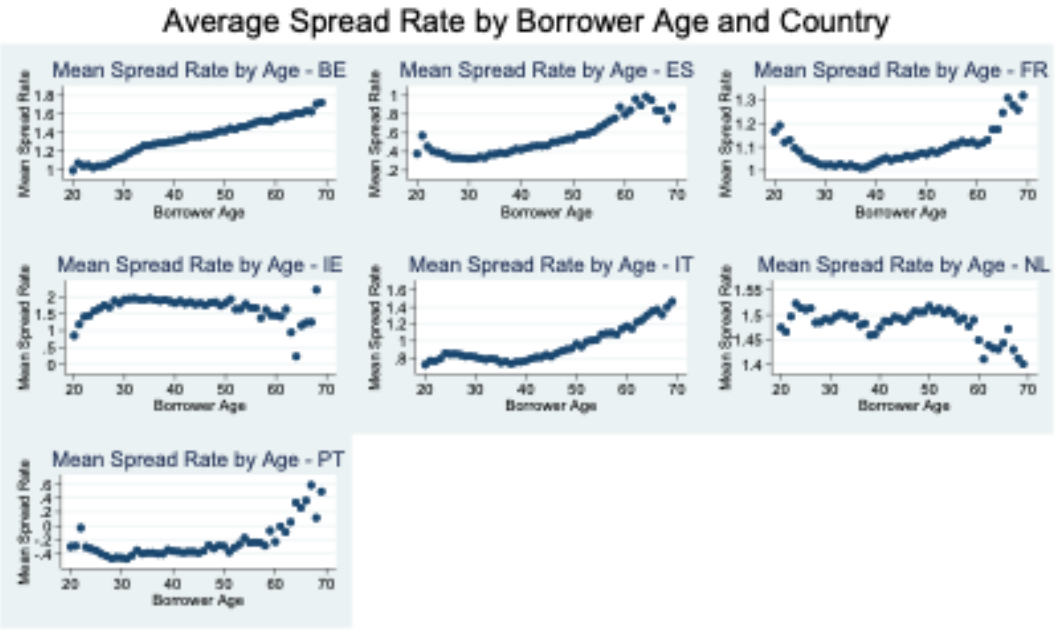

Figure 1: Unconditional age-specific mortgage spreads by country

Figure 1 reports our mortgage spread data by borrower age over the 2004–2019 sample period, based on a sample of over 18 million mortgages from our selected countries.
With the notable exceptions of Ireland and Netherlands (BE?) resulting mortgage spread profiles exhibit a 'smile' shape, indicating that—absent any controls for household, bank, or loan characteristics, and treating all years equivalently—younger and older borrowers face
age-specific premiums relative to the risk-free rate.

- Why is this result important? Does it affect access to finance?
- Is price discrimination a banking strategy to achieve … ? Is it relevant for monetary authorities, customers or banks? How?
- What is the economic magnitudes?
- Are the results different depending on national regulations?

Comment 2 – Descriptive statistics

Table 1: Descriptive statistics of loan characteristics: 2007-2019

	Median	Mean	St. Dev	Obs.
Adjusted Spread (bps)	1.180	1.173	0.880	6499513
Loan	97.000	110.563	107.557	6499513
Maturity (years)	23.756	22.693	8.066	6499513
Borrower age (years)	39.000	40.094	10.181	6499513
Loan-to-Income	48.280	405.967	522366.607	6499513
Loan-to-Value	80.220	75.349	30.158	6499513
Observations	6499513			

- Observations 6 499 513 – Are these only new loans granted each year?
  - If loans granted in previous years are also taken into account, how are treated loans granted previously but whose borrowers fall into a different age group?
- Why do you use overnight index swap (OIS) contracts as the risk-free rate to compute lending spreads as the main dependent variable?
  - Have you tested the robustness using an alternative risk-free rate?
- Insert more details about data

Comment 3 – Identification

Formally, in the APC, the mortgage spread for an individual homebuyer i is modelled as

$$spread_{i,t} = \beta_0 + \beta_a \cdot age_{i,t} + \beta_t \cdot D_t + \beta_c cohort_c + \beta_{i,x} \cdot X_i + \nu_{i,t}, \quad (1)$$
$$t = 1, \ldots, T, \quad i = 1, \ldots, N$$

Here, $spread_{i,t}$ is the mortgage spread faced by individual i at time t; $age_{i,t}$ is a vector of age dummies; D_t is a vector of year dummies that capture macroeconomic conditions common to all mortgages originated in one year; $cohort_c$ is the cohort of the borrower, summarised by its year of birth. Finally, X_i includes borrower- and loan-specific covariates such as income, loan-to-value ratio (LTV), interest rate type (fixed or flexible), bank identifier ($Bank_i$), and loan maturity. We experiment with several specifications

- Possible other determinants:
  - Market structure (competition); interest rates; market liquidity
  - technology; type of bank
  - Bank relationship (duration; number)
  - Current clients versus new customers; New loan versus refinancing a loan
  - Changes in the regulation at the country level;
  - Special programs (i.e. foreclosure moratorium) or products
  - Probability of default (NPLs)
  - Demand and supply shocks; price of houses;

- Interesting approach
- I really like the idea