

[Borrador número 1028](#)

Keep in mind

La serie Borradores de Economía es una publicación de la Subgerencia de Estudios Económicos del Banco de la República. Los trabajos son de carácter provisional, las opiniones y posibles errores son responsabilidad exclusiva del autor y sus contenidos no comprometen al Banco de la República ni a su Junta Directiva.

AUTHOR OR EDITOR

Santiago Gamba

Oscar Jaulín

Angélica Lizarazo

Juan Carlos Mendoza

Paola Morales

Daniel Osorio

Eduardo Yanquen

The opinions contained in this document are the sole responsibility of the author and do not commit *Banco de la República* or its Board of Directors.

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.