Analyzing Risk Taking of German Banks, 1895-1933
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Abstract

This project analyzes bank balance sheets from Germany during the period 1897-1933. The objective is to see if banks that hold higher levels of capital undertook less risk that those that were less highly capitalized. Given the emphasis of current day policy makers on strengthening bank capital ratios (e.g., Basel Accords, stress tests), this should be of interest to both economic historians and those concerned in current issues in banking.

The first part of the project was to compile individual bank balance sheets from 1895 to 1933 into a single database. Although aggregate banking data is readily available (Deutsche Bundesbank, 1976), there is no easily accessible data on individual bank balance sheets.

The second part was to observe how individual banking behavior may have been affected by the characteristics of the bank balance sheet. We attempted to identify which, if any, traits of banks, such as size or region, might have affected bank behavior.

You can say, contrary to what we expected, we found that banks with higher capital to asset ratios held less cash and were more rapidly growing than those holding lower capital to asset ratios.

Data and Methods

Panel data from individual bank balance sheets ranging from 1895 to 1933 obtained from the Handbuch der deutschen Aktiengesellschaften, a manual of German share companies.

Only banks from areas falling within present-day Germany were included. This was to help preserve the data from outliers and hopefully give a more accurate portrayal of domestic bank behavior.

Method: We used fixed effect and random effect models

Dependent Variables:
Asset Growth Rate—Used as an indicator for bank performance. Rapid growth may be a sign of profitability, but could also be a sign of excessive risk-taking. Also indicative of higher risk taking.
Cash/Asset—Used as a measure of how solvent the bank is and how cautious a bank is.

Independent Variables:
Dividend—Payments made to its shareholders. Most modern corporations attempt to keep dividends smooth to not disturb shareholders, but they were more fluid in the time period we’re working in. Used as perceived economic health in the public eye.
Regional Change—Change in number of banks in specific region. Used as an indicator of bank concentration within a region.
Current Age—Current age of bank according to the bank statement year to account for year-specific effects.
Log (Total Assets)—Log of total assets to account for size effects.
Capital/Asset—Capital to asset ratio, used to determine bank’s adequacy to meet time liabilities and credit risks. More capital suggests that banks will behave more cautiously.
Profit/Capital—Profit divided by capital.
GDP Rate—GDP growth rate.

Further Research

Although the results were not typical, there are many methods to test the validity of the results. Some could be used to evaluate the credibility of our research and others to discover different conclusions.

• Control for confounding factors—Other factors that could affect bank performance can be controlled for. Obtaining data on regional population is one possibility. This would help isolate the effect of capital assets on bank performance.
• Clean up data set—Having a large dataset allowed for mistakes in data format, missing data and incorrectly entered data. There were many mistakes and missing data in the balance sheets, and some missing years with no data.
• Duration Modeling—Duration models can be used to see how long a bank survived and how capital to assets affected their performance. These models can account for the different time periods each bank existed in.

References and Acknowledgements


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