We study whether a model with heterogeneous beliefs and rare-event risk can explain the household leverage cycle. We analyze and quantify the effects of beliefs dispersion and rare-event risk on household leverage and household debt pricing in a dynamic general equilibrium model. Heterogeneous beliefs drive households to borrow, and, thus, in an incomplete market subject to rare-event risk, default endogenously occurs in equilibrium. We find that the model can simultaneously account for both financial asset prices and leverages by households and financial institutions. Our results demonstrate that heterogeneous beliefs and rare-event risk are major drivers of the household leverage cycle.

In the wake of the 2008-2009 financial crisis, which triggered the worst global recession since the Great Depression of the 1930s, academic researchers and public policymakers have sought to explain its causes. While an emerging consensus is that the roots of the crisis lay in excessive pre-crisis household debt and the household leverage cycle, debate continues over the drivers behind the boom-and-bust household leverage cycle. The initial line of thinking suggested that financial innovation and deregulation had exacerbated agency problems and misaligned incentives, which led financial institutions to issue unsustainable credit to households, including subprime borrowers. Recently, however, a growing empirical literature has instead proposed a distorted beliefs view of household leverage, demonstrating that heterogeneous beliefs of investors may have led to rapid expansion of the credit market, and to increased asset prices in the run-up to the crisis. The paper employs a quantitative model that only features heterogeneous beliefs to determine which view can explain the asset prices and real quantities, and provide policy implications.

The paper has been presented at University of Illinois (Econ & Finance), University of Cambridge, Cambridge - Lausanne Workshop 2018, 2018 International Conference on Economic Theory and Applications.

To keep its tractability, the model assumes logarithmic utility functions. While the model explains the risky debt market well, one limitation of the assumption is that the model cannot speak too much about the equity market. We discuss and conjecture the possible results from relaxing the assumption.

The paper is under revision, and will be published on SSRN once finished.
This award has not yet produced any relevant outputs, but details of any future publications will be submitted to the CERF database as soon as they become available.