Modelling and forecasting mortgage delinquency and foreclosure in the UK

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Abstract

In the absence of micro-data in the public domain, new aggregate models for the UK's mortgage repossessions and arrears are estimated using quarterly data over 1983–2014, motivated by a conceptual double trigger frame framework for foreclosures and payment delinquencies. An innovation to improve on the flawed but widespread use of loan-to-value measures, is to estimate difficult-to-observe variations in loan quality and access to refinancing, and shifts in lenders' forbearance policy, by common latent variables in a system of equations for arrears and repossessions. We introduce, for the first time in the literature, a theory-justified estimate of the proportion of mortgages in negative equity as a key driver of aggregate repossessions and arrears. This is based on an average debt–equity ratio, corrected for regional deviations, and uses a functional form for the distribution of the debt–equity ratio checked on Irish micro-data from the Bank of Ireland, and Bank of England snapshots of negative equity. We systematically address serious measurement bias in the 'months-in-arrears' measures, neglected in previous UK studies. Highly significant effects on aggregate rates of repossessions and arrears are found for the aggregate debt–service ratio, the proportion of mortgages in negative equity and the unemployment rate. Economic forecast scenarios to 2020 highlight risks faced by the UK and its mortgage lenders, illustrating the usefulness of the approach for bank stress-testing. For macroeconomics, our model traces an important part of the financial accelerator: the feedback from the housing market to bad loans and hence banks' ability to extend credit.

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