Early warning systems for banking crises: does governance quality matter?

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Innovation

As the variable log time has a negative coefficient indicating that the variable does not enter crisis up to a certain point and then decreases. That is, if a country does not experience crisis until a certain year, the probability of experiencing a crisis after that year is smaller.
These results are the first innovation outcome for this thesis, no other hazard model has used this variable and produced these results.

The variable of global financial crisis dummy has an outcome of negative and significant. a significant outcome as overall it suggests that countries who had experienced a crisis were in a position of a significant high level of probability of experience a crisis. This variable outcome is the second innovation of this thesis, whereby previous papers have not used such a variable with such a large dataset and produced such significant results.

Abstract

The recent global financial crisis of 2008, has stimulated new interest among academics and policy makers in early warning system (EWS) models at the global level, aimed at providing warnings about the risk of a banking crisis. These models use variables within the banking and financial sector, monetary policy, macroeconomics variables and trade related. However, there has been very little use of variables in market power or regulation of this sector

Aim

The aim of this paper is to identify an optimum EWS for banking crises with the inclusion of corporate governance, banking regulation and market power above the original banking, financial and economic indicators, using a range of countries over a 25-year period.

Data

The data is for which data was available from International Financial Statistics (IFS), World Development Indicators (WDI), Global Financial Data (GFD) and DataStream. This collection was based on theory of banking crisis and previously used, however over a wider selection of countries and longer time span. The data has a total of 2252 observations, 133 countries, and 142 crisis years and shows the elements of logged time and forward crisis year, as well as regions.

Methodology

The methodology began with a stepwise method in order to add variables from the different categories to build up to the baseline model. The model was completed using 6 estimators and from these the finest model was selected. The selection process included the number of significant variables, the area under the curve (Lroc), estimation classification, the log likelihood, AIC and BIC.
The results are the probit model is the baseline for the model for this thesis.

Results

The model is estimated with one-year-forward crisis dummy. This model also includes a time variable and a global financial crisis dummy variable. It consist of 11 variables, of which 4 are significant the 5% level. The model estimation classification results are good overall classification (94.81%); very good classification of non-failure (99.89%) but not such a good classification of failure (3.03%). This is to be expected, the classification results favour the larger group, where this data set has more non-crisis years compared to crisis years

Future Work

The aim of the future work is to provide an overall EWS model for banking crises with the inclusion of corporate governance and market power. This will be achieved by using the variables from the categories of banking regulation, market power and corporate governance. The methodology will be the same as used when constructing the baseline model, through stepwise regression.