



Important research streams around sovereign credit ratings

Rahul Gupta

Research Scholar, Department of Commerce, University of Jammu, Jammu, Jammu and Kashmir, India

Abstract

In recent years, investors are increasingly focusing on international diversification due to the inevitable globalisation of markets, and due to this the demand for sovereign ratings has increased manifold. Sovereign credit rating indicates the performance of a country on economic, political and financial fronts from the point of its ability in repayment of debt. It can affect the cost of capital of a company, its cash flows, its equity markets, and its firms' ability to raise capital on better terms. Due to its great importance for a country and the investors, sovereign credit rating emerged as an important topic of research. The aim of the present study is to highlight and explore the important research streams around sovereign credit ratings by summarising much of the available literature related to the topic. The study can provide insight to the future researchers about the areas sufficiently explored so that they can explore new areas of research related to sovereign credit ratings.

Keywords: bond returns, determinants, financial obligations, research areas, sovereign credit ratings

1. Introduction

Due to the rapid globalisation of markets in past few years, investors are increasingly inclined towards international diversification (Bissoondoyal- Bheenick, 2005) ^[8, 9]. They place a high value on the systematic assessment of credit risk. The risk of default to honour the debt obligations by the borrower when they fall due is known as credit risk (Kumar and Rao, 2012). The credit risk is one of the most important areas of recent financial research (Cantor, 2004) ^[12]. Most of the studies in financial research have used credit rating as a proxy measure for credit risk (Murcia *et al.*, 2014) ^[24]. Standard & Poor's (S & P), one of the top global rating agencies, has defined credit rating as "the opinion of a rating agency about the ability and willingness of the issuer, may be a corporation/firm or state or city government, to meet its financial obligations in full and on time" (Standard & Poor's, 2010) ^[27]. The risk evaluation provided by rating agencies of economic as well as financial obligations of a specific country by way of a ranking is known as sovereign credit rating. It indicates the performance of a country on economic, political and financial fronts from the point of its ability in repayment of debt. It determines countries' access to international debt markets and the terms of that access (Erdem and Verli, 2014) ^[18]. Sovereign ratings, like other ratings, represent an evaluation of the relative possibility that a country will not fulfill its obligations (Cantor and Packer, 1996) ^[13]. A country's sovereign rating is the major indicator of the development of its financial system and its openness (Butler and Fauver, 2006) ^[11]. In past few years, sovereign ratings' demand has increased manifold due to the rapid globalisation and integration of markets. Sovereign rating change can provide a major input in the re-weighting of international level portfolios (Bissoondoyal- Bheenick, 2005) ^[8, 9]. Further, sovereign credit ratings can affect the cost of capital of a company, its cash flows, its equity markets, and its firms'

ability to acquire capital on better conditions (Butler and Fauver, 2006) ^[11]. Also, the sovereign credit ratings act as a major determinant for foreign institutional investment and foreign direct investment (Roychoudhary and Lawson, 2010) ^[26]. Sovereign credit ratings are highly relevant for international financial markets, governments as well as economic agents. It determines the interest rates faced by a country in the international financial market and which in turn determines its borrowing costs and also because of its limiting impact on the ratings provided to companies and local banks (Afonso, Gomes, and Rother, 2011) ^[1]. Due to these reasons and realising its great importance for a country and the investors, sovereign credit rating is continuously being focused as an important topic of research by academicians and professional and government institutions. So, the objective of the present study is to identify the important streams of research related to sovereign credit ratings focused upon, by the review of literature available in this context.

2. Various Streams of Research around Sovereign Credit Ratings

On the basis of a review of available literature, following important research areas around corporate credit ratings have been identified:

2.1 Factors determining/affecting sovereign credit ratings

One of the most important research areas related to sovereign credit ratings being explored in the recent past has been the identification of factors affecting the ratings. Several studies in the literature have identified the determinants of sovereign credit ratings and the macroeconomic factors influencing sovereign credit ratings. Cosset and Roy (1991) ^[15] tried to identify the determinants of country risk ratings and found that the level of per capita income and propensity to invest affect positively the rating of a country. Cantor and Packer (1996) ^[13]

conducted a study to identify the determinants and impact of sovereign credit ratings and concluded per capita income, GDP growth, inflation, external debt, economic development, default history, fiscal balance and external balance as statistically significant determinants of sovereign credit ratings. Bissoondoyal- Bheenick (2005) ^[8, 9] identified GNP per capita and inflation as the most important variables affecting the sovereign ratings. Later Bissoondoyal-Bheenick, Brooks and Yip (2005) ^[8, 9] reported technological development, GDP and inflation as the most important determinants of sovereign credit ratings. On the other hand, quality of a country's legal and political institutions found to have a positive association with sovereign credit ratings by Butler and Fauver (2006) ^[11]. The authors also remarked that on an average, sovereign credit ratings are three times more sensitive to a change in legal environmental composite as compared to factors such as change in GDP, GDP per capita, inflation, foreign debt per GDP and overall economic development. Another study by Mellios and Paget-Blanc (2006) ^[23] reveal that government income, real exchange rate changes, per capita income, default history and inflation rate are the factors that mostly influence sovereign ratings. Similarly Roychoudhary and Lawson (2010) ^[26] revealed that countries with higher values on the EFW index, measuring the consistency of country's institutions and policies towards economic freedom, have higher sovereign credit ratings. A study conducted by Afonso, Gomes, and Rother (2011) ^[1] identified certain short term determinants such as GDP growth, government balance, government debt, GDP per capita and long term determinants such as external debt, foreign reserves, government effectiveness and foreign default affect a country's sovereign rating. In a study conducted in Latvia on determinants of sovereign credit ratings by Arefjevs and Braslins (2013) ^[6] GDP per capita, external debt as a percentage of exports, real growth rate, fiscal deficit, unemployment rate and the inflation rate are identified as the determinants of sovereign ratings. Also the factors that determine the ratings of China's Local Government bonds have been explored by Luo and Chen (2013) ^[17]. The results revealed that bond issue characteristics particularly bond issue size and bond type are the major factors determining the ratings whereas bond issuer characteristics have little explanatory power. Recently budget balance/GDP, governance indicators, reserves/GDP and GDP per capita are identified as most relevant macroeconomic indicators behind the sovereign credit ratings by Erdem and Verli (2014) ^[18]. Another latest study on the macroeconomic determinants of sovereign credit ratings by Chee, Fah and Nassir (2015) ^[16] concluded that six variables namely, ratio of foreign reserve to GDP, ratio of money supply to GDP, GDP growth rate per capita, economic development indicator, value of exports over GDP, and world's economic freedom have a positive effect on the sovereign credit rating. Further, five variables namely, real exchange rate, the default history, ratio of external debt to GDP, the real interest growth rate and value of external debt to exports reported to affect the sovereign credit rating negatively by the study.

2.2 Relating sovereign credit rating changes with associated national stock market and bond returns, volatility and capital inflows

The effect of sovereign credit rating change announcements on national stock market and bond returns, volatility and capital inflows is examined by a group of studies. For instance, Cantor and Packer (1996) ^[13] in their study to identify the effect of sovereign rating changes on bond yields reported that the bond yield movements follow the sovereign rating changes in the expected direction that are statistically significant. Brooks *et al.* (2004) ^[10] investigated the impact of sovereign rating changes on the returns of the associated national stock markets. The study revealed that rating downgrades have a negative wealth impact on market returns whereas upgrades have no effect on market returns. Another study by Pukthuanthong-Le, Elayan and Rose (2007) ^[25] assessed the impact of changes in sovereign ratings and outlooks on equity and bond market returns. The study reported that changes in sovereign ratings and outlook significantly affect both the stock and bond markets and only downgrade has a noticeable impact on equity and bond returns. Also, Cavallo, Powell and Rigobon (2008) ^[14] in their study revealed that upgrades in the sovereign ratings and outlook are related to lower spread forward, increases in the stock market, and an increase in the exchange rate. Recently, a study was conducted by Afonso, Gomes, and Taamouti (2014) ^[2] to investigate the effect of sovereign credit rating announcements on the volatility of stock and bond market in European Union (EU) countries. The study concluded that upgrades had no significant effect on volatility but downgrades increased stock and bond market volatility. Association of sovereign credit rating changes with capital inflows has also been examined by few studies such as Gande and Parsley (2004) ^[20], Kim and Wu (2008) ^[21], Chen *et al.* (2013) ^[17] and Bayar and Kilic (2014) ^[7]. These studies found that changes in sovereign credit ratings significantly and positively affect portfolio inflows, international capital inflows, private investment growth and FDI inflows.

2.3 Spillover of sovereign credit rating announcements

Some previous studies also examined the spillover effects of sovereign credit rating announcements on stock markets of other countries, on other credit ratings and other aspects also. For instance, Ferreira and Gama (2007) ^[19] in their study explored the impact of sovereign debt rating changes in one country on stock markets in other countries. The authors reported that rating downgrades have economically and statistically significant negative return spreads. Further, interdependence in rating actions of different rating agencies is analysed by Alsakka and Gwilym (2010) ^[5]. The researchers found evidence of interdependence in rating actions. The results of their study also revealed that downgrade (upgrade) probabilities are much lower and upgrade (downgrade) probabilities much higher for a sovereign rating issuer with a recent downgrade (upgrade) by another agency. Williams, Alsakka, and Gwilym (2013) ^[28] conducted a study to examine bank ratings' sensitivity to sovereign ratings and stated that

there is a high probability of banks being upgraded (downgraded) soon after an upgrade (downgrade) to their sovereign rating. Further, Almeida *et al.* (2014) [3] in their study on the effect of sovereign downgrades on investment of firm and its financial policy found that that firms with ratings at the sovereign bound reduce investment and leverage more than similar firms with a rating lower than the bound following a sovereign downgrade.

3. Conclusion

Sovereign credit rating plays a very important role for countries and international investors by supplying them superior information at low cost. By providing a reliable opinion about the default likelihood of the countries and their credit instruments, rating agencies help in the development of international capital markets. This further results in reducing the information asymmetry of the investors and enhances their confidence in investing in the rated instruments and countries. Realising such great importance to investors and users, sovereign ratings assigned to countries has evolved as a focus of research in the recent past. So, the present study tries to summarise the literature available to the best of knowledge, related to the sovereign credit ratings to highlight the major research streams around the sovereign credit ratings. The study finds three important areas of research related to sovereign credit ratings continuously focused upon by the researchers which include factors determining/affecting sovereign credit ratings, relating sovereign credit rating changes with associated national stock market and bond returns, volatility and capital inflows and spillover of sovereign credit rating announcements. The study can provide insight to the future researchers about the areas sufficiently explored so that they can identify new areas of research related to sovereign credit ratings.

4. References

1. Afonso António, Pedro Gomes, Philipp Rother. Short and long-run determinants of sovereign debt credit ratings, *International Journal of Finance and Economics*, 2011; 16:1-15.
2. Afonso António, Pedro Gomes, Abderrahim Taamouti. Sovereign credit ratings, market volatility, and financial gains, *Computational Statistics and Data Analysis*, 2014; 76:20-33.
3. Almeida Heitor, Igor Cunha, Miguel A. Ferreira, and Felipe Restrepo. The real effects of sovereign credit rating downgrades, Working Paper, Boston College. Retrieved from <https://research.mbs.ac.uk/accounting-finance/Portals/0/docs/The%20Real%20Effects%20of%20Sovereign%20Credit%20Rating%20Downgrades%20.pdf>, 2014.
4. Al-Najjar Basil, Mohammed M, Elgammal. Innovation and credit ratings, does it matter? UK evidence, *Applied Economics Letters*, 2013; 20:428-431.
5. Alsakka Rasha, Owain Ap Gwilym. Leads and lags in sovereign credit ratings, *Journal of Banking & Finance*. 2010; 34:2614-2626.
6. Arefjevs Ilja, Girts Braslinsm. Determinants of sovereign credit ratings: example of Latvia, *New Challenges of Economic and Business Development*, 2013, 15-25.
7. Bayar Yilmaz, Cüneyt Kilic. Effects of sovereign credit ratings on foreign direct investment inflows: Evidence from Turkey, *Journal of Applied Finance & Banking*, 2014; 4:91-109.
8. Bissoondoyal-Bheenick Emawtee. An analysis of the determinants of sovereign ratings, *Global Finance Journal*, 2005; 15:251-280.
9. Bissoondoyal-Bheenick Emawtee. Robert Brooks, and Angela YN Yip, Determinants of sovereign ratings: A comparison of case-based reasoning and ordered probit approaches, working paper, Department of Econometrics and Business Statistics, Australia, 2005.
10. Brooks Robert, Robert W Faff, David Hillier, Joseph Hillier. The national market impact of sovereign rating changes, *Journal of Banking & Finance*, 2004; 28:233-250.
11. Butler Alexander W, Larry Fauver. Institutional environment and sovereign credit ratings, *Financial Management*, 2006; 35:53-79.
12. Cantor Richard. An introduction to recent research on credit ratings, *Journal of Banking & Finance*, 2004; 28:2565-2573.
13. Cantor Richard, Frank Packer. Determinants and impact of sovereign credit ratings, *Economic Policy Review*, 1996; 37-54.
14. Cavallo Eduardo A, Andrew Powell, Roberto Rigobón. Do credit rating agencies add value? Evidence from the sovereign rating business institutions, Working paper, Inter-American Development Bank, New York, 2008, 3-48.
15. Cosset Jean-Claude, Jean Roy. The determinants of country risk ratings, *Journal of International Business Studies*, 1991; 22:135-142.
16. Chee Soh Wei, Cheng Fan Fah, Annuar Md Nassir. Macroeconomics determinants of sovereign credit ratings, *International Business Research*, 2015; 8:42-50.
17. Chen Sheng-Syan, Hsien-Yi Chen, Chong-Chuo Chang, Shu-Ling Yang. How do sovereign credit rating changes affect private investment?, *Journal of Banking & Finance*, 2013; 37:4820-4833.
18. Erdem Orhan, Yusuf Varli. Understanding the sovereign credit ratings of emerging markets, *Emerging Markets Review*, 2014; 20:42-57.
19. Ferreira Miguel A, Paulo M Gama. Does sovereign debt ratings news spill over to international stock markets?, *Journal of Banking & Finance*, 2007; 31:3162-3182.
20. Gande Amar, David Parsley. Sovereign credit ratings and international portfolio flows, in *Proceedings of the Joint ECB/IMF Workshop IMF*, Washington, 2004.
21. Kim Suk-Joong, Eliza Wu. Sovereign credit ratings, capital flows and financial sector development in emerging markets, *Emerging Markets Review*, 2008; 9:17-39.
22. Luo Robin H, Linfeng Chen. Yields, credit ratings, and bond characteristics: evidence of local government financing vehicle bonds, *SSRN Electronic Journal*, 2013, 1-30. <http://www.researchgate.net/publication/254950373>.
23. Mellios Constantin, Eric Paget-Blanc. Which factors determine sovereign credit ratings?, *The European Journal of Finance*, 2006; 12:361-377.

24. Murcia Flávia Cruz de Souza, Fernando Dal-Ri Murcia, Suliani Rover, José Alonso Borba. The determinants of credit rating: Brazilian evidence, *Brazilian Administration Review*, 2014; 11:188-209.
25. Pukthuanthong-Le Kuntara, Fayez A, Elayan, Lawrence C Rose. Equity and debt market responses to sovereign credit ratings announcement, *Global Finance Journal*, 2007; 18:47-83.
26. Roychoudhury Saurav, Robert A Lawson. Economic freedom and sovereign credit ratings and default risk, *Journal of Financial Economic Policy*, 2010; 2:149-162.
27. Standard, Poor's. Guide to credit rating essentials http://www.unite.it/UniTE/Engine/RAServeFile.php/f/File_Prof/MALAVOLTA_1250/SP_CreditRatingsGuide.pdf, 2010.
28. Williams Gwion, Rasha Alsakka, Owain ap Gwilym. The impact of sovereign rating actions on bank ratings in emerging markets, *Journal of Banking & Finance*, 2013; 37:563-577.