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How The Growth In Bond Market Affect The Performance Of Banks In Briics?

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ABSTRACT: *When it comes to raising capital, corporates have two major sources of external funds: Equity and Debt. Corporate debt consists of broadly two types – bank borrowings and bonds. A bond is a formal contract between a borrower and a lender whereby the borrower promises to repay borrowed money with coupons at fixed intervals and at maturity in which the participants are provided with the issuance and trading of debt securities. The main objective of this study is to understand how the growth in bond market affects the performance of the Bank in BRIICS countries. The variables like Bank's capital to asset ratio, Domestic credit to private sector, NPA, Portfolio investment and Bond market size has been analysed and Panel regression has been used to find the results. The results showed that all the variables analysed have a positive impact on the bond market growth and a leading effect on the banks.*
Keywords: *Bond market growth, Bank's capital to asset ratio, Domestic credit, NPA, Portfolio investment.*

I. INTRODUCTION

Corporates uses two types of fund sources to raise capital. One is Internal funding or internal accrual and other one is external sources such as equity capital and debt capital. When corporate raises capital using debt instruments, it's called corporate debt. Corporate debt can be broadly divided into two types bank borrowings and bond.

Bank borrowings is the most preferred mode of funding in India. Corporates take debt from banks or other financial institutions for various business purposes in standardized or non-standardized forms at varying interest and varying durations. This can either be project loans, syndicated loans, loans for working capital etc. Syndicated loans is one that involves a group of lenders, who are called syndicate, who pool their lending resources to make a loan. Project loans usually refers to loans given to specific project or tasks. Working Capital loans refers to loans given to businesses to run their daily expenses.

A bond is a formal contract between a borrower and a lender whereby the borrower promises to repay borrowed money with coupons at fixed intervals and at maturity. The bond market also called the debt market or credit market is a financial market in which the traders involved get to issue and trade of debt securities. Here, traders can either issue new debt in primary market or they can trade debt securities in secondary market. There are several types of bonds available in the market such as corporate bonds used by organizations to raise money for financing ongoing businesses or for expansion or Government issues government bonds for those risk averse investors by giving the face value on the agreed maturity date along with periodic interest payments or local government like cities, states, districts etc. issues municipal bonds to carry on with their local projects for development or mortgage-backed, asset-backed, and collateralized debt obligations bonds are issued by pledging asset(s). These type of bonds pay monthly, quarterly or semi-annual interest.

This study is mainly focused on bank financing and corporate bonds. (Jiang, Tang, & Law, 2002) points out that the main benefit of a well-developed corporate bond market is that it provides an alternate source of financing than bank financing. Some of the key advantages of corporate bond financing on bank financing are: a) Information asymmetry: Bond financing spreads the credit risk among a large group of investors while banks go through many layers of filtering before financing. B) Lower funding cost: In bond financing, a high quality borrower might find lower funding cost as the operation cost or the intermediation cost are lower than that of bank finance. While, some of the limitations in developing bond market could be lack of risk diversification that is, demand and supply depends on the wide range of investors available – domestic and foreign, presence of weaker currencies for developing countries.

However, overall it is maintained that a well-functioning and deep bond market enables financial development of the economy. Almost all economies focus on developing their capital markets along the banking sector. Some of the developed countries like Australia have followed sequencing method wherein they first developed their debt market and then bond market and while countries have simultaneously developed both market.

While India has a strong banking sector, its bond market is still in nascent stage. In the recent years, the policy makers have prioritise the development of bond market. In a seminar titled "Challenges in Developing the Bond Market in BRICS" conducted by Govt. of India, R. Gandhi, former deputy Governor of RBI said

(Gandhi, 2016), that investors are now focused in emerging countries including BRICS countries for high yield bonds, since most of the developed countries are having negative interest rates or zero yield debts. He also spoke about how emerging sectors contribute to 39% of global output and yet they account for 14% of the global corporate bond market value.

However, as the bond markets grow, they will impact the existing banking sector. This impact can have two dimensions. On one hand, a growing bond markets means that credit dispersion in the economy gets diversified and this will help in reducing the burden from the banks. On the other hand, a growing bond market implies increasing competition for the banking sector and can impact its performance and profits of the banking sector. The objective of this study is to understand the effect of growth in the corporate bond markets on the banking institution. We take into consideration both negative as well as positive impacts of the growth in the corporate bond market in BRICS countries (Brazil, Russia, India, China, South Africa).The data has been collected from BIS data and World Bank for the time period of 2000-2015

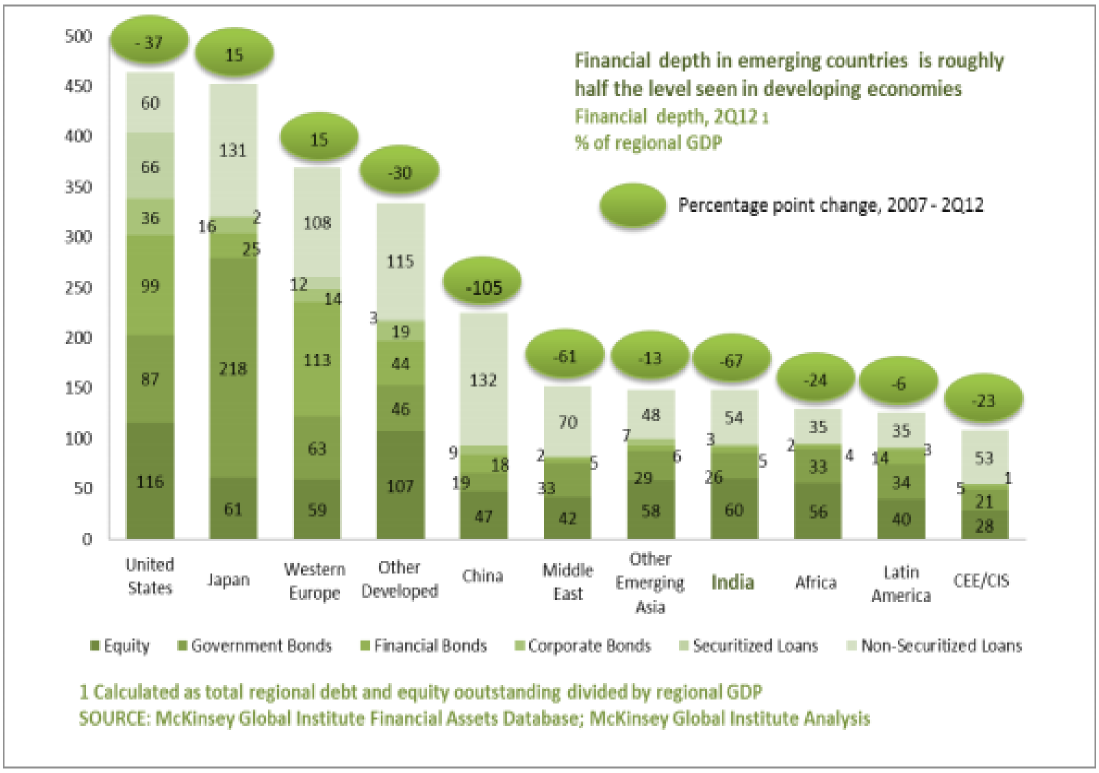
The study has been organised as follows: The following section provides literature review, the next section……..

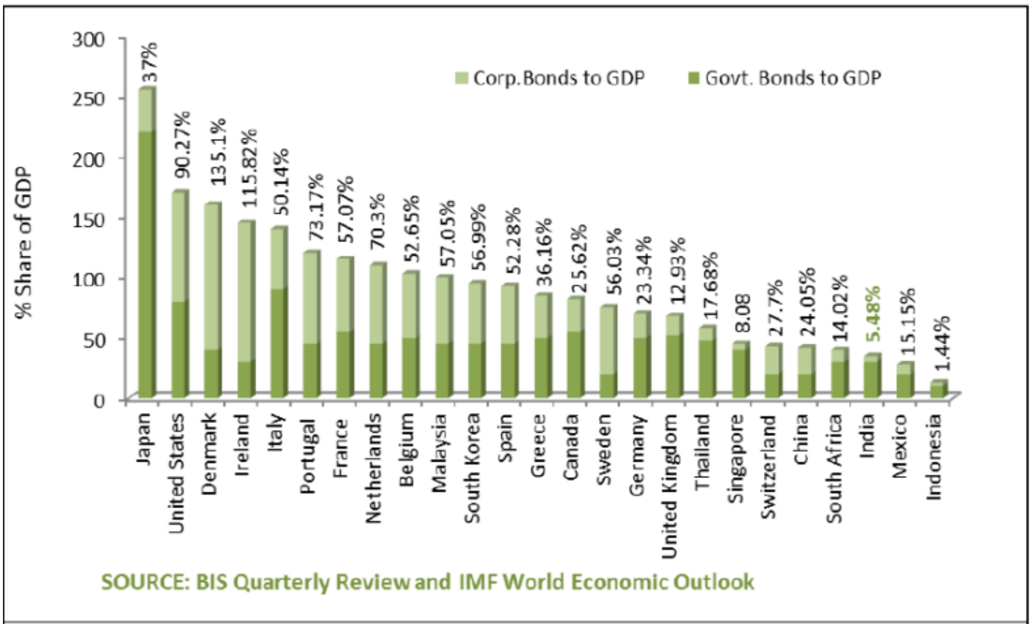
Table 1.40 Emerging Market External Financing: Total Bonds, Equities, and Loans

(in US$ million)

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Brazil	14,214	12,952	21,454	19,266	11,119	12,909	15,834	27,486	31,219	73,218	30,843	39,601	67,703
Russia	13,156	167	8,313	2,831	8,535	12,239	22,532	37,004	59,165	84,536	61,230	53,940	45,389
India	1,434	2,376	3,428	2,066	1,360	3,776	13,060	21,660	29,534	60,513	37,561	58,320	115,929
China	6,975	3,462	9,227	4,255	4,256	12,843	22,850	38,805	50,040	75,677	28,261	66,829	79,879
South Africa	–	3,423	8,699	4,647	4,058	7,837	5,413	6,266	12,701	19,904	2,816	7,980	7,460

Source: Data provided by the Bond, Equity, and Loan Database of the International Monetary Fund sourced from Capital Data.
Note: – Not available.





lote: Percentage figures at top of bar chart refer to corporate bonds

OBJECTIVE OF THE STUDY

- To understand the effect of growth in the corporate bond markets on the banking institutions.
- Potential of both negative as well as positive impact.

II. LITERATURE REVIEW

(Ayala, Nedeljkovic, & Saborowski, July 2015) studies the determinants of shifts in debt composition among emerging markets' non-financial corporates. Their primary aim was to examine the factors that cause the emerging markets' financial system to shift from bank finance to bond market. Their findings confirm that the shift was mainly after the global financial crisis. They also found evidences that supports the fact that policy also plays a major role in the shift. It also found evidence that supports the fact that corporates provide a suitable environment for the growth of bond markets, if only there is proper expansion and suitable investors in the market. The result they found was the growth in Bond market was due to Global cyclical factors and foreign linkages

(Bhattacharyay, 2011) studied the major determinants of bond market development in 10 East major Asian economies. He used simple OLS, Multivariate OLS, fixed effects, Random effects and GLS models to come into the conclusion that major determinants include the size of an economy, the stage of economic development, the openness of an economy, the size of the banking system, the exchange rate variability and the variability of interest rate. The findings suggest that the ASEAN bond market would be one way to create an integrated and linked Asian economies, so that the multinational investors would be attracted to increase the size of the economy or they can try to reduce the exchange rate volatility with collective efforts

(Mizen & Tsoukas, 2014) studies Asian bond market development by examining the determinants of firms' decisions to issue public debt in a range of Asian economies like China, Hong Kong SAR, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand. The findings suggest that firm specific characteristics are the major factor of issuance of bonds. It also finds that government policies also have a positive effect on the issuance of bonds.

(Patara Thumrongvit, 2013) studies the effect of development of domestic bond market on its economic growth. In this study, it uses a panel data set of 38 countries and generalized method of moments techniques for dynamic panels, they found that (i) stock market development is positively related to economic growth because of government bonds that dominates the bond market (ii) the contributing role of bank credit to economic growth diminishes as domestic bond markets develop (iii) government bonds are positively related to economic growth, while the effects of corporate bonds change from negative to positive over the period of time, as domestic financial structures expand in size, technological expansion and diversity. The findings also throw a light on the reducing demand of bank finance vis-à-vis bond market.

(Sarma, 2014) studies the Indian corporate bond market vis-à-vis the government bond market, the factors that affect the poor development of the corporate bond market. It also studies the issue of inflation-indexed bonds introduced by RBI – WPI bonds and CPI bonds and a comparison of both bonds. Along with the findings , (Sarma, 2014) has also recommended few steps for improving the bond market.

DATA

The variables analysed for the study are Bank's capital to asset ratio(BACP), Non-performing assets of the banks(NPA), Domestic credit to private sector(DC), Portfolio investment(PI) for six countries like Brazil, Russia, India, Indonesia, China and South Africa collectively known as the BRIICS. The data has been collected for 16 years (2000-2015)

Sources: World bank database, BIS data, Asian bond online, SEBI.

METHODOLOGY

The panel analysis equation is as follows:

$$RBS\ it = \alpha + \mu\ BCAP \cdot RBCAPit + \mu\ NPA \cdot RNPAit + \mu\ DC \cdot RDCit + \mu\ PI \cdot RPIit + ut$$

In the equation RBS, RBCAP, RNPA, RDC, RPI means Bond size, Bank's asset to capital ratio, Non-performing assets of banks, Domestic credit to private sector, Portfolio investment. We conducted tests to identify the relevant panel regression model for our estimation. The test concluded that Fixed effects model is most suited. Fixed effects model is used when there are no significant temporal effects, but there are significant differences among countries. While the intercept is cross section specific and differs from country to country, it may or may not differ over time. Also, we gauged the short term relationship between the variables using Granger causality test. We examined the direction of causality amongst our variables. The Granger causality test is a statistical hypothesis test for determining whether one-time series is useful in forecasting another.

III. ANALYSIS AND RESULTS

The study has been conducted to understand the effect of bond markets growth on the banking performance. Variables like Banks capital to asset ratio(BCAP), Bank nonperforming loans to total gross loans(NPA), Domestic credit to private sector by banks (% of GDP) and Portfolio investment in bonds were analysed to understand the dependence of each variable to each other and also on the growth of bond markets which will in turn affect the banking sector. From the analysis done, the following short term results are obtained.

Null Hypothesis:	Obs.	F-Statistic	Prob.
LBS does not Granger Cause BCAP	42	2.89535	0.0489
BCAP does not Granger Cause LBS		0.04253	0.9881
LBS does not Granger Cause DC	61	0.02718	0.9939
DC does not Granger Cause LBS		0.42089	0.7387
LPI does not Granger Cause LBS	20	0.22593	0.8767
LBS does not Granger Cause LPI		3.00826	0.0688
NPA does not Granger Cause LBS	61	3.28958	0.0274
LBS does not Granger Cause NPA		2.41615	0.0764

This shows the causality between the variables. The bond market size is the dependent variable. The bank's capital to asset ratio has caused increase in the bond market size but the bond market size does not cause the rise in banks capital. The non-performing assets and the bond market size has direct relationship because increase in NPA leads to growth in bond market and vice versa. There also a positive relationship between the bond market growth and the portfolio of investment.

To understand much more details a Panel regression was done. Presence of fixed and random effects was also tested and it was found that there are only fixed effects. Based on the fixed on the regression was run and the results obtained are as follows:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.35199	2.056811	-2.11589	0.0405
BCAP	0.42086	0.088714	4.744025	0
NPA	0.075801	0.025493	2.973435	0.0049
DC	0.216544	0.057145	3.789412	0.0005
LPI	0.330658	0.082357	4.014947	0.0002
R-squared	0.955257	Mean dependent variable		11.92716
Adjusted R-squared	0.945435	S.D. dependent variable		6.121728
S.E. of regression	0.589527	Sum squared resid		14.24923
F-statistic	97.25981	Durbin-Watson stat		1.231858
Prob(F-statistic)	0			
	Unweighted Statistics			
R-squared	0.898842	Mean dependent variable		10.16435
Sum squared resid	14.56255	Durbin-Watson stat		1.213043

All the variables like BCAP, NPA, DC and PI has positive impacts on the Bond market size. The BCAP and NPA are the banking variables whereas DC is the macro-economic variable and PI is the variable that shows the investment behaviour. It shows the increase in BCAP has an increasing effect on the bond market size. The BCAP can increase by its own or due to decreasing loans or assets of the banks.an increase in the non-performing assets of the banks also pay ways for the growth of bond market. DC the macroeconomic factor also has a positive impact on the bond market growth. DC increases when the macro economic conditions in the country is stable and good. During recession people will not go for direct credit and therefore at that time it decreases. PI also has an impact on the bond market size. When more investments in bonds takes place the growth of market will be faster.

IV. RECOMMENDATIONS

- Increase in Portfolio investments shows that there is a positive investment behaviour in the economy so the policy makes have to encourage people to invest more in the bond market.
- Tax reductions or exceptions can be used as a way to encourage more investment in bond markets.
- Encouraging domestic credits by reduced interest rates can also be used to encourage people going for bond market borrowings.
- BCAP has to be monitored because if the loans are going done it will affect the capital of the banks which is not preferable for the banking sector.
- The increase in NPA of banks is a good sign for bond markets but it is not preferable for banks. It has to be reduced because it leads to bankruptcy.
- Both banking sector and the bond market should have a balanced growth because those cannot be substituted with each other. Banks are essential for a sound financial system in the country and its existence cannot be eliminated.

V. CONCLUSION

The study has been conducted to understand the effect of growing bond market on the performance of the bank. Variables like Bank's capital to asset ratio(BCAP), Bank nonperforming loans to total gross loans(NPA), Domestic credit to private sector by banks (% of GDP) and Portfolio investment of countries like India, China, Russia, Brazil, Indonesia and South Africa for 16 years (2000-2015) were taken into consideration for the study. Collection of data was through secondary means of data collection and the results were obtained through Panel regression. From the study it has been proved that all the variables used have a positive impact on then on the growth of bond market and also negative impact on the banking sector. The banking variables like bank's capital to asset ratio and the NPA has a positive impact on the bond market growth where when both of these variables increases the size of bond market also increases. This is a good sign for the bond market whereas bad signal for banks because as the NPA increases there more chances for bankruptcy. The macroeconomic factor DC and the portfolio investment variable gives more opportunity for the bond market growth. The growth in bond market has both positive impacts on the banking sector. It helps to reduce the burden of the banking but at the same time cab be a strong source of competition.

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