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Is sovereign risk related to the banking sector?☆,☆☆

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ABSTRACT

We examine whether the banking sector within a nation is related to sovereign risk. We hypothesize that more competitive and sophisticated financial systems are less prone to panics or bank runs, and consequently will be associated with superior sovereign credit ratings. Using Ordered Probit with Aggregate Time Effects methodology, our results show that banking sector characteristics such as concentration in the banking system, liquidity of bank assets, and size of financial system are significantly related to sovereign credit ratings. Since the use of these sovereign ratings is ubiquitous in international finance in varied applications such as determination of the cost of international borrowing by governments, international cost of capital for FDI, and others, the relationships identified in this paper have important public policy implications.

☆ This paper is dedicated to the memory of our coauthor, Geraldo M. Vasconcellos, who passed away suddenly on August 29th, 2011. We miss you Geraldo.

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1. Introduction

Global markets have gained significant importance due to financial liberalization across the globe. As a result, many businesses operate internationally, and investment portfolios include securities from various exchanges. Financial liberalization has been linked to growth (see Bekaert, Harvey, & Lundblad, 2005) and it is not surprising that emerging economies are increasingly embarking on such policies. The gains in these global markets are also associated with risks that can be different from those in domestic markets.

As a result, an understanding of these risks is essential in efficient allocation of investment capital. Consequently, this paper focuses on the exposures within different territories, namely country risk. In particular, we examine whether banking sector characteristics are related to the unique risk level of a country, as proxied by its sovereign credit ratings.[3] For example, even though there is an extensive literature on how competition in banking sector affects the probability of a bank failure (see Berger, Klapper, & Turk-Ariss, 2009; Turk-Ariss, 2010), there has been very little discussion on how this competition is related to sovereign risk. Our exploration into the importance of banking sector variables is especially timely given the recent bailout of banking institutions by governments across the international landscape.

Sovereign credit ratings are well suited for our purpose of examining sovereign risk since their use is ubiquitous in the field of international finance. First, they affect the cost of debt service for the borrowing nation, and superior ratings translate into cheaper access to international capital. Second, sovereign yield spreads, which are directly related to sovereign ratings, are used by financial analysts to compute risk premia that are incorporated into cost of capital computations for international project evaluation, and stock/asset valuation.[4] Given this importance of sovereign ratings in international financial markets, we attempt to uncover the factors that affect those ratings. While macroeconomic, social and legal factors, as prior research has indicated, would naturally affect the ratings, we examine some other factors that are relatively new. In particular, we explore variables that capture unique aspects of a nation's financial system and its institutional environment. We believe that these factors may have some additional explanatory power over and above the variables already uncovered in the literature.

We can summarize our results regarding non-macroeconomic variables as follows. First, we confirm that the Corruption Index (from Transparency International) is significantly associated with the ratings under our panel setting and ordered probit methodology. Second, when we introduce the "Trade in Services" variable as a continuous variable, we find that it is also a significant factor. More importantly, we demonstrate that concentration in the banking sector and increased liquid reserves of the banking system are associated with worse sovereign ratings, while nations with larger banking assets and higher market capitalization stock markets are associated with better ratings. The significance of these additional financial sector variables not only improves the explanatory power of the rating model, but also suggests some important policy implications related to the banking system for sovereign risk reduction. Our findings also support the "competition-stability" view on how competition in banking sector affects financial system fragility. Boyd and De Nicolo (2005) argue that the empirical literature on market power and bank risk taking can best be described as "mixed". However, our results are more in line with the positive effect of competitive markets.

The remainder of the paper is as follows. In Section 2, we provide a literature review related to sovereign risk. Next, we formulate our hypotheses explicitly, lay out the econometric model, and describe how we will test our hypotheses in Section 3. Then, in Section 4, we describe our dataset and discuss the expected behavior of macroeconomic factors. We present our analysis and empirical findings in Section 5, and explain the intuition behind the results. Section 6 presents several robustness checks on the results we presented previously in Section 5. Finally, we conclude in Section 7 with a discussion of our findings and potential directions for further exploration.

[3] We use foreign currency denominated sovereign credit ratings in our analysis. Even though, by definition "country risk" and "sovereign risk" are not the same, since the actions of governments have a direct impact on the economy, and sovereign credit ratings constitute a ceiling for the overall credibility of an economy, these terms are sometimes used interchangeably.

[4] See, for example, Lessard (1996).