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Asymmetric Effects of Borrower-Based Measures on Household Access to Finance and Default

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Empirical evidence regarding the asymmetric effects of macroprudential policies is still scarce, given the relative novelty of such instruments, as well as the challenges regarding granular data. In this paper we utilize a novel dataset which combines credit-registry information and data regarding tax returns to analyze the consequences of macroprudential policies on extensive and intensive margin, as well as debtor's payment discipline. Our paper is one of the few works which utilizes such granular data over multiple years, bringing to light its asymmetric effects depending on borrower characteristics and show-casing its distributional consequences.

The paper analyses the consequences of macroprudential policies on access to finance, loan volumes and default. We take advantage of Romania's rich history with debtor based macroprudential instruments and focus our analysis on two important regime changes: i) the releasing of hard limits for DSTI and LTV in 2007 as a result of Romania's accession to the EU and the introduction of a self-regulation policy and ii) the implementation of currency-differentiated LTV caps for mortgage loans and consumer loans maturity restriction in 2011. We utilize a unique debtor-based dataset which combines information regarding loan characteristics and default, with income data from the Ministry of Finance.

Using a multinomial logit model, we are able to evaluate the probability of a debtor being granted a loan, before and after the macroprudential regime was changed. Furthermore, we employ a Heckman model to evaluate how macroprudential policy impacts the amount at origination, conditional on loan acceptance. While the first model allows us to observe the impact of macroprudential policy on the extensive margin, measuring whether debtors are more likely to be rejected, our second model permits us to observe whether the amounts granted are also affected. This has important ramifications for debtors' decision to purchase a home, as well

as on home prices. Finally, we evaluate debtors' default behavior, using a logit model, by monitoring them for 3 years after the origination of the loan. As we observe income on an annual basis, we are able to control for transitions to unemployment and changes to salary, as well as for debt-service shocks due to changes in interest rates of fluctuations of the exchange rate.

We show that introduction of the self-regulation regime in 2007 encouraged riskier foreign currency lending, both at the extensive margin (i.e. leading to a higher probability of a loan being granted), as well as on the intensive margin (i.e. conditional on acceptance higher loan amounts were granted) at the expense of loans denominated in the national currency. We also find that the macroprudential policy loosening in 2007 benefited high-income debtors to a greater extent. Furthermore, loans granted in the capital region experienced the largest increases, conditional on acceptance. Using our counterfactual analysis, we show that in the presence of the DSTI and LTV limits, the number of new loans would have increased approximately 8 percent, as opposed to the increase of 31 percent for mortgages and 51 percent for secured consumer loans, which occurred under the elimination of the limits.

On the other hand, the quality of loans issued in 2007 declined compared with the period when LTV and DSTI limits were in place, with low income debtors experiencing the largest declines. This underlies that low-income debtors are more vulnerable to negative economic shocks. Using our counterfactual analysis, we find that the average probability of default would have been 30 percent lower for both mortgages and secured consumer loans. Additionally, we also observe a stronger improvement for low-income borrowers.

Reintroduction of hard LTV limits in 2011 did not have an effect in terms of overall access to mortgage credit. However, we observe significant heterogeneous effects by currency, income category and loan amount. We exploit a discontinuity of the maximum amount offered by loans under the First Home governmental program, to control for the impact of the LTV limit on access to finance for mortgages. Our findings show that the decrease in access to finance for standard mortgage loans below the threshold is offset by First Home loans, while the probability of taking out a mortgage loan above the threshold decreases by 40 percent. Overall, the probability of being granted a mortgage loan was stable or improved for low-income debtors, while average probability of being granted a loan fell for high-income debtors. In terms of currency, the regulation supported loans in national currency, as expected by the stricter LTV limits for FC-denominated loans. Conditional on being accepted, the regulation did not have an effect on the amounts granted to debtors, showing that the measure was most effective on the extensive margin. In the case of consumer loans, the maturity cap led to a significant decrease in the probability of receiving secured and unsecured consumer credit, as well as a reduction in the amount granted for loans that were accepted. Debtors with higher incomes experienced the strongest decreases.

Due to deteriorating macroeconomic conditions, the average probability of default for loans granted under the new regime deteriorated compared to the previous year for all types of loans, with the exception of First Home loans. Using a counterfactual analysis, we prove that by encouraging RON-denominated loans, the introduction of the LTV limit led to a 20 percent improvement in the average probability of default compared to maintain the self-regulation regime in the case of mortgage loans. Our counterfactual analysis shows that for unsecured consumer loans the maturity cap led to a 10 percent reduction in the average probability of default. Furthermore, the biggest improvement is observed for lower income debtors, showing that tighter macroprudential policy protects the most vulnerable income categories to a greater extent.