A general equilibrium approach to analyzing financial stability in Colombia

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Central banks have achieved positive results for inflation during the last two decades. At the same time, their concern for financial stability has increased, particularly after the late nineties, when they experienced the high costs that come with financial crisis.1 Moreover, it now seems clear that, under extreme circumstances, financial stability can pose a constraint to the normal operation of monetary policy (See Vargas et al., (32006)).

For these reasons, central banks now use a set of tools to assess and promote financial stability. According to Bårdsen, Lindquist and Tsomocos (2006), these tools range from calculating indicators to designing structural macroeconomic models. The latter are understood as complex environments that allow for an analysis of interaction between the different agents at hand and the financial system (banks, depositors, regulators, etc.), as well as the effect of changes in the stance of monetary policy.

The Bank of England was a recent pioneer in constructing models of this type, particularly dynamic general equilibrium models with a finite horizon (DGEMFH).2 The main developments in this respect are summarized in the work of Tsomocos (2003) and Goodhart, Sunirand and Tsomocos (2004, 2005, 2006a and 2006b). The Financial Stability Department at Banco de la República has applied these developments to a recent analysis of the stability of Colombia's financial system. The initial results of that exercise are summarized herein,3 particularly the assessment of how the model behaved in replicating the series observed in the Colombian financial system.

There are five sections in this article. The first offers justification for using a model to analyze financial stability. The second presents a simplified version of the model that was employed. It is a DGMFH with several features particular to the Colombian financial system. The third and fourth sections outline how the model was applied. Finally, several thoughts about its application are presented in the form of a conclusion.

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