

An Early Warning Model for Predicting Credit Booms Using Macroeconomic Aggregates

Working Paper No. 723 Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHOR OR EDITOR Alexander Guarín Andrés González Daphné Skandalis Daniela Sánchez

In this paper, we propose an alternative methodology to determine the existence of credit booms, which is a complex and crucial issue for policymakers. In particular, we exploit the Mendoza and Terrones (2008)'s idea that macroeconomic aggregates other than the credit growth rate contain valuable information to predict credit boom episodes. Our econometric method is used to estimate and predict the probability of being in a credit boom. We run empirical exercises on quarterly data for six Latin American countries between 1996 and 2011. In order to capture simultaneously model and parameter uncertainty, we implement the Bayesian model averaging method. As we employ panel data, the estimates may be used to predict booms of countries which are not considered in the estimation. Overall, our findings show that macroeconomic variables contain valuable information to predict credit booms. In fact, with our method the probability of detecting a credit boom is 80%, while the probability of not having false alarms is greater than 92%.

The opinions expressed here are those of the authors and do not necessarily represent neither those of the Banco de la República nor of its Board of Directors. As usual, all errors and omissions in this work are our responsibility.