Can better capitalised banks be more profitable? An analysis of large French banking groups before and after the financial crisis

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Key question

In response to the financial crisis of 2008-2009, banking regulation on the international level was strengthened, with the Basel III Accords subjecting banks to increased capital requirements. Henceforth, does the cost of a larger share of capital in the banks' funding structure necessarily have a negative impact on their profitability? What is the empirical effect of a capital increase on profitability? Is this effect the same when the capital increase results from a shares issue?

Methodology

The study focuses on 17 large French banking groups over the period 1993-2012. A fixed effect model is estimated, adjusted for heteroscedasticity and autocorrelation. Capitalisation metrics are lagged in order to reduce potential simultaneity biases. Other variables deemed relevant to the explanation of profitability are included.

Results

Aside from the general trend in profitability, the banks whose accounting and regulatory capital ratios increase more than the average display improving profitability rates. All else being equal, a 100-basis point increase of the different capitalisation metrics leads to a 3 to 10% increase of the average return on equity (ROE), depending on the metrics considered, and to a 7 to 30% increase of the average return on assets (ROA). This positive effect materialises with a time lag and shows a peak two years after the initial capital increase. The positive effect of capitalisation on ROA is weaker in the case of a share issue. However, the study does not distinguish more precisely between voluntary capital increases and increases imposed by regulation.

Impact of the capitalisation metrics on the return on equity (ROE) and return on assets (ROA)

	Return on equity (ROE)	Return on assets (ROA)
Accounting capital ratio	Non significant effect	Positive effect
Leverage ratio (US definition)	Non significant effect	Positive effect
Leverage ratio (Basel III definition)	Positive effect	Positive effect
Tier 1 capital ratio	Positive effect	Positive effect
Total capital ratio	Positive effect	Positive effect
Shares issues	Non significant effect	Weaker positive effect

Annual data taken from the accounting and supervisory database of the French Supervisory Authority.
Sample of 17 large French banking groups over the period 1993-2012 covering more than 90% of the French banking system.
Authors' calculations.

Key messages

While banks' average profitability has decreased since the crisis, the banks which have gradually increased their capital – in particular through retained earnings – have been able to strengthen their position, without prejudice to their profitability, as measured by ROE and, more markedly, by ROA. The positive effect on profitability takes some time to materialise. Despite a limited sample of observations, the value of this study lies in the use of a very rich confidential database, which allows the authors to recalculate capitalisation metrics using a consistent definition and to take into account information relating to additional, institution-specific capital requirements.

* Economie et Statistique / Economics and Statistics n°494-495-496, 2017. https://insee.fr/en/statistiques/3135080