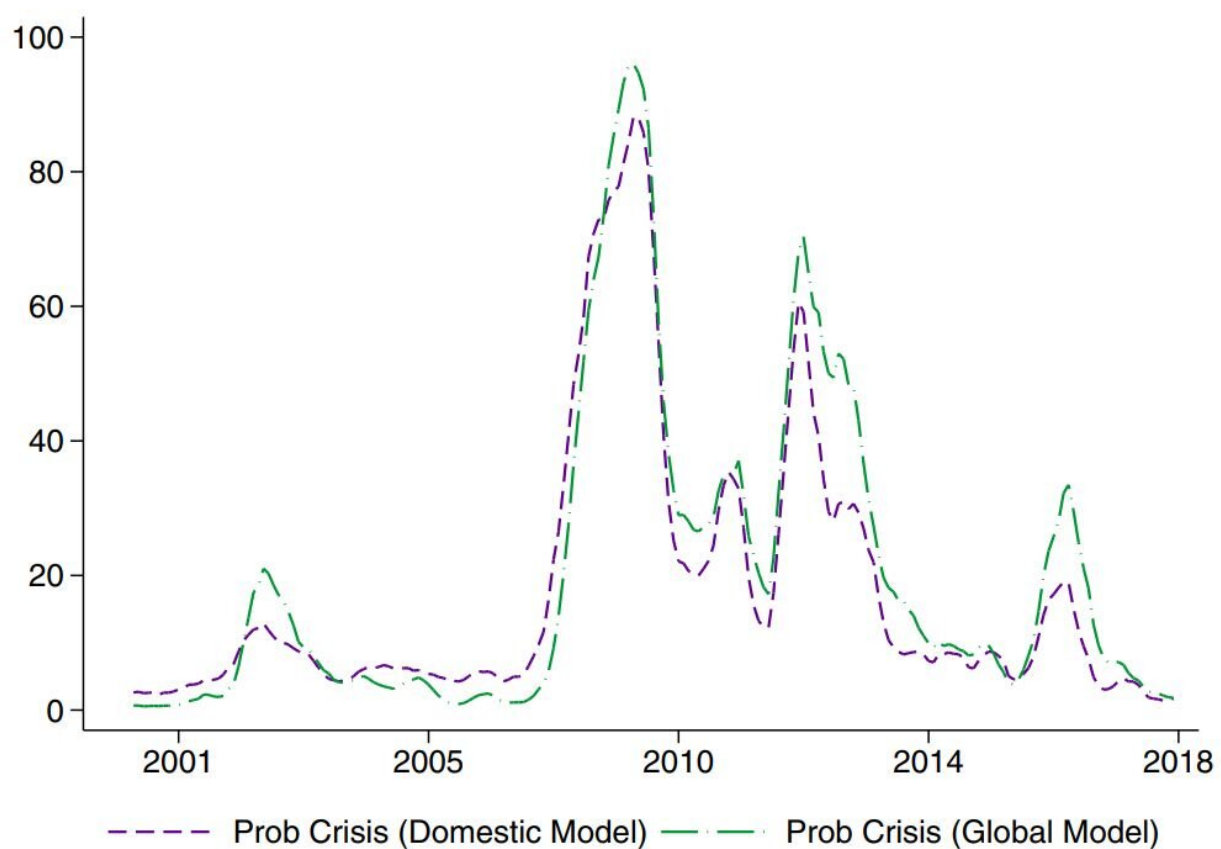


Using a bank analysis tool to make predictions about a national or global financial crisis

August 30 2019, by Bob Yirka



Probability of crisis (%): United States. Reproduced with permission from Annu. Rev. Financ. Econ. 10, 125–152 (2018)., copyright 2019 by Annual Reviews. Credit: *Proceedings of the National Academy of Sciences* (2019). DOI: 10.1073/pnas.1903879116

Two economics professor have modified a commonly used bank assessment tool to make predictions about a national or global financial crisis. In their paper published in *Proceedings of the National Academy of Sciences*, Nobel Laureate Robert Engle and Tianyue Ruan of the National University of Singapore describe how they modified the tool and what it revealed.

Recent news has included reports of an impending [recession](#). But thus far, most arguments for it are based more on assumptions and gut feelings rather than science. To fill that void, Engle and Ruan used a well-tested economic [tool](#) called SRISK—it was developed as a means for testing the soundness of a bank during rough economic times.

SRISK works by using [economic data](#) to measure things like capital shortfalls during times of economic stress. To apply it at a national level, the researchers used it on a number of important financial institutions such as Freddie Mac, Fannie Mae, Lehman Brothers and Morgan Stanley. They also added stock market trend information. Output from the tool was therefore an aggregate of scores that together provided some degree of warning of an economic downturn.

To test the tool, the researchers used data from the last recession (starting in 2007) and found that it very accurately showed what happened after the housing loan crises (in the U.S.) and the subsequent downturn. They found that it also showed very clearly how interconnected the world is today—as the crises grew in the U.S., other countries began to feel the effects, and soon experienced a recession, as well.

The researchers report that they found no indication of an imminent downturn, much less a recession. But they also note that the SRISK tool was designed to function as a short-term analysis tool. The economic fortunes of a country, or the world, for that matter, can turn around very

quickly, they note, as occurred during the last recession.

More information: Robert F. Engle et al. Measuring the probability of a financial crisis, *Proceedings of the National Academy of Sciences* (2019). [DOI: 10.1073/pnas.1903879116](https://doi.org/10.1073/pnas.1903879116)

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