

# Collateral, Output Growth, Mortgage Spread Volatility and Subsidies in Colombia

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**Resumen:**

The housing market is one of the most dynamic and important sectors of the economy, not only in advanced economies but also in developing countries. In the 2007-2009 crisis in the United States was evident: "The U.S. financial crisis of 2008 followed a boom and bust cycle in the housing market that originated several years earlier and exposed vulnerabilities in the financial system" (Corporation, 2017). Among the shocks that triggered the crisis were the losses on subprime mortgage securities. The housing market is very closely related to financial and economic stability.

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The housing sector is one of the most relevant in terms of economic and financial stability. Understanding its behavior can prevent bubbles and busts in the economy. There are many studies about the corporate bond's spreads, but the studies about mortgage interest rate spread and its volatility remain scarce. Similarly, the analysis of the subsidies on the housing sector on different dimensions has not been investigated enough. The main objectives of the paper are: i) to investigate the main determinants of mortgage interest rate spread and its volatility at the macro level, ii) the determinants of the mortgage interest rate at the micro level, and iii) contribute to the empirical literature on macroprudential policies in the housing sector to improve financial stability in terms of credit growth. We use GARCH models, panel data models and a difference-in-difference approaches, respectively. We found that a GARCH (1,1) model with output growth explains very well the spread volatility. We also found that collateral is an important variable that explains mortgage interest rates, an increase of 1% in collateral decreases the mortgage interest rate in 0.28%. Finally, the impact of a change of housing subsidies focalization on the assignation of the disbursements of the beneficiaries with respect to the individuals that do not use the subsidies is an increase with a difference of 1.014%. The main policy implications of these findings are that policy makers should take in account the evolution of output growth to reduce the volatility of mortgage spread; that for financial stability purposes, collateral is a variable that should be regulated and that a macroprudential policy in the housing market could be the change of the focalization of subsidies.