Policy brief

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How do Regulators Influence Mortgage Risk?

Evidence from an Emerging Market

In brief

- This study is the first large scale loan-level analysis of the Indian mortgage market. The authors examine the regulatory environment in India with regards to mortgages, and seek to provide findings which may be helpful for regulatory policy in India.

- This study examines the period of 1995-2011 in the Indian mortgage market.

- The authors find evidence of the impacts of changing risk weights, ceilings on deposit interest rates by housing finance companies and changes in the definition of non-performing assets on mortgage risk in the form of default.

- Thus, changes in regulatory definitions lead to changes in defaults and have real impacts. However, this finding should be viewed with a degree of caution as they are inferred from aggregate time-series patterns over roughly 15 year

- Implicit subsidies inherent in the quantity restriction imposed by the priority sector lending norms distort the efficient markets relationship between mortgage rates and defaults. Thus, this allows us to potentially quantify the extent of distortion caused by the policy.

Indian Mortgage Market

At the outset, it is important to emphasize that to our knowledge, this is the first large scale loan-level analysis of the Indian mortgage market. Furthermore, we document several features of the shifting regulatory environment for mortgage finance in India in the Internet Appendix to our paper, available here:

"Changes in these regulatory definitions actually lead to changes in defaults, lending and monitoring behaviour, and hence have real impacts"

http://intranet.sbs.ox.ac.uk/tarun_ramadorai/TarunPapers/PrudentialRegulationAppendix.pdf

We believe this document helps to shed light on the details of mortgage regulation in India, at least over the 1995 to 2011 period. There are various hyperlinks and references to regulatory notifications contained within the document, which is important, as such changes are frequent, and not summarized in any one place. Moreover, we have physically scanned and created an electronic archive of all of the documents referred to in this Internet Appendix document.

Findings

Turning to the concrete findings of the paper which may be helpful for regulatory policy in India, our paper conducts two main analyses of regulatory policy for residential mortgages in India, and helps in the following ways:

1. We provide evidence of the impacts of changing risk weights, ceilings on deposit interest rates by housing finance companies, and changes in the definition of non- performing assets on mortgage risk in the form of default. The main theme here is that changes in these regulatory definitions actually lead to changes in defaults, lending and monitoring behaviour, and hence have real impacts. We are able to link these regulatory changes to changes in outcomes such as defaults, although our findings in this part of the paper do need to be viewed with some caution as they are inferred from aggregate time-series patterns over roughly 15 years. This means that the visual analysis we conduct in this part of the paper is strongly suggestive, but cannot be viewed as definitive at this stage. However, we are working on ways to better identify the impacts of these changes using various cross-sectional differences in the impacts of changes in these regulatory norms on loans with different characteristics.

"We document the implicit subsidy inherent in the quantity restriction imposed by the priority sector lending norms, using a new methodology"

2. We document the implicit subsidy inherent in the quantity restriction imposed by the priority sector lending norms, using a new methodology, which is summarized in the bubble plots in figures 12 through 17 of our paper. This methodology clearly shows that, especially during the earlier period in our dataset (i.e., 1995 to 1999), these lending norms distorted the efficient markets relationship between mortgage rates and defaults. This is helpful, as it allows us to potentially quantify the extent of the distortion caused by the policy – we could measure the extent to which subsidized loans deviate from the straight line relationship between mortgage rates and defaults which would exist in an efficient mortgage market. We view this as a broader contribution of the paper, as this methodology could be used more broadly for mortgage market analysis.

Consultations

"Especially during the earlier period in our dataset (i.e., 1995 to 1999), these lending norms distorted the efficient markets relationship between mortgage rates and defaults"

Turning to consultations with policy stakeholders during the research project, this happened in three ways:

1. During the writing of the paper, we consulted extensively with the Indian mortgage provider who provided us with the data, including soliciting (and receiving) comments from the mortgage provider after the first writing of the draft. We believe this process of consultation would help to influence thinking related to mortgage origination and default policy.

2. The paper was presented at the National Institute of Public Finance and Policy/ Indian Finance Ministry Department of Economic Affairs conference on March 15th, 2012 in Delhi (full program and participants on the conference website a link to which is provided here): http://macrofinance.nipfp.org.in/meetings.html. The conference routinely attracts significant Indian policymakers, and the Chairman of the Prime Minister's Economic Advisory Council gave the inaugural session at the conference. We received several good comments at the conference, which have been helpful in our revision of the paper.

3. We solicited inputs during the writing of the paper from senior regulators for housing finance and banking in India, consulting with policymakers including the former and current Chairmen of the National Housing Bank, the apex housing regulator in India for housing finance companies, the former Deputy Governor of the Reserve Bank of India, who is now the Director of the Centre for Advanced Financial Research and Learning (CAFRAL) of the Reserve Bank of India, and the Deputy Chairman of the Indian Planning Commission.

About the authors

John Y. Campbell is the Morton L. and Carole S. Olshan Professor of Economics at Harvard University. He grew up in Oxford, England, and received a BA from Oxford in 1979. He came to the United States to attend graduate school, earning his PhD from Yale in 1984. He spent the next ten years teaching at Princeton, moving to Harvard in 1994. In 2006 his undergraduate teaching was acknowledged with a Harvard College Professorship. Campbell has published over 80 articles on various aspects of finance and macroeconomics, including fixed-income securities, equity valuation, and portfolio choice. Campbell served as President of the American Finance Association in 2005 and as President of the International Atlantic Economic Society in 2009. He is a Research Associate and former Director of the Program in Asset Pricing at the National Bureau of Economic Research, a Fellow of the Econometric Society and the American Academy of Arts and Sciences, and Honorary Fellow of Corpus Christi College, Oxford, and holds honorary doctorates from the University of Maastricht and the University of Paris Dauphine.

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