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SYSMO I: A Systemic Stress Model for the Colombian Financial System

Borrador número 1028 Keep in mind
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This paper presents the first version of SYSMO, the analytical framework employed by the Financial Stability Department at the Banco de la República (the Central Bank of Colombia) to perform its biannual, top-down, stress testing exercise. The framework comprises: (i) a module to produce internally consistent macroeconomic scenarios; (ii) a set of satellite risk models that capture the materialization of credit and market risks in times of stress, and (iii) a bank model that simulates the endogenous response of banks to an adverse scenario. The framework also incorporates endogenous contagion and funding risks, key regulatory constraints (solvency and liquidity), and the feedback effects between the endogenous response of banks and the macroeconomic scenario. The use of SYSMO is illustrated with the example of the stress testing exercise published in the Banco de la República's Financial Stability Report of the second semester of 2017.

Fuente: https://www.banrep.gov.co/en/borrador-1028