

Risk Shocks and Housing Supply: A Quantitative Analysis

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### Abstract

This paper analyzes the role of stochastic uncertainty in a multi-sector housing model with financial frictions. We include time varying uncertainty (i.e. risk shocks) in the technology shocks that affect housing production and provide estimates of the time-series properties of risk shocks by using firm level productivity data. The analysis demonstrates that risk shocks to the housing production sector are a quantitatively important impulse mechanism for the housing market. Specifically, the model can match the volatility of housing prices observed in the data and, with adjustment costs in housing production, the model replicates the volatility of residential investment. We demonstrate that bankruptcy costs act as an endogenous markup factor in housing prices and are an important determinant of house price volatility. The model can also account for the observed countercyclical behavior of risk premia on bank loans.

- *JEL Classification: E4, E5, E2, R2, R3*
- *Keywords: agency costs, credit channel, time-varying uncertainty, residential investment, housing production, calibration*

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