Aggregate Shocks and the Volatility of House Prices

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Both housing prices and housing transactions are much more volatile than GDP. In addition, housing transactions fluctuate much more than housing prices and they are positively correlated. This paper asks whether these features can arise in a suitably calibrated model of the economy that is subject to aggregate shocks to interest rates, to earnings and to demographics fluctuations. In other words our aim is quantitative asking whether we can have a theory of housing prices capable of generating the observed size of fluctuations. We build an overlapping generation model of an aggregate economy with many agents and where there are different size dwellings (houses and flats) in addition to financial assets, and where there are a variety of trading friction. In particular, there are no insurance possibilities against shocks, the purchases of houses requires a down payment as well as a transaction cost and the interest rate for borrowing is above the interest rate for lending. We are interested in the quantitative importance of the "property ladder effect" described by Ortalo-Magne and Rady (2004) where small changes in the price of flats may induce both housing transactions and larger changes in the price of houses due to the wealth increase experienced by flat owners. Preliminary findings are encouraging.