The impact of sovereign rating actions on bank ratings in emerging markets

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ABSTRACT

This paper analyses the effects of sovereign rating actions on the credit ratings of banks in emerging markets, using a sample from three global rating agencies across 54 countries for 1999–2009. Despite widespread attention to sovereign ratings and bank ratings, no previous study has investigated the link in this manner. We find that sovereign rating upgrades (downgrades) have strong effects on bank rating upgrades (downgrades). The impact of sovereign watch status on bank rating actions is much weaker and often insignificant. The sensitivity of banks' ratings to sovereign rating actions is affected by the countries' economic and financial freedom and by macroeconomic conditions. Ratings of banks with different ownership structures are all influenced strongly by the sovereign rating, with some variation depending on the countries' characteristics. Emerging market bank ratings are less likely to follow sovereign rating downgrades during the recent financial crisis period.

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1. Introduction

Sovereign ratings have been a focus of widespread attention during 2010–2012, most obviously in the case of eurozone sovereigns including Greece and Spain and in the downgrading of the USA by Standard & Poor's (S&P) in August 2011. The IMF (2010) highlights that sovereign credit risk is one of the main current threats to global economic stability. Related to this, Duggar et al. (2009) identify that 71% of defaults by rated corporates and sub-sovereigns in emerging markets have occurred during sovereign crises. They also suggest that sovereign credit risk is a key factor in corporate defaults outside sovereign credit events. The aim of this paper is to investigate to what extent sovereign rating actions affect the credit ratings of banks in the same country. The paper models: (i) the effects of sovereign credit rating upgrades, downgrades and watch status on bank credit ratings; and (ii) how country characteristics and bank ownership influence the sensitivity of bank ratings to recent sovereign rating changes. The paper aims to provide insights into the rating policies applied by the world's largest credit rating agencies (CRAs).

A crucial factor motivating the analysis is the notion of the sovereign rating 'ceiling'. This means that generally the sovereign rating represents the highest achievable rating for non-sovereigns within that country. Although the largest CRAs no longer apply this ceiling as an absolute rule, it is still the prevailing situation in the vast majority of cases. For example, many non-sovereigns were downgraded in August 2011 following the USA downgrade. The sovereign ceiling inevitably has a greater impact on non-sovereign ratings in countries with lower sovereign ratings. For example, if the sovereign has a speculative grade rating, the potential rating scale for a non-sovereign issuer in that country is compressed. This paper focuses on emerging markets, where the effect of the sovereign ceiling is much more apparent.

Sovereign rating changes and outlook/watch signals affect bond and stock markets in emerging markets. The literature also shows that these effects are not only significant at the domestic level, since sovereign rating news is found to affect markets in other countries. In particular, negative sovereign rating news causes significant spillovers into other countries' stock and bond markets, while positive news has an insignificant effect (e.g. Brooks et al., 2004; Gande and Parsley, 2005; Ferreira and Gama, 2007). The economic and market impact of sovereign rating actions are discussed further in Section 2.

The large growth in debt issuers has increased the demand for ratings and the influence of CRAs in capital markets. The credibility of CRAs has been questioned over the past few years, in particular during the 2007 US subprime mortgage crisis. Yet, CRAs still control the gateway into capital markets for bond issuers, as well as providing debt market participants with valuable signals due to their access to private information. In general, the vast majority

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of studies on credit ratings have used data from a single agency (usually Moody's or S&P). More recently, a few studies have highlighted important inter-agency differences (e.g. Hill et al., 2010).

This paper contributes to the literature by examining the effects of sovereign rating actions on bank ratings. We consider the economic significance of detected relationships by calculating the effects of changes in the independent variables (sovereign rating change and sovereign watch status) on the probability of bank rating upgrades and downgrades of one and two or more notches, and the probability of no rating change, i.e., the marginal effects (see Livingston et al., 2008). We utilise a large dataset of emerging market bank ratings from the three global CRAs, namely Moody's, S&P and Fitch. Several robustness checks are performed using sub-samples by agency, bank ownership and time periods. We also investigate whether the characteristics of the countries, in terms of economic/financial freedom and macroeconomic conditions, influence the sensitivity of bank ratings to sovereign rating changes, and whether this impact varies across different bank ownership status.

The main results are as follows. Emerging market banks have very high probabilities of being upgraded (downgraded) soon after an upgrade (downgrade) to their corresponding sovereign rating. These effects are fairly consistent for all three CRAs, although some results imply that Moody's is the least likely agency to migrate bank ratings simultaneously with the sovereign rating. We find that the sensitivity of bank ratings to sovereign rating actions does vary depending on the country's overall economic and financial freedom and macroeconomic factors. The results are not driven by bank ownership, because state-owned, foreign-owned, and local privately-owned bank ratings are all affected very strongly. However, local privately-owned banks' ratings are the most sensitive to sovereign upgrades, and foreign-owned banks' ratings are the most sensitive to sovereign downgrades. This can be explained by varying levels of influence of country characteristics on bank ratings' sensitivity to sovereign rating actions across different ownership structures of banks.

The rest of the paper is organised as follows. Section 2 reviews the relevant literature, Sections 3 and 4 discuss the data and methodology, Section 5 presents the empirical results and Section 6 concludes the paper.

2. Literature review

2.1. Bank ratings

The literature linked to bank ratings is limited, and there is no prior research which documents how bank ratings are affected by sovereign rating signals. Ferri et al. (2001) examine the effect of linking banks' capital requirements with external credit ratings in non-high income countries, under the proposed Basel II regime. They find that the capital requirements of banks in these countries would become more volatile since the bank ratings seem to be strongly correlated to sovereign ratings. Caporale et al. (2012) show that bank ratings reflect banks' financial position and country of origin, whereby a bank in a less stable/developed/rich economy appears to have a lower rating. Using a sample of S&P credit ratings for 86 countries during 2002–2008, Shen et al. (2012) find that banks with higher ratios of profitability, liquidity and capital adequacy and better ratios of efficiency (cost-to-income) and asset quality (loan loss provisions to net interest revenues) tend to be assigned higher ratings. The influence of financial ratios on bank ratings is greater in low information asymmetry countries (such as industrial or high-income countries) but reduced in countries with high information asymmetry (such as middle-income countries and emerging market countries). Shen et al. (2012) also show that

larger bank assets and higher sovereign credit ratings boost bank credit ratings.

Poon et al. (2009) and Bannier et al. (2010) investigate bank ratings, but their focus is on whether unsolicited ratings are biased downward. These studies indicate that solicited bank ratings tend to be significantly higher than unsolicited ratings. Using S&P ratings for 460 commercial banks in 72 countries, excluding the United States, for the period 1998–2003, Poon et al. (2009) point out that banks with solicited ratings tend to be larger, have relatively less nonperforming loans to gross loans, and have higher returns on equity than banks with unsolicited ratings. Bannier et al. (2010) show that observed downward bias in unsolicited bank ratings (by S&P for 1996–2006) is driven by strategic factors within the rating process, and seems to increase along with bank's opaqueness.

On a related issue, Morgan (2002) analyses ratings assigned by Moody's and S&P across different US industries to determine whether there are more split ratings in the banking sector than in others, with split ratings used as a proxy for opaqueness. He finds that the proportion of split ratings is much higher in the banking and insurance sectors. He argues that banks are more opaque than other corporates, thus making it more challenging to quantify the risks arising from the nature of banks' assets and capital structure. Cash, loans and trading assets increase the uncertainties involved with quantifying banks' risks, whilst there is less uncertainty for banks with more fixed assets and capital. Similarly, Iannotta (2006) uses split ratings to test whether banks are relatively more opaque than other industries. For European data on firms rated by Moody's and S&P, he finds that the probability of a split rating increases by more than 20% when the issuer is a bank, compared to other industries.

2.2. Rating heterogeneity

Assessing the factors causing credit rating migration is a topical theme in recent credit ratings literature. The CRAs use outlook and watch as indicators of possible future rating changes, in order to retain rating stability whilst providing more information for market participants.[1] These instruments have been found to provide an important economic function (e.g. Bannier and Hirsch, 2010). Vazza et al. (2005) analyse the behaviour of S&P corporate issuer ratings placed on outlook and watch. They find that such issuers have a higher probability of a rating change in the direction specified by the watch or outlook. 70% (64%) of issuers placed on positive (negative) watch were subsequently upgraded (downgraded), normally within 90 days of having been placed on watch. 44% (35%) of issuers placed on positive (negative) outlook were subsequently upgraded (downgraded), within a 6-month to 2-year period after being placed on positive or negative outlook. Using data from six CRAs, Alsakka and ap Gwilym (2009) analyse the dynamics of sovereign ratings in emerging economies, while including the watch status. They find that sovereigns placed on watch have a higher probability of a rating change in the direction specified by the watch status, within 12 months of being placed on the watch list.

An important element of credit rating migrations is rating momentum, where the prediction of a future rating change for an issuer is dependent on its previous change. The implication is that an issuer that has experienced a previous upgrade (downgrade) is more likely to be upgraded (downgraded) in its next rating update. For S&P rated corporate issuers, Lando and Sködeberg (2002) find strong evidence of downgrade momentum except for issuers in the BB, CCC+ and CCC− rating categories, while little

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[1] Outlook reflects a CRA's medium-term (1–2 years) view on the development of a credit rating, while watch is a stronger indication focused on a typical ex-ante target horizon of 3 months.