

Abstract

The paper studies the effects of the risk-based capital ratio on bank lending due to the substantially heightened capital requirements (Basel III and the Stress Tests) in the U.S.. The effectiveness of monetary policy is examined as well. In addition, the effects of the capital ratio on banks' common stock equity and retained earnings are examined. The study uses the quarterly bank level data from the FDIC ranging from 2001 Q4 to 2017 Q3. The unbalanced dataset covers between 6,000 and 9,000 depository institutions in the U.S., with a total of 500,000 observations across 64 quarters. The data is divided into two sub-samples to compare the effects between pre and post the introduction of the heightened requirements in 2009. The analysis uses standard dynamic lending models based on several studies including Kashyap & Stein (1995), Gambacorta & Mistrulli (2004), Berrospide & Edge (2010), Gambacorta & Shin (2016) and Borio & Gambacorta (2017). Dynamic panel regression methods such as system GMM and lags of explanatory variables are used to mitigate the endogeneity issues according to Anderson & Hsiao (1981), Arellano & Bond (1991), Ahn & Schmidt (1995) and Blundell & Bond (1998).

The regression results suggest that the risk-based capital ratio is generally insignificant, or only marginally positive in affecting banks' lending growth rate after the introduction of heightened capital requirements. Factors such as monetary policy, the liquidity ratio¹ and non-performing loans are statistically significant, hence more important in affecting lending than the risk-based capital ratio. The observed effectiveness of monetary policy in stimulating lending decreases across sub-samples.² Moreover, the risk-based capital ratio does not significantly affect banks' common stock equity and cumulative retained earnings.

¹A ratio of sum of cash and securities to total assets, reflecting banks' liquidity position.

²The coefficient of cumulative effects of monetary policy changes sign across sub-samples. Explanations are given in section 6.1 - Analysis and Results.

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