BANK LEVERAGE SHOCKS AND THE MACROECONOMY: A NEW LOOK IN A DATA-RICH ENVIRONMENT

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The recent crisis has revealed the potentially dramatic consequences of allowing the build-up of an overstretched leverage of the financial system, and prompted proposals by bank supervisors to significantly tighten bank capital requirements as part of the new Basel 3 regulations. Although these proposals have been fiercely debated ever since, the empirical question of the macroeconomic consequences of shocks to banks' leverage, be they policy induced or not, remains still largely unsettled. We aim to overcome some longstanding identification issues hampering such assessments and propose a new approach based on a data-rich environment at both the micro (bank) level and the macro level, using a combination of bank panel regressions and macroeconomic factor models. We first identify bank leverage shocks at the micro level and aggregate them to an economy-wide measure. We then compute impulse responses of a large array of macroeconomic indicators to our aggregate bank leverage shock, using the new methodology developed by Ng and Stevanovic (2012). We find significant and robust evidence of a contractionary impact of an unexpected shock reducing the leverage of large banks.

Although we feel the evidence can be a useful contribution to the policy debate about the pros and cons of the heightened capital requirements being imposed on large banking corporations, we see our results as providing at best an upper bound of the likely short-run adverse economic impact of a surprise increase in capital requirements. Indeed, our capital ratio shocks at the individual level, however convincingly orthogonalized to possible credit demand effects, remain a combination of various unobservable influences affecting bank leverage. Tighter regulations, if any, are only one possible source of the volatility of the innovations to capital ratios we can observe in our sample.

That said, our results lend support to the view that a switch to tighter capital regulations should be gradual and operate preferably through accumulated earnings in order to minimize its short-run negative consequences for the economy.

The full study is available on CIRANO's Website at:

http://www.cirano.qc.ca/pdf/publication/2012s-23.pdf