

Heterogeneous expectations, boom-bust housing cycles, and supply conditions: a nonlinear dynamics approach

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Abstract

We develop a dynamic model of a speculative housing market, based on a simple 'stock-flow' setup, which incorporates explicit relationships between house price, housing stock, and rent (price of housing services), and governed by a parsimonious scheme of behavioral heterogeneity. The latter consists of an evolving interplay of extrapolative and regressive expectations, and is largely inspired by recent 'bounded rational heterogeneous agent' models of financial market dynamics. The model results in a two-dimensional discrete-time nonlinear dynamical system. Despite its simplicity, the model naturally generates long-lasting deviations of prices from 'fundamentals' and endogenous boom-bust price cycles. We therefore exploit this stylized, yet powerful model to investigate how 'real' forces, in particular supply conditions, affect the nature of housing bubbles caused by the speculative behavior of heterogeneous house market investors.

Keywords

Housing markets; Speculation; Housing supply; Boom-bust cycles; Nonlinear dynamics.

JEL classification

D84; R21; R31.

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