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Modeling Systemic House Price Risk

Economists and policy makers have become increasingly aware of the role of house price risk in driving financial fragility. This paper develops a semiparametric framework to model and assess downside risk in the U.S. housing market. First, we use panel quantile regressions to capture heterogeneous effects of supply, demand, and non-fundamental factors across the distribution of state-level house price changes. Second, we estimate the quantile regression jointly with a copula-based structure to capture cross-state dependence. Finally, we construct a measure of systemic housing risk using a weighted composition of state-level Case–Shiller price indices, allowing us to compare tail exposures and quantify cross-state contributions to aggregate risk. This is joint work with S. van Norden.