

Discussion Paper #: 24-2013

Paper Title: Financial Stress, Regime Switching and Macrodynamics: Theory and Empirics for the US, EU and Non-EU Countries

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Referee Comments

The authors propose a macroeconomic model with a finance-macro link which uses multi-period decisions framework of economic agents. The model is considered into two regimes of financial stress (i.e., high and low financial stress regimes). Furthermore, the authors studied the impacts of financial stress shocks on the macroeconomy in a large number of countries by using a Multi-Regime VAR (MRVAR) so to point out the empirical evidence of the two regimes of financial stress in real economies.

The paper is interesting and try to address important issues on over-borrowing and financial stress that are nowadays characterizing the discussion on macroeconomic policy, but some requests do arise.

In Section 6.2, the authors compare the estimations of the Multi-Regime VAR with a Markov switching model. However, a discussion on the differences (pros&cons) can be helpful so to understand why the MRVAR should be preferred.

The solutions of the model make reference to nonlinear model predictive control (NMPC) and a short discussion on the algorithm (hypothesis, pros&cons) can be helpful so to better understand. Furthermore, the authors should address why there is the need to mimic a finite horizon decision making rather than to consider a real finite horizon decision making.

The model, the regimes and, in general, all results proposed in the paper are originated by the dynamics of aggregate debt. In this respect, a more detailed discussion is required so to better understand the differences between the proposed model formulations. Furthermore, authors should point out:

- the differences between b and b_t , k and k_t and the reason of their specific presence in the equations that describe the dynamics of aggregate debt (i.e., eqs. (3), (6) and (10))
- the reasons of the quadratic assumption for the adjustment cost for investment $\varphi(g_t, k_t)$
- the reasons to represent the credit spread as an *arctan* function of the debt to capital stock ratio (i.e., eq. (7))

Furthermore, authors should check correctness of eqs. (6) and (7), whose combination yields a β^2 coefficient

Finally, the paper is generally adequate and requires only to revises English and some typos.