Determinants of Ratings in Banking and Financial Industry

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Executive Summary

The recent Global Financial Crisis has brought our attention to rating agencies and their integrity. Often blamed to be too slow to act, rating agencies become the main culprits of many financial crises. The recent liquidity freeze in the financial sector potentially undermines the rating in banking and finance industry, provided by rating agencies. This opens some research questions. Are bank ratings provided by rating agencies reliable? Have rating agencies done enough to avoid financial crisis? Have rating agencies properly evaluated banks and financial institutions? What should be appropriate determinants of bank ratings? This project aims to address these research questions. Our project aims to empirically address these research questions. The ultimate goal of this project is to provide a clearer picture on the determinants of bank and financial industry ratings, which will enhance credibility of ratings in this industry. The empirical findings from this paper will be of interests for bankers, investors as well as policy makers.

Background of the project

There have been a few papers in the area of determinants of ratings (see for example Cantor and Packer (1996), Linden, McNamara and Vaaler (1998), Trevino and Thomas (2000), Bissoondoyal-Bheenick(2005)). Our proposed project makes a clear contribution to the

existing literature as none of existing studies have examined the rating of banking and financial industries before. Further, our project include a wide range of different types of banks and financial industries in a wide range of countries such as the US, Australia, Canada and Japan[1]. This allows us to compare and contrast results among different countries and test the generalization of our model as well as a possible extension of spillover effect of rating among countries examined.

Proposed Model

Using data collected for all types of banks from BANKSCOPE as well as rating data from S&P, Moody's and Fitch, we aim to adopt the ordered probit model to examine what determine ratings in banking and financial industry. In a nutshell, the ordered probit model will allow us to break the dependent variable (i.e. Moodys Bonds and Notes, Moodys Bank Deposits, Standard and Poors Foreign Currency Rating, Standard and Poors Local Currency Rating for our case) into different categories, we then include all other variables that could explain the level of ratings as our independent variables in the model. In our cases, the independent variables are firm characteristics and economic variables. These variables include primary asset quality ratio such as nonperforming loan and leases to total loan and leases ratio, charges-off to total loan and leases ratio, provision to loan and leases loss to non-performing loan, allowance to loan and lease loss to non-performing loan, non-performing loans and leases to tangible common equity and loan loss reserve, and nonperforming loans to core earnings; proxies for market risk such as noninterest income as a percentage of gross operating income (including the component ratios of trading income to gross operating income, and investment income to gross operating income), and VAR (value-at-risk) index for trading portfolio; proxies for funding/liquidity/interest rate risk such as funding

[1] The number of countries examined depends on the availability of data.

composition ratios respective to cost of funds, total loans to core deposits, average liquid assets as percentage of average total assets, volatile liabilities net of temporary investments, to net loans and leases plus investment due in more than one year, interest rate VAR, and asset-liability finding gap schedule; proxies for capital adequacy such as tangible net worth, Tier 1 total BIS capital and other regulatory ratios, tangible net worth to total assets plus securitized assets, retained net income to average equity; proxies for operating performance such as net operating income growth rate. In addition, we also consider the following variables country and sovereign risk, economic and business risk, regulations and regulatory risk, ownership and corporate structure, management and strategy and risk management, as well as macroeconomic variables such as industrial production, unemployment rate (see A.M.BEST Bank rating Methodology 2007 and Curry et. al (2008) for detailed discussion of the appropriateness of these variables). Estimating this ordered probit model will assist us to identify factors influencing banks and financial firms' ratings.

Furthermore, given we cover a wider range of countries as well as various categories of banks, we will also apply panel regressions to our dataset, which will be an unbalanced panel. One of the major benefits from using panel data as compared to cross-section data is that it enables us to control for country level heterogeneity. Not controlling for these unobserved individual specific effects can lead to bias in the resulting estimates. This study will consider panel estimation, with correction for fixed effects in cross section, period and both cross section and period dimension.

Finally, the use of the above different modeling frameworks will enable us to get better understanding of the determinants of bank ratings across countries. It will differentiate our study from the existing literature, which mostly done using probit analysis only.