

# External Vulnerabilities, Corporate Leverage and Financialization of Firms

## Analysing the Case of India

Shromona Ganguly

Department of Economics, Indian Institute of Management Calcutta

Email: [shromonag13@iimcal.ac.in](mailto:shromonag13@iimcal.ac.in)

### Abstract

Over the past two decades, increased integration of product as well as financial markets across the nations has resulted in greater risk of contagion emanating from financial crisis. The Global Financial Stability Report highlights the impact of growing corporate leverage of the major emerging economies in the context of the risk spillover from developed to emerging economies. The burgeoning leverage of the large firms from emerging economies in the international debt and securities market exposes those countries to external vulnerabilities, which adds to the risk emanating from weak macroeconomic fundamentals of these countries. The present paper analyses the case of India, one of the prominent emerging market economies in terms of the vulnerabilities that it may face due to external exposure of corporate balance sheets. Using detailed balance sheet data, the paper examines the inter sectoral differences as well as the possibility of building up of “pockets of risk” in certain sectors. The paper also contributes to the growing body of literature on cross border capital flow and financialization of firms.

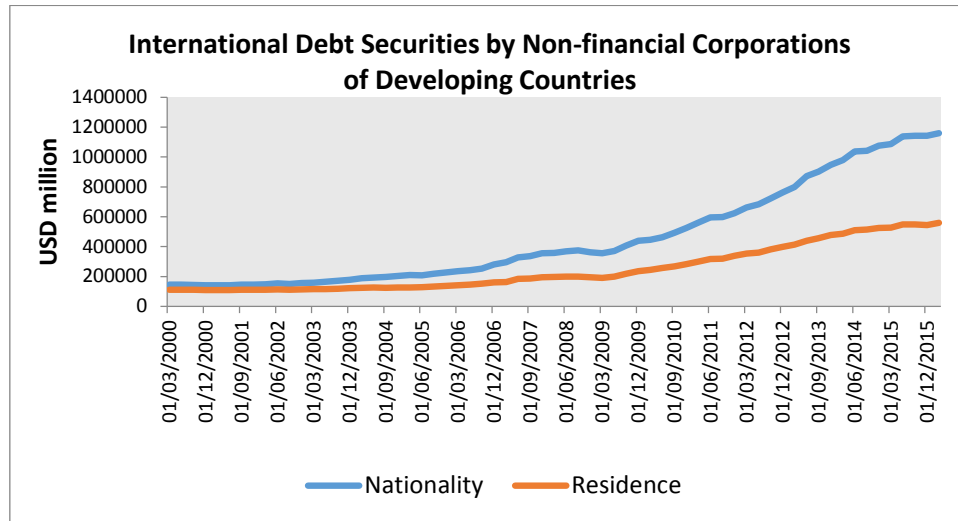
### Introduction

As per the latest Global Financial Stability Report, IMF, the spread of contagion has been driven mostly by financial factors rather than trade channels in the post-crisis period. The same report also highlights the growing importance of corporate borrowing in EMEs as a major conduit of spillover transmission. The prevailing easy global financial conditions during the post-crisis period and quest for yield have encouraged non-financial corporate from emerging market economies (EMEs) to borrow overseas. This is exacerbated by the appreciated collateral values of EME corporate caused by cross border capital flow owing to policy easing in advanced economies (AEs). There are several channels through which the prevailing policy environment in the AEs provides incentives of EME corporates to increase their leverage (Caruana 2012, He and McCauley 2013). First, the lower policy rate in AEs gets transmitted to a lower rate in EMEs as central banks of EMEs try to prevent currency appreciation. Second, large scale bond purchases in AEs reduce bond yield both in their own markets as well as EMEs through portfolio rebalancing effects.

In addition, the growth in emerging market corporate leverage has been strongly associated with rising importance of international bond finance. What is more important is that in many cases, such debt issuance in international market is through the offshore affiliates. To the extent the affiliates are backed by the parent companies for their debt issuance, the difference between international debt issuance by nationalities and residence status reflects the contingent liabilities of the countries. Often, standard measures of

international indebtedness underestimate the vulnerabilities arising out of such contingent liabilities. For developing countries, such contingent liabilities emanating from international debt issuance by offshore affiliates has been rising steadily over the years (Figure 1).

**Figure 1**



**Source:** BIS statistics on debt securities

The growing leverage of emerging market corporate exposes the countries to vulnerabilities owing to interest rate risk and currency risks. Moreover, if such risks materialise, the corporates may get exposed to rollover risk in the international credit market, resulting in higher financing cost and slower investment growth in the EMEs. The unhedged foreign exposure of the corporate balance sheet of EMEs has important implications for their domestic financial stability. This works through the assets as well as liability side exposures of their financial system to the non-financial corporate. The liability side exposure would work through the dependence of the financial system on the non-financial corporates for their funding. The asset side exposure is mainly through the direct credit exposure of banks to the corporates or banks holding of corporate bonds in these countries. In addition, there is a possibility of feedback effect channel exacerbating initial interest rate or currency mismatch shock. This would be particularly strong when the EME country's corporate balance sheet has substantial exposure to the global bond markets. The initial interest rate risk or foreign exchange risk may get amplified with the herd behaviour of bond holders of those EME corporate in the global market (Chui 2014).

A key issue, therefore, loomed large in front of the policy makers in the EMEs regarding the imminent external vulnerabilities to these countries resulting from their increased external exposure through the corporate balance sheets, as global interest rates starts hardening. Such risks to macroeconomic and financial stability of these countries are especially prominent if such external debt becomes significant relative to the corporates' debt servicing capacity, mainly determined through the export performance of these firms. During the post crisis period, the fundamentals of EME firms have deteriorated in terms of the profitability, liquidity, debt servicing capacity and asset quality ratios (Table 1). This is coupled with weaker macroeconomic fundamentals of the EMEs, especially the sharply deteriorating current account balances. At this juncture, the *Brexit* would put additional pressure on the export performance of some of the EMEs whose exposure to UK is high. Additionally, if the exposure to UK/EU through ownership of stocks or FIIs is high, the rising uncertainty could

adversely affect the longer term growth potential of firms, along with the translation risk that they carry in their balance sheets. Add to this the additional operational expenses likely to be incurred by EME IT firms in near future to shift part of their operations in other EU countries<sup>1</sup>. At this backdrop, clearly, external debt accumulated in the EME corporate balance sheet requires close and careful monitoring.

**Table 1: Firm-level and Macroeconomic Fundamentals of EMEs**

	Pre-crisis (2004-07)	Post-crisis (2010-13)
<b>Firm Level Fundamentals</b>		
Return on Assets	3.6	3.3
Quick Ratio	0.9	1
Interest Coverage Ratio	3.4	2.8
Tangible Asset Ratio	30.5	22.9
<b>Macroeconomic Fundamentals</b>		
Current Account Balance	0.6	-0.9
External Debt	35.9	35.6
ICRG Index	38.7	38.2

Source: IMF Global Stability Report, Oct 2015

### Research Question

Data limitations make it difficult to adequately gauge such vulnerabilities emanating from corporate exposure in the case of EMEs, especially at a cross-country level. For this, the BIS consolidated statistics on debt securities and debt coverage ratio (DCR) becomes useful. It can be seen that the corporate debt to GDP ratio is highest in China and Korea amongst the EMEs, and in both cases, the ratio has surpassed 100 per cent. Especially, the case of China presages vulnerabilities with a lower DCR coupled with high corporate debt to GDP ratio. Among other EMEs, the DCR is on a lower range for Indonesia, India and Turkey (Table 2).

The exposure of EMEs to global debt markets through their corporate balance sheet varies across sectors, indicating building up of “pockets of risk” in certain sectors. To the extent export earnings provides cushion against foreign exchange risk, the exporting sectors are found to be better covered as compared with the non-tradable sectors. Among the sectors, construction sector of EMEs has increased foreign leverage significantly during recent years (IMF Global Financial Stability Report, Oct 2015).

Against this backdrop, it becomes important to analyse the use of such funds raised by EME corporates overseas. In the case such funds are used for expansion of capacities and technology upgradation, the stronger foreign exchange earnings prospects through increased export at least partially offsets the vulnerabilities. However, if funds raised through the “carry trade” are used for speculative purposes and investment in financial instruments, a phenomenon often termed as “financialization of firms”, such risk of vulnerabilities from corporate leverage goes up (Chui 2014).

Table 2: Corporate Sector Indebtedness and Debt Service Coverage of EMEs

Year	Brazil		China		Indonesia		India		Korea*		Malaysia		Thailand		Turkey		South Africa	
	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage	Debt to GDP	Debt to Service Coverage
2007	30.5	11.1	98.7	13.7	14.7	3.1	42	7.1	91.6	42.6	58.2	10.8	46.1	9.2	24.9	7.3	10.1	10.1
2008	35.2	18.1	98.6	12	15.6	3.5	45.9	8.2	105.1	47.7	58.5	10.7	47.3	9.2	29.7	9.9	11.2	11.2
2009	33.7	12.8	123.2	15	13.6	3.2	47	7.2	107	47.2	64.7	11.5	45.1	8.6	29.7	6.4	9.8	9.8
2010	38.1	13.4	124.4	16	13.4	3.2	50	7.5	102.7	41.2	60.4	11.1	42.9	8.3	33.3	6.2	8.5	8.5
2011	40.7	16.9	124	16.7	14.9	3.4	50.1	8.2	104.7	42.3	61.3	11.5	47.5	9.7	37.5	9.3	7.8	7.8
2012	43.9	14.7	135.8	17.6	18.2	3.7	51.6	8.6	106.2	43.2	60.4	11.7	46.5	10.1	38.3	9	7.7	7.7
2013	45.9	15.9	146.9	19.2	21.8	4.2	51.9	8.8	103	41.7	62.4	12.3	50.6	10.7	47.1	10	7.6	7.6
2014	47.2	17.5	156.9	20	22.7	4.5	50.2	8.6	105.6	42.1	64.1	12.8	51.2	10.8	52.3	11.4	7.8	7.8
2015	47.9	18.7	160.7	20.2	22.5	4.3	50.9	8.6	106.2	41.8	65	13	51.3	10.7	55.6	12	8	8

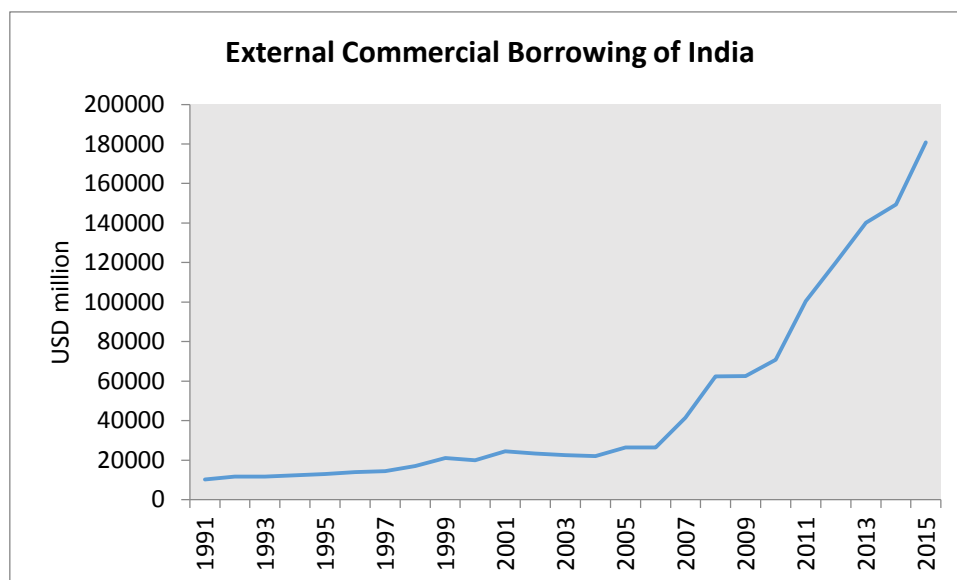
Source: BIS statistics on debt securities and DCR

**The present paper** analyses the case of India, one of the prominent emerging market economies in terms of the vulnerabilities that it may face due to external exposure of corporate balance sheets. Due to limitations in data reported by corporate it is often difficult to gauge the proportion of imbalances hedged by corporate, especially in a cross country setup. Using detailed balance sheet data, the paper examines the inter sectoral differences as well as the possibility of building up of “pockets of risk” in certain sectors. The paper also contributes to the growing body of literature on cross border capital flow and financialization of firms (Demir 2009) by analysing the relation between external borrowings of firms and their investment in financial securities. Though the purpose of the use of funds raised from global market by corporate is deemed as a key determinant of the extent of risk, literature lacks analysis of the same.

### Data Analysis

It is generally believed that India is doing far better than its peer group countries in terms of less volatility in external front as well as stronger growth prospects baked by macroeconomic fundamentals. Indeed, capital flight from India has been less volatile as compared with other emerging economies since 2015. However, a closer look at the capital flows in the country during recent times indicates a change in composition from equity to debt inflows. This means that sensitiveness of Indian economies to yield and currency movements have gone up. While the growing presence of domestic institutional investors in the Indian stock market partially offsets the volatilities caused by FIIs, the resulting depreciation of rupee due to capital flight means the debt servicing burden of Indian corporate have grown up.

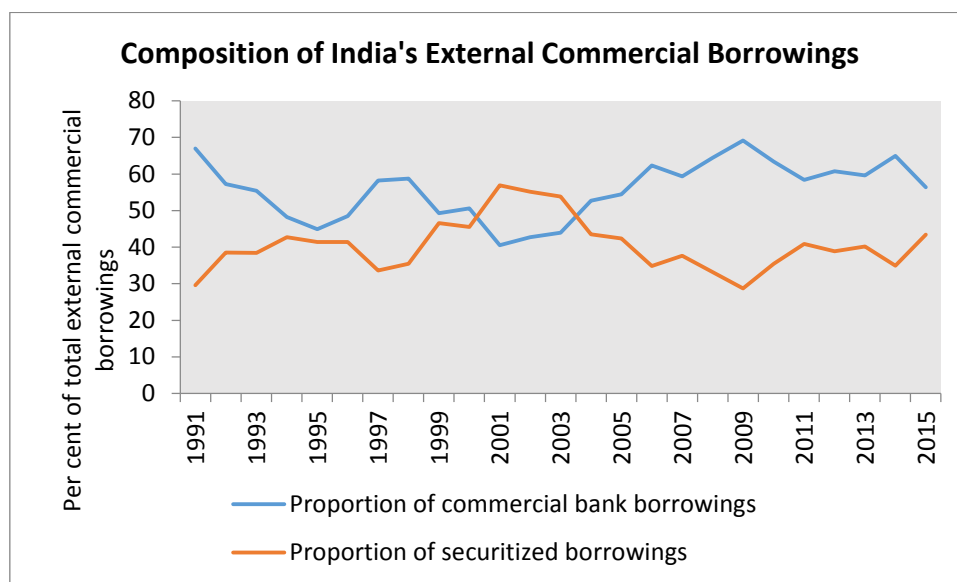
**Figure 2**



Like corporations in other emerging market economies, Indian firms have also borrowed extensively from the global markets during the post crisis period to take advantage of low interest rate and liquidity in the global markets (Figure 2). According to the Ministry of Finance (MoF, 2015a) data, the share of external commercial borrowing (ECBs) by private corporate as a proportion of India’s total external debt was to the tune of 38 per cent at end March 2015, significantly higher than the corresponding percentage in 2009 (28 per cent). Also, a significant proportion of this exposure is unhedged in the case of India, mainly due to

the shallow market of hedging instruments in India (Sivakumar and Sarkar 2008, MoF 2015b). The changing composition of the ECB in India is reflected by a rise in the proportion of total cross-border bank borrowings and fall in securitized external borrowing (Figure 3).

**Figure 3**

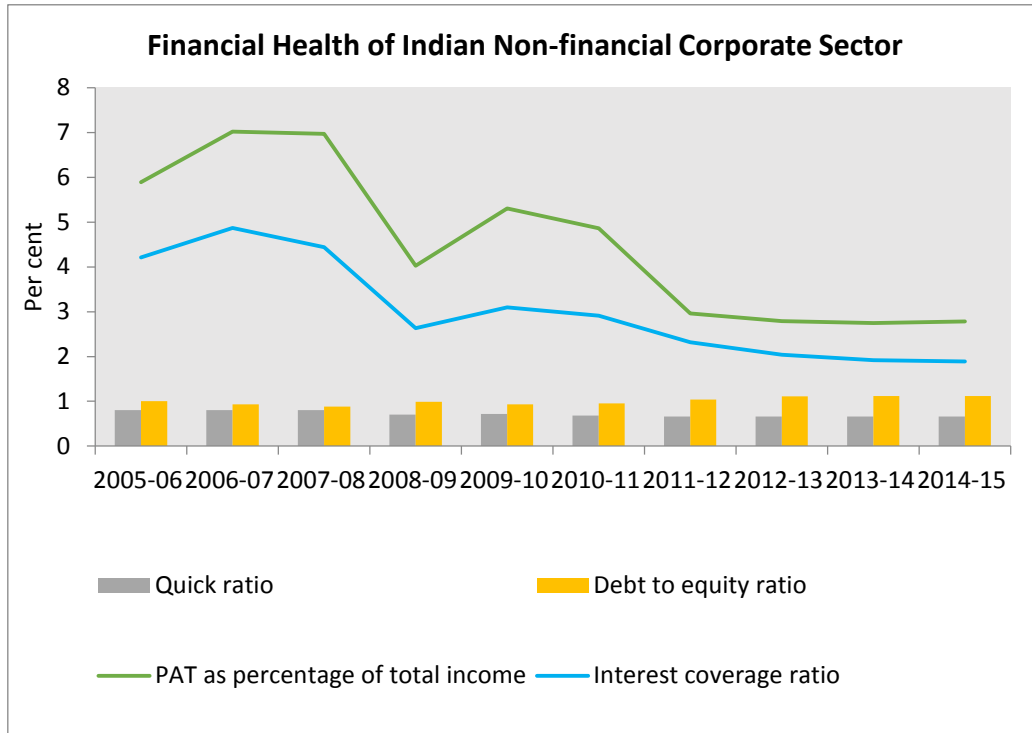


In addition, the slowdown in China and the devaluation of renminbi will exert further pressure on the competitiveness of Indian manufacturing. China is the biggest source of Indian imports though in terms of exports, India's exposure to China is low. Indian manufacturing sector has exhibited sluggish growth performance during the last two decades, both in terms of its share in GDP and export growth. Hence, the devaluation of Chinese currency along with a production glut in China in certain sectors like steel and other manufactured goods warrant further pressure on export competitiveness of Indian goods. Weaker export growth already warrants an increase in the mismatch of foreign currency denominated assets with that of the liabilities in the India's corporate balance sheet. The sluggish profitability of the Indian corporate sector is also reflected in the lower debt service coverage ratio since 2005-06.

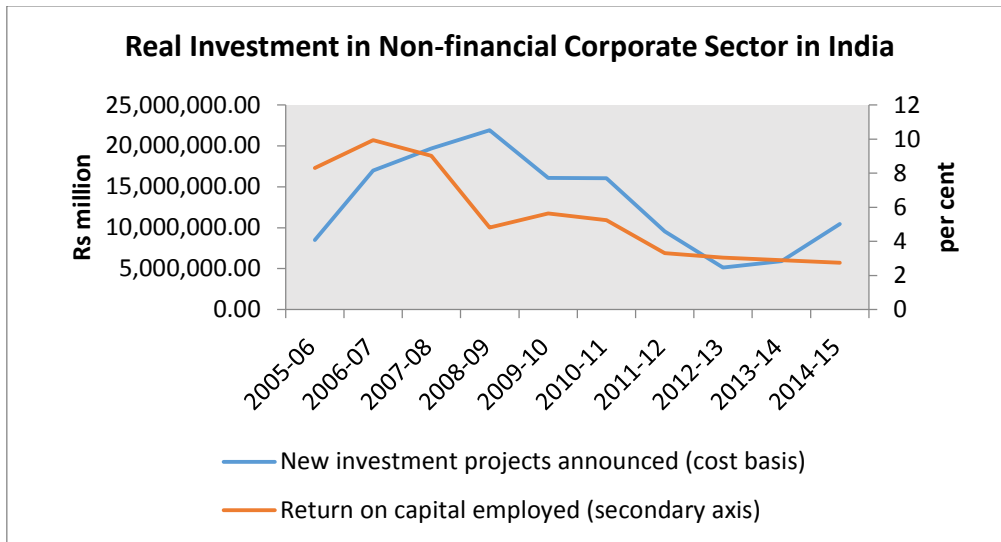
The financial health of the non-financial corporate sector of India has deteriorated since 2005-06. What is more interesting is that, along with the slower profitability and return on capital employed, both the debt to equity ratio as well as liquidity ratio remained almost stable since 2005-06 (Figure 4). This trend may partially reflect the tendency of firms' to borrow cheap funds in overseas markets and carry trade incentives (Pal 2016). Also, the return in real investments as measured by the net profit as a percentage of capital employed has deteriorated in the post crisis period. As a response of the above trend, the capital expenditure (measured as value of new projects undertaken) has also slowed down during the same period (Figure 5). Against this backdrop, the stable liquidity ratio along with higher debt to equity ratio requires further investigation on the use of the borrowed funds by the corporate.

During the last decade, a growing trend has been observed in the non-financial sector to divert a substantial part of their cash holdings to the financial sector instead of investing the funds in expanding their production capacity. The aforementioned tendency, at times referred to as financialization of firms, has raised a lot of questions and put forward very few satisfactory answers.

**Figure 4**



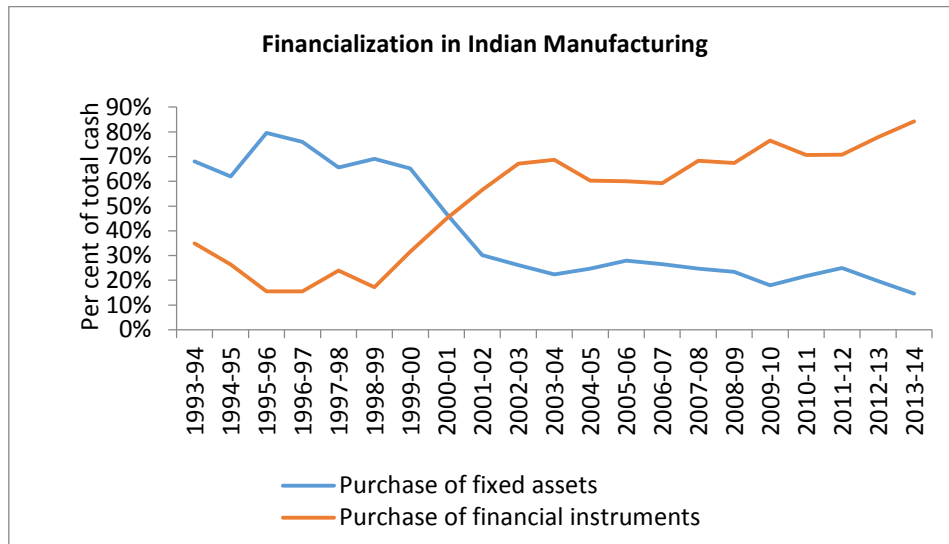
**Figure 5**



According to Demir (2007), in major emerging economies like Argentina, Mexico and Turkey, the slowdown in real investment is largely due to increasing return gap between real and financial investment, coupled with growing uncertainty in real sector. Our preliminary

analysis revealed the presence of similar phenomenon in the case of Indian manufacturing sector, which constitutes a significant part of the non-financial corporate sector of India. The total of investment in equity, mutual fund, debt and other financial instrument by the manufacturing sector as a whole witnessed a steady increase during 1991-2014. As against this, gross capital formation in the manufacturing sector has been volatile, with the overall trend being directed downward (Figure 6).<sup>1</sup>

**Figure 6**



A sectoral level analysis of foreign currency borrowings and foreign exchange earnings of India’s non-financial sector indicates that in most of the sectors with high proportion of foreign currency denominated debt, the proportion of foreign currency earnings in their total income appears to be quite low. Especially, sectors like transport services, electrical machinery and automobile ancillaries have high proportion of foreign currency debt coupled with low proportion of foreign exchange earnings. Within the services sector, the export performance of Indian software industry remained relatively better compared to health and other services. This is reflected in higher proportion of foreign exchange earnings in the case of Indian software industry. However, the proportion of foreign currency denominated debt is quite high in the other services such as healthcare, transport services, and telecommunication. This indicates build up of “pocket of risks” in sectors such as electrical machinery, and automobile ancillaries within manufacturing and telecommunications in services (Table 3).

<sup>1</sup> Please also see [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2688608](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2688608)



**Table 3: Foreign Currency Borrowing and Earnings in Indian Corporate Sector**

Sector	Proportion of borrowing in foreign currency	Proportion of foreign currency earning in total earning
Shipping transport services	68.38	11.58
Miscellaneous electrical machinery	57.67	2.22
Other automobile ancillaries	47.32	3.91
Refinery	39.87	4.78
Computer software	39.67	7.94
Health services	37.23	0.43
Crude oil & natural gas	36.18	0.00
Man-made filaments & fibres	34.51	5.85
Pesticides	32.27	6.45
Plastic films & flexible packaging	31.41	4.93
Telecommunication services	31.38	0.30
Plastic furniture, floorings & miscellaneous items	29.70	9.12
Natural gas trading & distribution	25.81	0.00
Electricity distribution	24.68	0.00
Refractories	24.12	24.08
Other chemicals	23.72	7.62
Steel pipes & tubes	22.96	7.58
Rubber products	22.84	10.57
Drugs & pharmaceuticals	19.64	7.38
Media-print	18.23	0.03
Other asset financing services	17.40	1.43
Wires & cables	16.72	1.69
Electricity generation	16.56	0.00
Ferro alloys	15.62	4.66
ITES	15.36	10.79
Other non-ferrous metals	13.73	3.51
Steel	13.73	2.84
Other agricultural products	13.46	4.15
Industrial construction	13.11	1.94
Granite	11.23	1.95
Metal products	10.47	0.72
Other leather products	10.31	25.21
Other electronics	10.29	9.44
Paper products	9.44	0.90
Other textiles	9.05	8.15
Vegetable oils & products	8.77	12.00
Paper & newsprint	8.73	0.11
Sugar	6.95	0.02

Other miscellaneous services	6.31	6.43
Tea	5.66	1.27
Tyres & tubes	3.85	3.42
Trading	1.39	6.02
Other transport equipment	1.03	10.60
Processed foods	0.83	18.25
Transport logistics services	0.77	0.03
Retail trading	0.57	2.55
Poultry & meat products	0.43	56.36

**Source:** Author's calculations based on CMIE, Prowess

### **Discussion and Policy Implications**

Following the fed rate hike and inception of tighter policy regime at global front, the burgeoning foreign currency borrowing by many EME corporate acts as a presage for growing vulnerabilities resulting from higher debt servicing cost, rollover risk and currency mismatches for these economies. Despite deterioration in profitability, emerging market firms were able to access low cost fund in the global capital market mainly due to the near zero interest rate in the US and the quest for higher returns among the global investors. This, in turn, has exposed many EMEs to the uncertainties resulting from swings in the global capital markets. To the extent such low cost funds are used for real investment by EME corporate, the expected earnings prospects partially mitigates the uncertainty resulting from interest rate risk and currency depreciation. However, if such funds are used for speculative purposes, it adds to the external sector vulnerabilities looming large on EMEs.

Analysing the case of India, at this backdrop, provides important macro and micro-prudential policy lesson for many comparable EMEs. Although India has weathered the first wave of financial crisis well, thanks to its resilient banking sector, the growing corporate sector ECB poses challenges to the country. The export performance of Indian manufacturing remained weak for the last two decades, when compared with many EMEs. The poor industrial performance of India is reflected in its trade balance with China, which remains the largest source of India's manufacturing imports. Going forward, the depreciating Chinese currency would further depress the competitiveness of Indian exports.

The slowdown in corporate profitability coupled with burgeoning foreign currency denominated debt in the corporate balance sheet adds to the policy dilemma of India. Any depreciation in rupee will further add to the debt servicing burden of the corporate sector, thus partially offsetting the positive impact of currency depreciation on competitiveness. In India, certain sectors like automobile ancillaries, telecom equipments, steel have substantial foreign currency borrowing in their balance sheet though their proportion of foreign exchange earning remains relatively low, reflecting poor performance of Indian manufacturing. It is also worth mentioning here, that apart from exchange rate management, the quality of exportables also factors in a country's ability to supply in the global market. At the macro prudential policy front, in the case of India, there is a need to rethink on the root cause of premature deindustrialization in India and accordingly, national policy should aim at required institutional reform to revive the industrial growth of India.

## Conclusion and Future Research Avenues

The article analyses the cause and consequences of leverage of major corporate firms in India in the international debt market. The existing literature lacks a thorough analysis of country specific factors in this context. The dearth of systematic research on the aspect of financialization of firms or investment of non-financial firms in the financial instruments in Indian context is highlighted by the joint parliamentary committee (JPC) report on stock market scam, 2002. The analysis of the article suggests that on the micro-prudential policy front, there is a need of close and careful monitoring of the use of funds by the large corporate in India. Often, firms with access to cheap funds in the global market use such funds for the purpose of speculation. This may have wider implications for the financial system stability of the country.

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<sup>i</sup> Economic Times, 28<sup>th</sup> June 2012

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