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CPS Paper

Measures of Bank Competition and Bank Risk-Taking by Dr. Veronica B. Bayangos (vbayangos@bsp.gov.ph)

Author: Dr Veronica Bayangos

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Brief Description

Since the 2000s, reforms have greatly reshaped the structure of the global financial system.

Some banks have become big and interconnected while some have become risk takers.

Studies suggest that financial sector reforms promote bank competition in most advanced economies.

As such, discussions on bank competition have intensified in recent years particularly in constructing different measures of bank competition and in explaining their relevance in driving financial stability.

However, some studies also find that bank competition in many emerging countries have declined despite the implementation of financial sector reforms.

Crucially, the array of empirical studies has highlighted the influence of bank competition on financial stability, credit growth, and the regulatory drivers of competition in banking markets (De-Ramon and Straughan 2020).

This study attempts to contribute on research related to the role of bank competition on bank risk-taking by examining two competing views.

In the traditional “competition-fragility” view, Jimenez et al.

(2013) explain that increased bank competition could threaten the solvency of individual banks.

This could erode the franchise value of a bank which could encourage a bank to pursue riskier policies to maintain its profits.

These riskier policies could lead to higher non-performing loan ratios and potentially lead to bank failures.

The “competition-stability” view posits that a less intensive competition may result in higher lending rates, which may in turn raise the credit risk of borrowers due to moral hazard issues.

The increased default risk could drive more problem loans and greater bank instability.

However, such a situation allows a bank to protect its franchise value by pursuing safer policies that contribute to the stability of individual banks (Boyd and De Nicolo 2005).

Since the Philippines does not have official measures of bank competition, the approach is to first construct measures of bank competition based on market power from a unique dataset of balance sheet and income statements for 542 banks operating in the Philippines from March 2010 to December 2020.

These measures include the H-Statistic, Lerner Index, and the Boone Indicator.

The paper then estimates the impact of these competition measures on solvency risk or the risk of being unable to absorb losses with the available capital across universal bank, thrift bank, and rural/cooperative bank industries.

Using panel quantile regression, the results reveal that, at the industry level, bank competition reduces solvency risk.

Specifically, the Boone Indicator which measures efficiency, has the biggest impact on solvency risk among the measures of bank competition.

Looking at the risk distribution, the study shows the presence of the competition-fragility and competition-stability hypotheses holding simultaneously for universal banks suggesting that the effect of competition depends crucially on the underlying individual bank risk.

Equally importantly, the results highlight that the relationship between competition and bank risk is sensitive to factors related to extent of diversification strategy, cost-to-income ratio, deposit growth, capitalization, changes in the physical banking networks, and growth of real Gross Domestic Product.

Abstract

The array of empirical studies has highlighted the influence of bank competition on financial stability, credit growth, and the regulatory drivers of competition in banking markets. This study attempts to contribute to research related to the role of bank competition on bank risk-taking by examining two competing views - the traditional “competition-fragility” view and the “competition-stability” view.

The Philippines does not have official measures of bank competition. Our approach in the study is to first construct measures of bank competition based on market power from a unique dataset of balance sheet and income statements for 542 banks operating in the Philippines from March 2010 to December 2020. These measures include the H-Statistic, Lerner Index, and the Boone Indicator. The paper then estimates the impact of these competition measures on solvency risk or the risk of being unable to absorb losses with the available capital across universal bank, thrift bank, and rural/cooperative bank industries.

The study reveals important findings. First, at the industry level, bank competition reduces solvency risk. Specifically, the Boone Indicator which measures efficiency, has the biggest impact on solvency risk among the measures of bank competition. These findings imply that the impact of competition on bank risk depends crucially on the underlying individual bank risk. Second, cost efficiency plays a significant role in reducing bank risk and improving stability and on bank competition across industries. Third, the relationship between competition and risk is sensitive to other bank-specific characteristics and macroeconomic factors related to the extent of diversification strategy, funding source, capitalization and real GDP growth. Fourth, the findings show the positive and significant impact of changes in the physical banking network on bank risk for bigger universal banks and negative for thrift and rural/cooperative banks. Fifth, the study initially finds that the pandemic has increased bank risk across banking industries.