EMERGING RISKS IN SECURITIZATION OF INFRASTRUCTURE AND OTHER PROJECT FINANCING

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ABSTRACT

Enormous never ever met need for project financing has been observed both domestically and internationally. Various types of securitization transactions can be used to assist in meeting this need e.g. after a project has been constructed and is performing satisfactorily, a special purpose entity (“SPE”) could issue debt and equity securities and use the proceeds to purchase project loans from the original lender. Alternatively, the SPE could use the proceeds to refinance a project at a lower rate. In both cases, the banks and other financial institutions which originated the project financing and evaluated and took the construction and similar risks, would be paid out, thereby making these funds available to be lent to finance other projects. The present paper aims to highlight the Rating Agency Criteria for power projects and other income-producing project financings. Further, distinctive roles of lender and long-term refinancing lender through securitization have been elaborated. An attempt has been made to enlist and rank emerging risks in infrastructure financing. Moreover, efforts have been made to suggest effective measures to cope up with the risks of developing critical infrastructure in a limited fund scenario.

KEYWORDS: Infrastructure, Project Financing, Risks, Securitization.

INTRODUCTION

With recent growth in World trade and privatization opportunities, and foreign investment and currently-popular joint ventures and strategic alliances, there is an increased interest in the application of project finance to provide the necessary debt capital therefore. Project finance has long been an attractive corporate finance option, especially in capital intensive industries such as transportation (aviation, railroads and shipping), mining, oil and gas, pipelines and non-utility power generation. In particular, infrastructure (e.g., transportation, power, telecommunications and environmental) requirements are exploding, domestically and internationally, far outpacing the public financing available for these requirements. This has led to the exploration and development of private sector alternatives to traditional public financing sources and has created a new lexicon of "public-private partnerships" and "infrastructure privatization" for these activities. A recent survey by Public Works Financing indicates that approximately $300 billion of "market-oriented" infrastructure projects are under development or have been funded since the early 1980s, including over 500 privately sponsored, public-purpose facilities in 63 countries. In power alone, the World Bank estimates that there will be about $1 trillion of worldwide
investment by the year 2010, especially in the fast-growing emerging markets in Asia and Latin America.

Domestically, in its "Financing the Future: Report of the Commission to Promote Investment in America's Infrastructure" the Commission (the "Infrastructure Commission") found an annual shortfall of between $40 to $80 billion in infrastructure expenditures to meet critical needs, in addition to the available $140 billion spent annually. Ecologically, United States Environmental Protection Agency estimates that a minimum $200 billion of expenditures will be required to ensure compliance with existing federal mandates for clean air and water. Following the collapse of the former Soviet Union and Eastern Bloc countries, an international environmental crisis was revealed. For example, in Poland only 6% of its rivers are fit for drinking water and 38% of its rivers are unfit for industrial use. The Polish government has designated 11% of the country, including Gdansk and other large industrial centres, as "areas of ecological hazard".

The Infrastructure Commission also noted that traditional public financing sources for infrastructure projects (federal and state grants as well as tax exempt financing) were not likely to fill the funding gap. Grants generally do not leverage enough projects and public fiscal constraints make general tax increases or expansion of tax exemptions unlikely. Some have suggested new legislation to assist in bridging the infrastructure funding gap. The Infrastructure Commission recommended the creation of a new government sponsored entity--the National Infrastructure Corporation, which likes its model, the College Construction Loan Insurance Association would provide equity, subordinated financing or financial guarantee insurance or similar credit enhancement and thus significantly leverage its capital and promote greater infrastructure project activity.

However, securitization offers potential new capital to finance these critical infrastructure and other project finance needs without new legislation (although the proposed National Infrastructure Corporation might be an additional provider of credit enhancement for such securitization). While experience to date in securitizing project finance is somewhat limited, there are sufficient existing examples to confirm the promise of this form of structured finance to assist in bridging the otherwise probable project financing "gap." An officer of Standard & Poor's recently estimated that commercial banks hold over $50 billion of project finance loans and reported that such loans are ripe for securitization.

**OBJECTIVES OF THE STUDY**

1. To highlight the Rating Agency Criteria for power projects and other income-producing project financings.
2. To elaborate distinctive roles of lender and long-term refinancing through securitization.
3. To enlist and rank emerging risks in infrastructure financing.
4. To suggest effective measures to cope up with the risks of developing critical infrastructure in a limited fund scenario.
RESEARCH METHODOLOGY

The present empirical study has incorporated the collection of both primary and secondary data for the in-depth investigation. All the information, data and opinion are collected which have a direct or indirect relevance to the information. An intensive desk research has been undertaken to collect published data. For collecting primary data, structured questionnaire has been used and 100 academicians were surveyed after pilot survey. The present study is an attempt to analyze various emerging challenges in infrastructure financing in India. To find out the most significant emerging risks in infrastructure financing, Garrett’s ranking technique was used. As per the method, respondents have been asked to assign the rank for all the parameters and outcome of such ranking have been converted into score value with the help of the following formula.

\[ \text{Percent Position} = 100 \left( \frac{R_{ij} - 0.5}{N_j} \right) \]

- \( R_{ij} = \) Rank given for ith item by the jth respondents
- \( N_j = \) Number of items ranked by jth respondents.

The present position of each rank thus obtained was converted into scores by referring to the table given by Henry Garrett. Then for each factor the scores of individual respondents were added together and divided by the total number of respondents. These mean scores for all the parameters were arranged in the order of their ranks and inferences were drawn.

REVIEW OF LITERATURE

Numerous studies have not been conducted on the issue securitisation for infrastructure projects. Thus almost no literature is available on this subject. Therefore this research work reflects the importance and use of securitisation for financing infrastructure projects. There are some articles and presentations given by outside organization to the in-house working group which sought to study the importance and growth of securitisation. For instance, Mundra (2004) in his article “SARFAESI Act-2002 passes the test” has revealed about problems faced by the banks and financial instructions regarding the non-performing assets. In his article, author studies the various cases and also study Mardia Chemicals case which had retrained the bank from attaching the company’s property at Surendra Nagar in Gujarat. The author also mentioned the various provisions of the SARFAESI Act. Journal of the Institute of Chartered Accountants of India (2003) in his article, “Guidance note on accounting for securitisation” explains the meaning of securitisation and accounting treatment in the books of originators, SPV and investors. Various definitions on the terms given in SARFAESI Act are explained.

Subramanian (2006) in his article “Securitisation of NPAs-India moves ahead” has revealed the various amendments made in the SARFAESI act in the year 2004. In his article author also revealed the various NPA routes followed by banks and current status of various asset reconstruction companies. Further, author observed the various bottlenecks in the way of securitisation and mentioned certain areas that need urgent attention. Srinam (1999) in his article “New financing avenues for infrastructure project” explains how securitisation can be used as a tool for financing infrastructure projects and technique of securitisation for infrastructure
projects. In his article he also studied the benefits of securitisation which helps in reducing the cost of capital for infrastructure projects. He studied the various regulatory and legal issues which need to be addressed for the development of the market for securitisation. Singh, Rupa Devi, Vice President and Group Head, Financial Engineering, SBI Capital market limited gave a detailed presentation covering the Indian experience in contrast to the ground realities in some of the developed countries. The various hindrances faced by SBI Caps in their attempt to structuring securitisation deals were explained at length. She stated that officials from SBI Caps along with NHB had visited USA in 1994 to get a feel of securitisation process. She explained the intricacies pertaining to treatment of receipts as equity by the Originator out of the sale proceeds.

Verma R.V., General Manager, NHB informed the Group the NHB has acquired vast experience in mortgage securitisation in recent years and has reached an advanced stage of preparation for launching the securitisation product in a big way. The author spoke on securitisation of mortgage loans and operational and regulatory issues. Takkar Naresh and Basu of ICRA gave the presentation on “Structuring and Assessment of Credit Risk of receivable – system requirement”. The presentation covered the assessment of credit quality risk structural and legal regulatory issues and system requirements from originator point of view. The rating measures ability and willingness of the structure to sustain all repayment obligations (cash flow) cover the currency of the transaction. The author explained the difference between traditional MBS/ABS, collateralized Debt Obligations (CDO) and future receivables. The author informed that there are Standby Administrator and Standby Trustees in the USA, which can be inducted if investors feel so. He also pointed out that SPV could be tax neutral in case of Pass through Certificates and tax assessable in case of Pay through Certificates. In the Indian scenario, very little information is available on the demographic characteristics of the pool of assets except for the data on income level of obligors. He also stated that call option for Originator (repurchase obligation of the Originator) is not allowed.

Although primarily financed by governments to date, this level of government spending places an enormous burden on public finances and is probably unsustainable over the long run, especially in Asia where infrastructure investment is expected to rise from 4% to 7% of gross domestic product by the year 2000 (J. Paul Forrester, 2005). The Asian Development Bank has recently projected over $1 trillion of infrastructure investment in Asia by 2004. The scope of this projected new infrastructure investment is awesome. For example, China wants to install 8 million telephone lines a year after 1995. This in itself is an impressive goal, until one note that in 1992 China only had a total of 18 million installed lines. (World Development Report, 1994) In addition, a common problem with existing infrastructure investments in developing countries is inferior performance when compared with comparable investments in developed countries. Until recently, most infrastructure has been financed by the public sector through budget allocations and, as often as not, by sovereign borrowings. Often the results of such public spending have been quite unsatisfactory with clear evidence of corruption, inefficiency and substantial waste. On the other hand, infrastructure investments can deliver major benefits in economic growth. (Brown, 2005) Moreover, failure to make necessary investments in infrastructure can impair or derail a country’s economic growth and development.

Private infrastructure investment (as opposed to public investment) is growing rapidly throughout the world, but especially in the developing countries and emerging markets in Asia,
Latin America and the former Eastern bloc (Platt, 2005). According to one recent survey, private investment in infrastructure outside the United States doubled from 1993 to 1994 and the survey reported over 900 projects amounting to almost $680 billion that have been constructed or are under development in 72 countries. (Morgan, 2004) This survey noted the importance but limited availability of commercial bank financing for these projects and that obtaining long-term institutional debt and equity financing in sufficient amounts remained a challenge even for financially sound, well-structured projects. (Kidder, 2003) This survey also noted that the large construction companies increasingly dominate infrastructure development, but are funding this development on their own balance sheets. Another recent survey of project sponsors echoed this concern and also complained of a lack of creativity and sophistication among project advisors and lenders. (Tillet, 2005) These and other similar surveys provide clear evidence of a need for an exchange of information and education in this area.

Through reliance upon project finance techniques, infrastructure can be financed through limited recourse securities which, if structured correctly, carry manageable (and therefore marketable) risks. (Duff, 1996) Moreover, many have noted that project finance, by unbundling and encapsulating the risks comprised in international infrastructure projects, allows project participants to assume those risks that they can best control and, at least in theory, to leverage multi- and bi-lateral agencies' participation into a larger number of total supported projects. (Mayor, 1998)

Since World War II, public international organizations have assisted economic development in the emerging markets, particularly the World Bank (or, as it are officially known, the International Bank for Reconstruction and Development or IBRD). One of the principal problems to be addressed after the war was the need for investment capital to rebuild war-torn economies and for economic development in less developed countries. As Lord Keynes stated at the Bretton Woods Conference (at which it was determined to form the World Bank): (Kravitt, 1997) . . . only a few of the member countries will be in possession of an investable surplus available for overseas loans on a large scale, especially in the years immediately following the war. It is in the nature of the case that the bulk of the lending can only come from a small group of member countries, and mainly from the United States. How then can the other member countries play their proper part and make their appropriate contribution to the common purpose? (Jayson, 2004) Infrastructure projects represented more than 25% of the $2.9 billion in financing approved by the International Finance Corporation (the private sector member of the World Bank group, "IFC") in 1995, which was the fourth consecutive year of more than 10% growth in financing volume. The total value of all projects supported by the IFC in 1995 was $19.5 billion, a record for the IFC. (Peabody, 2006)

Notwithstanding their socially desirable or necessary purposes, infrastructure projects are often the subject of great public interest and occasionally strong opposition. This is particularly true for very large power plants and waste treatment facilities, and especially for hazardous waste treatment facilities. Accordingly, there can be protracted delays in obtaining necessary governmental or regulatory approvals. This was demonstrated in the case of the Von Roll hazardous waste incinerator in Ohio, when after finally obtaining all required licenses (after considerable delay caused by community opposition), the project's operation was temporarily
enjoined by the EPA on account of the intervention of Vice President Al Gore. By way of illustration, the licensing period for a landfill near a populated area will often take 10 years or more. (Nevitt, 2000) Moreover, even after securing all required approvals, an infrastructure project remains at risk of politically-motivated changes in law to the extent that such project is dependent upon any governmental support (e.g., tax abatement, subsidy or other). The foregoing clearly demonstrates the necessity for interim financing for an infrastructure project until the project has been completed and its proper performance sufficiently demonstrated in order that the project be able to receive an investment grade rating and to attract long-term capital. (Fabozzi, 2001) A transfer which does not satisfy the sale treatment requirements must be reported by the selling bank as a borrowing and the transferred assets will remain on the bank's books. Accordingly, such assets must still be supported by the required amount of regulatory capital, which, in most situations, would make the transaction unprofitable to the bank. (Tjia, 2009) The rationale for this rule is that the bank has likely retained the bulk of the credit risk and, therefore, must hold capital as if no transfer had taken place. (John, 2008)

In a positive development, legislation adopted by Congress in 1994, and subsequently implemented by the banking agencies, now limits the amount of such capital in certain cases to the maximum recourse exposure of the bank and in other cases (where the selling bank's exposure to losses on the pool satisfied some minimum credit quality test) to the maximum credit exposure resulting from the enhancement itself instead of the full risk-weighted capital charge for the amount of the pool enhanced. (Kenney, 1999) Under the "low level recourse" rules, if the bank's maximum recourse exposure were less than 8% or if the credit quality of the pool without benefit of the recourse were investment grade or better, the regulatory capital requirement will be limited to that maximum credit exposure. (Moody, 2004) In addition, proposed amendments to the risk-based capital rules would, if adopted, provide substantial capital relief for investments rated in the highest rating category, but reformulates the required regulatory capital under a complicated system of conditions and alternatives. (Jason, 2006)

**RATING AGENCY CRITERIA FOR POWER PROJECTS AND OTHER INCOME-PRODUCING PROJECT FINANCINGS**

Up till now, only S&P has announced formal criteria for rating power projects, infrastructure projects and income-producing project finance portfolios and DCR has published its rating approach for project finance. However, in order to assign an investment grade rating to securitized obligations financing an infrastructure project, a rating agency should be expected to examine each project for relevant economic and legal issues. It is essential that the project, including the project entity, be structured to maximize its integrity and insulation from credit problems affecting project sponsors, suppliers and other contractors. Contracts must be structured to properly allocate risk and responsibility for project problems, including the failure of equipment to perform to specification or noncompletion of the project facility on a timely basis for the contracted cost. The project's contracts must also provide for possible contingencies, such as licensing delays, equipment delivery problems and additional governmental or regulatory requirements.
Assuming a satisfactory project structure, the rating agencies will also examine and assess the creditworthiness of all material project participants as well as the projected financial performance of the project and the assumptions underlying such projections. Where a group of project loans is being securitized, the rating agency will examine, in assigning a portfolio rating, the portfolio for appropriate diversification in order to avoid or minimize geographical, demographic or technological concentration. Generally, to date, only a single project loan or a small number of affiliated project loans has been securitized. This may indicate that it is easier for a rating agency and prospective investors to evaluate the credit and other considerations applicable to one good project financing than to attempt to evaluate a pool of project financings which vary by industry, credit quality, etc.

DISTINCTIVE ROLES OF LENDER AND LONG-TERM REFINANCING LENDER; REFINANCING THROUGH SECURITIZATION

Commercial banks and similar financial institutions have traditionally and logically acted as originators of project loans as they are generally capable of evaluating complex project financing transactions and undertaking the construction and similar risks that are usually involved in most project financings. Commercial banks have always had an active role in project finance transactions. In fact, project finance is generally thought to have begun in U.S. in 1930s when a Dallas bank made a non-recourse loan to develop an oil and gas property and to have "come of age" in the 1970s and 80s with the successful project financing of North Sea oil and gas, Australia's Northwest Shelf gas project, independent non-utility power generation in the United States, and similar substantial projects. However, principally due to the short-term nature of a commercial bank's liabilities (i.e., its deposits), commercial banks usually limit in amount and otherwise closely monitor and control their project finance underwriting (just as they do their other long-term assets).

Frequently, financing for a project will be sought by the project's sponsor through a "request for proposal" process, with several commercial banks likely to form separate syndicates or "clubs" to respond to such a request. The division of work within the syndicate is often functional and has become quite efficient with individual banks being designated as technical agent, documentation agent, syndication agent and similar variations thereof. The project's sponsor will normally request commitments from its commercial banks for both construction financing and, following completion, the permanent, long-term financing of its project. Typically, the commitment for construction financing will be for about 2 years and for permanent financing will be from 10 to 15 years; although in rare cases commercial banks have provided permanent financing commitments of 20 years or more. Most permanent financing commitments by commercial banks will include specified increases in the applicable interest rate ("step-ups" in the applicable margin or spread over the commercial bank's cost of funds) in an effort to create escalating incentives for the commercial bank financing to be refinanced before its scheduled maturity. Although the existence of such "step-ups" and the incentive to refinance will complicate the prepayment risk when such loans are pooled for securitization.

The successful commercial bank syndicate for a project financing will usually seek to "sell down" its underwritten commitments in a further coordinated syndication to a larger bank group.
or an individual bank may assign a portion of its commitment in a negotiated transaction. This subsequent syndication may occur before financial closing (i.e., the execution and delivery of definitive financing documents) or afterwards, depending upon the confidence of the original underwriting banks in the "marketability" of their transaction in the bank project finance markets (and their willingness to assume the risk of adverse change in such markets), the timing constraints of the project, the project sponsor's preferences in this regard or the original banks' desire to reduce their level of commitments or all or any combination thereof. The project's construction financing, which will normally bear interest at a floating rate, will usually require interest rate risk to be hedged through an interest rate swap, cap or collar (although, if such hedging is under swaps and collars, because payments thereunder may be due from the project and thus the swap or collar providers may become creditors of the project, project collateral will have to be shared with such providers). Even though the commercial banks provide a permanent, long-term financing commitment, upon completion of construction and demonstration of the project's acceptable performance, most sponsors will seek to refinance the project with permanent, long-term and fixed rate financing. This refinancing will usually be on terms that allow the project more operational flexibility because construction risk has been eliminated from the project and because obtaining waivers from institutional holders is quite difficult.

This traditional model has proven very successful over a considerable period of time and in a wide variety of industries and specific applications. It has provided and will continue to provide substantial capital to qualifying projects throughout the World.

RISKS OF CROSS BORDER INFRASTRUCTURE FINANCING AND PROJECT FINANCING

Arranging cross-border infrastructure financing requires that the project participants assume certain risks, in addition to those common to infrastructure projects, including:

1. CURRENCY RISK

Any devaluation of the local currency in which project revenue is denominated will require a corresponding increase in the project's cash flow to assure that economic returns are maintained, and to service the project's debt (especially if denominated in another currency). Any significant devaluation of a local currency, without offsetting factors, will directly impair the project's likelihood of repaying its lenders and other investors.

2. POLITICAL RISKS

Loans and other investments dependent on revenue streams from foreign projects are subject to risks specific to the country involved, causing investors to examine differences in law and politics from their own nation. Furthermore, investors must also take into consideration the risks of unanticipated developments that might adversely affect the project, or the industry segment served by the project. These risks include the risk that underlying contracts will be changed or impaired, the risk of expropriation or confiscation of project assets and risks of war and civil disturbance. Investors must also consider the likelihood, and probable effect, of any change in
political regime, and whether policies and attitudes toward the particular project, towards international financing in general or towards the sponsors in particular will change

3. EFFECT OF TAX POLICIES

Beyond the impact all government policies and attitudes may have on an economy, an industry segment or a project, tax policies may have an important effect upon a project and therefore warrant special consideration. Current and expected income, assets or property, operational, stamp, mortgage, withholding and other revenue and financing-related taxes need to be considered carefully by investors in evaluating and structuring infrastructure financings. Significant increases in such taxes or cancellation, modification or termination of favorable tax treatment of the project entity, the project or the sponsors could have an adverse effect upon the availability of cash flow from an infrastructure project, thereby diminishing the revenues available for the repayment of the project’s debt.

Aside from these cross-border risks, infrastructure financing involves the following project risks:

4. ECONOMIC SENSITIVITY

Insulation from the general credit risk of the private or sovereign sponsor is one of the benefits of infrastructure project financing. In addition, infrastructure involves basic products and services needed or required by the public. However, such financing is also insulated from (and deprived of the benefit of) any diversity in activities of the sponsor which may cushion an economic downturn affecting the project. Consequently, a financing which is wholly dependent on the demand for a particular product or service from a particular facility (such as a single power plant with a single power purchaser, or a toll road with only a single destination) is directly subject to the economy of the country in general, and to the specific industry segment of the economy served by the project. Historical use, projected trends and economic expectations are therefore very important considerations to all investors and other project participants.

5. LIMITED REMEDIES

Project finance involves limited recourse to sponsors and other non-project assets. Investors must recognize that project financing of infrastructure is subject to additional restrictions in the exercise of traditional remedies. For example, foreclosure on a power plant with a sole power purchaser (such as a state-owned power company) is of little use if the problem is an inability of the power purchaser to make the required payments. If there are no other significant purchasers of power available in the relevant market, the power plant, to the extent physically and legally removable, may have only salvage value to lenders.

6. CONSTRUCTION AND TECHNOLOGY RISK

Since there is often incomplete data or in some cases no reliable data concerning project revenues prior to completion, lending for construction of a project is properly regarded as a relatively high-risk proposition. The ability to finance any project, particularly in the capital markets, is therefore directly tied to its stage of development and the availability of operational
data. A project that is complete and operating is considerably easier to finance than a project subject to construction risk, completion risk, technology risk or performance risk. A project with an operating history is easier to finance than a project subject to unquantified operating risk. Historical and pro forma operating data, and a careful analysis thereof by an independent expert, are essential.

7. TRANSFERABILITY

Project financing is usually secured by the cash flows (including, in the case of financing a concessional project, the right to receive revenues under the concession), the underlying contracts and the project assets themselves. In evaluating any limited recourse financing, secured creditors always want to know the likelihood and cost of being able to foreclose upon, and realize the benefit from, the assets which secure repayment of their financing. The ability to perfect a security interest and, more importantly, to be able to transfer the asset at the time of foreclosure to reduce or repay in full the outstanding indebtedness are highly important considerations to lenders, particularly in the context of project finance.

**TABLE 1. ACADEMICIANS’ VIEWS REGARDING RISKS OF CROSS BORDER INFRASTRUCTURE FINANCING AND PROJECT FINANCING**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Risks</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Currency Risk</td>
<td>8</td>
<td>24</td>
<td>12</td>
<td>5</td>
<td>17</td>
<td>14</td>
<td>20</td>
<td>100</td>
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<tr>
<td>2.</td>
<td>Political Risks</td>
<td>14</td>
<td>3</td>
<td>28</td>
<td>11</td>
<td>12</td>
<td>15</td>
<td>17</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>Effect of Tax Policies</td>
<td>19</td>
<td>1</td>
<td>20</td>
<td>17</td>
<td>26</td>
<td>6</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>4.</td>
<td>Economic Sensitivity</td>
<td>6</td>
<td>19</td>
<td>2</td>
<td>21</td>
<td>8</td>
<td>29</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>5.</td>
<td>Limited Remedies</td>
<td>23</td>
<td>3</td>
<td>13</td>
<td>5</td>
<td>17</td>
<td>30</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>6.</td>
<td>Construction and Technology Risk</td>
<td>31</td>
<td>9</td>
<td>1</td>
<td>12</td>
<td>18</td>
<td>5</td>
<td>24</td>
<td>100</td>
</tr>
<tr>
<td>7.</td>
<td>Transferability</td>
<td>33</td>
<td>3</td>
<td>21</td>
<td>16</td>
<td>11</td>
<td>6</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Garret Table Value</td>
<td>79</td>
<td>66</td>
<td>57</td>
<td>50</td>
<td>43</td>
<td>34</td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

(Source: Primary Data)
Table 2: Garret’s Ranking Regarding Risks of Cross Border Infrastructure and Project Financing

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Risks</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Garret Total Value</th>
<th>Average</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Currency Risk</td>
<td>632</td>
<td>1584</td>
<td>684</td>
<td>250</td>
<td>731</td>
<td>476</td>
<td>440</td>
<td>4797</td>
<td>47.97</td>
<td>VI</td>
</tr>
<tr>
<td>2.</td>
<td>Political Risks</td>
<td>1106</td>
<td>198</td>
<td>1596</td>
<td>550</td>
<td>516</td>
<td>510</td>
<td>374</td>
<td>4850</td>
<td>48.50</td>
<td>V</td>
</tr>
<tr>
<td>3.</td>
<td>Effect of Tax Policies</td>
<td>1501</td>
<td>66</td>
<td>1140</td>
<td>850</td>
<td>1118</td>
<td>204</td>
<td>242</td>
<td>5121</td>
<td>51.21</td>
<td>III</td>
</tr>
<tr>
<td>4.</td>
<td>Economic Sensitivity</td>
<td>474</td>
<td>1254</td>
<td>114</td>
<td>1050</td>
<td>344</td>
<td>986</td>
<td>330</td>
<td>4552</td>
<td>45.52</td>
<td>VI</td>
</tr>
<tr>
<td>5.</td>
<td>Limited Remedies</td>
<td>1817</td>
<td>198</td>
<td>741</td>
<td>250</td>
<td>731</td>
<td>1020</td>
<td>198</td>
<td>4955</td>
<td>49.55</td>
<td>IV</td>
</tr>
<tr>
<td>6.</td>
<td>Construction and Technology Risk</td>
<td>2449</td>
<td>594</td>
<td>57</td>
<td>600</td>
<td>774</td>
<td>170</td>
<td>528</td>
<td>5172</td>
<td>51.72</td>
<td>III</td>
</tr>
<tr>
<td>7.</td>
<td>Transferability</td>
<td>2607</td>
<td>198</td>
<td>1197</td>
<td>800</td>
<td>473</td>
<td>204</td>
<td>220</td>
<td>5699</td>
<td>56.99</td>
<td>I</td>
</tr>
</tbody>
</table>

(Source: Calculated from Henry Garrett Table)

Table 1 & 2 reveal that academicians find Transferability as most important risk of cross Border Infrastructure Financing with 56.99 average Garret Score. In considering the transferability of project assets, the project lenders focus on certain aspects e.g.

- Are the licences, permits and concessions transferable to someone who can finish the project and operate it?
- Are hard assets transferable or removable?
- Is there a fully effective and legally enforceable assignment of all rights to future cash flow?
- Are the underlying operational contracts transferable for performance by someone else?

Second important risk has been viewed as construction and technology risk with average Garret Score 51.72. Unavailability of complete and reliable data in some cases concerning project revenues prior to completion, lending for construction of a project is regarded as a relatively high...
risk proposition. A project with an operating history is easier to finance than a project subject to unquantified operating risk. Effect of tax policies has been rated as third significant challenge in cross border infrastructure financing with 51.21 average Garret score. Significant increase in such taxes or cancellation, modification or termination of favourable tax treatment of the project entity, the project or the sponsors could have an adverse effect upon the availability of cash flow from an infrastructure project, thereby diminishing the revenues available for the repayment of the project’s debt. Project finance involves limited recourse to sponsors and other non-project assets as it been termed as fourth significant risk in cross border infrastructure and project financing with 49.55 average Garret score. Moreover, where the financing is structured as a securitization of concession rights which, unlike the related cash flows, are generally non-transferable), upon the occurrence of an event of default, there may be no asset on which to foreclose toll roads and bridges cannot be moved. Political risks or country specific risk rated as fifth important risk with 48.50 average Garret score must be taken into account, including

- the political stability of the applicable governmental units (central and local),
- the attitude (historical and current) of the government towards foreign investment, in particular regarding currency exchange, privatization and the need for infrastructure development, and
- the degree of involvement of the government in the economy and industry segment served by the project.

Further, investors in financings for foreign borrowers must consider and evaluate the risks associated with foreign currencies including the possibilities of devaluations, exchange requirements and repatriation restrictions. Economic sensitivity which has been given least significance with 45.52 average Garret Score, leads to a financing which is fully dependent on the demand for a particular product or service from a particular facility (e.g. power plant with a single purchaser) is directly subject to the economy of country in general and the specific industry segment of the economy served by the project.

**SUGGESTIONS**

1) There is need to constantly innovate in a rapidly changing environment e.g. raising funds, developing products and in developing projects.

2) There is need to continuously enhance the depth of its management in developing internal resources for all critical functions.

3) Ability of the banking sector should be enhanced to provide financial resources in a sustainable manner to support the desired levels of investment in private infrastructure projects.

4) Avenues must be created to enable sell down of assets that have moved recourse to create headroom for lenders. This would result in deepening the market for infrastructure debt over the long term.
5) There is a need to enhance the role of insurance companies and pension funds in financing infrastructure.

6) Specialized agencies like IDFC can provide the needed expertise and help to enable investment decisions.

7) IDFCL can play the role of a guarantor to passive investors such as pension funds or to retail investors for capital market instruments.

8) Exploit the opportunities of project finance to isolate and encapsulate embedded risks in order to take advantage of the most cost effective solution thereto.

9) Adapt and use U.S. municipal finance models, which have demonstrated flexibility and creativity in balancing political, social and economic goals (all of which are usually present in an infrastructure project.

10) Use equity enhancements to reduce debt service requirements yet maintain an investor's return. These enhancements can be tailored to suit the specific situation and, at least in theory, can be very flexible.

11) Investors must also take into consideration the risks of unanticipated developments that might adversely affect the project, or the industry segment served by the project.

CONCLUSION

Securitisation is a very fast and a complex subject in the financial engineering. It is certainly a new concept in the emerging country like India. Securitisation will definitely solve some problems of the infrastructure financing in India. Already 10 states in India have taken crucial steps in reducing the stamp duty for the transaction structured on the basis of securitisation for the transaction. While certain legal, taxation, accounting and other regulatory issues are in the limelight and are needed to be addressed soon. With the new instrument becoming familiar to the market and further as the retail investor takes interest in securitized projects, the cost of capital will come down over a period of time. In any country, more complex the capital market is and greater the depth it has in its debt market the economy of that country is considered to be highly matured.

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