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RESEARCH SUMMARY

Benefits and Costs of a Higher Bank Leverage Ratio

The government's response to banking crises throughout US history has often been to enact new laws and regulations, promising that "never again" will such problems disrupt the financial system. Yet while major crises have become less frequent over the past century, they now tend to last longer than before.

In "Benefits and Costs of a Higher Bank Leverage Ratio," James R. Barth and Stephen Matteo Miller analyze the role of the equity-to-asset leverage ratio (also known as the capital-to-asset ratio) in reducing the economic damage from banking crises. To estimate marginal benefits of increasing the minimum bank leverage ratio, the study analyzes annual data on banking crises and the aggregate equity-to-asset leverage ratio from 1892 to 2014. To estimate marginal costs, the study analyzes quarterly data from a panel of all US financial holding companies with at least $ 1 billion in total assets between 1996 and 2014. Overall, the marginal benefits tend to exceed the marginal costs of imposing a leverage ratio increase, and in the baseline case, a leverage ratio of 19 percent equates the marginal benefits and costs.

BACKGROUND

Throughout US history, careful benefit-cost analysis has played a much smaller role in shaping banking laws than has the politics of banking interests.

- The United States has experienced more banking crises than other countries (10 major crises since 1825) in part because of a collusion between small banking interests and agrarian populists that worked to prevent interstate banking and branch banking.
- Interstate and branch banking restrictions help explain why so many crises have occurred, even though during much of the 19th and early 20th centuries, equity-to-asset ratios for US banks were higher than they are now.
- Laws passed to prevent crises may sometimes have unintended consequences that contribute to subsequent crises.
- Enacting successive laws and employing more regulators with greater powers have not proved to be good substitutes for simply maintaining a higher leverage ratio and for allowing banks to operate branches and to operate across state lines.

ANALYSIS

Examining the merits of increasing the leverage ratio for banks from 4 percent to 15 percent requires calculating and comparing the benefits and costs of such a change.

- The costs of increasing the leverage ratio arise from forgone economic growth: banks could pass on higher equity funding costs to borrowers, resulting in less investment.
- The benefits of increasing the leverage ratio include a reduction in the likelihood and adverse effects of a banking crisis.
- Annual data from 1892 to 2014 is analyzed using limited dependent variable regression methods to determine these benefits and costs.
- The robustness of a higher equity-to-asset leverage ratio is examined by varying assumptions, such as (1) whether crises have only temporary effects or some permanent effects, (2) the duration of the temporary effects of crises, (3) the loss per crisis, (4) the tax advantage of debt, and (5) the share of nonfinancial corporate funding coming from debt.

The benefits to society of increasing the capital ratio from 4 percent to 15 percent tend to exceed the costs.

- Across all cases examined in the paper, the average and median leverage ratios that maximize net benefits to society equal 21 percent, while the optimal capital ratio, assuming relatively conservative baseline benefits and the highest costs, equals 19 percent.
- The net benefits increase with a higher discount rate, a smaller tax advantage of debt, a lower assumed share of nonfinancial corporate funding coming from debt, a higher cost of crises, a longer duration of crises, and when crises have some permanent effects.