FINANCIAL RISKS AND CONSTRUCTION PROJECTS

Dr. M. J. Kolhatkar¹, Er. Amit Bijon Dutta²

¹Assistant Professor in Commerce, VMV Commerce, JMT Arts & JJP Science College, Wardhaman Nagar, Nagpur,
²Senior Manager, Mecgale Pneumatics Private Limited, N65, Hingna MIDC, Nagpur 440 016

Abstract

With An economic growth rate which is the world’s second fastest (8.9%) and a GDP that is the fourth largest in terms of Purchasing Power Parity (US$ 3.6 trillion), one of the emerging global business giant is India (Ernst and Young, 2012). The risk of failure in business exists in every industry. Construction companies are particularly vulnerable to financial risk due to the nature of the industry, extreme competition, relatively low entry barrier, high uncertainty and risk involved, and capricious fluctuations in construction volume. We need to have a closer understanding of the relationship between the two inter-related topics of risk management and finance on construction projects, it is becoming increasingly crucial to achieve the objectives of the investor, the owner (end – user) and the constructor and its supply chain, especially when the interest in PFI and PPP arrangements are continuously growing all around the world.

Common types of Financial Risks are Bankruptcy of project partner, Fluctuation of inflation rate, Fluctuation of interest rate, Fluctuation of exchange rate, Rise in fuel prices, Insurance risk, Currency exchange risk, Liquidity risk, Change in bank formalities and regulations.

Keywords: Financial Risk, Construction, Projects, Bankruptcy

1. INTRODUCTION

An economic growth rate which is the world’s second fastest (8.9%) and a GDP that is the fourth largest in terms of Purchasing Power Parity (US$ 3.6 trillion), one of the emerging global business giant is India (Ernst and Young, 2012). Projected population of India is to rise to 1.7 billion by 2050, which will be making it 400 million in surfeit of China which is currently the most populated country (UN population bureau, 2012). As a result, the infrastructure will be on strained heavily on the existing infrastructure and construction industry to support this.

We need to have closer understanding of the relationship between the two inter-related topics of risk management and finance on construction projects, it is becoming increasingly crucial to achieve the objectives of the investor, the owner (end – user) and the constructor and its supply chain, especially when the interest in PFI and PPP arrangements are continuously growing all around the world. Financial Management and Risk in Construction depicts the relationship between the Construction Project Manager’s task of time balancing, need of satisfying quality the client’s requirements efficiently and cost. Effective and professional whilst at the same time contributing to the contractor’s future sustainability.

Possibility of shareholders to lose money when they invest in a company with debt, if the cash flow in the company proves inadequate to meet its financial obligations. Debt financing if used by a company, its creditors will be repaid before its shareholders if the company becomes insolvent. Financial risk refers to possibilities of a corporation or government defaulting in its bonds, which would lose money due to those of bondholders.

2. COMMON TYPES OF FINANCIAL RISKS:

i) Bankruptcy of project partner
ii) Fluctuation of inflation rate
iii) Fluctuation of interest rate
iv) Fluctuation of exchange rate
v) Rise in fuel prices
vi) Insurance risk
vii) Currency exchange risk
viii) Liquidity Risk

i) Bankruptcy of Project Partner:

Bankruptcy is a legal status of an entity or a person who cannot repay the debts it owes to creditors. Bankruptcy in most of the jurisdictions is imposed by a court order, which is often initiated by the debtor. Bankruptcy is not merely a legal status that an insolvent person or other entity may have, and hence he term bankruptcy is for that reason not a synonym for insolvency. In United Kingdom and some countries, bankruptcy is limited to individuals, and for companies there are other forms of insolvency proceedings (such as liquidation and administration) is applied. Bankruptcy is applied more broadly to formal insolvency proceedings in United States.
The word bankruptcy is derived from Italian “banca rota”, meaning “broken bench”, which may stem from a custom of breaking a moneychanger’s bench or counter to signify his insolvency, or which can be termed only as a figure of speech.

India does not have a clear law on corporate bankruptcy even though individual bankruptcy laws have existed since 1874. In 1920 Provincial Insolvency Act was incorporated and is the current law in force.

Indian legal System has contested the legal definitions for the terms bankruptcy, liquidation insolvency, and dissolution. No regulation or statute legislated upon bankruptcy which denotes a condition of inability to meet a demand of a creditor as is common in many other jurisdictions.

Winding up of companies is in the jurisdiction of the courts which can take a decade even after the company has actually been declared insolvent. The supervisory restructuring at the behest of the Board of Industrial and Financial Reconstruction is generally undertaken using receivership by a public entity.

India has often been in the limelight for archaic laws in relation to bankruptcy and its processes. To take preventive or remedial measures for sick companies, the special legislation entitled Sick Industrial Companies (Special Provisions) Act, 1985 (‘SICA’) was enacted.

The Board for Industrial and Financial Reconstruction was set up under SICA to deal with revival and rehabilitation of sick industries. Due poor enforcement mechanism the whole process was too prolonged. SICA had been increasingly used as a shelter by defaulting borrowers who did not want to pay the legitimate dues of the creditors. This had a great impact on the economy, credit processes, and rates of interest and credibility of companies.

Bankruptcy laws outside India focus on business revival. The basic idea of the law is to provide various mechanisms to the debtor for restructure and revive the business, for acquiring finance in favourable terms or providing a stay on litigation.

A partnership is a relationship which exists between two or more persons for carrying out business together with a view to earn profit. Contrasting from a company, a partnership dose not has any separate legal personality and so cannot be the subject of any legal proceedings on its own merits. Partners, can either be individuals or companies, will therefore be personally liable - usually without limit - for the debts of the partnership.

It should be noted, however, that a Limited Liability Partnership (LLP) is a hybrid entity with characteristics falling between those of a company and those of a partnership. LLP is considered to be a body corporate and so a separate legal entity from the individuals or companies making up the partnership, as in a company. However, the liability of the partners’ is limited. Relationship between the members of an LLP is governed by a partnership agreement and it does not have shareholders or directors, like a company.

i) Bankruptcy of a partner and Partnership liquidation:

Partners are personally liable for the debts of a partnership. A partnership can be wound up and bankruptcy orders can be made against the individual partners. A creditor in a partnership can petition for either:

- the winding up of an insolvent partnership as a unregistered company, with no action taken against the individual partners; or
- the winding up of the insolvent partnership as an unregistered company, with bankruptcy petitions also presented against one or more of the partners.

Alternatively, a creditor may choose to only pursue the partners for the debt by petitioning for the bankruptcy of one or more of the partners without petitioning for the partnership to be gash up. The debt in the partnership will be treated as the debt of the partner against whom the bankruptcy petition is presented.

A petition can also be done by a member of a partnership, for the insolvent partnership to be wound up as an unregistered company with no action against the insolvent partners, or with action taken against the insolvent partners individually. A winding-up order can only be applied by a creditor against the partnership if that partnership has traded in England and Wales at any time in the three years before the petition is presented.

ii) Fluctuation of Inflation Rate:

In economics, inflation is a persistent increase in the general price level of goods and services in an economy over a period of time. Whenever there is a general price level rises, a unit of currency can buy fewer goods and services. As a result, inflation reflects in reduction of purchasing power per unit of money – a loss of real value in the medium of exchange and unit of account in the economy. The annualised percentage change in a general price index (normally the consumer price index) over time is a principal measure of price inflation.

Inflation's effects on an economy are various and can be at the same time positive and negative. Negative effects of inflation comprise an increase in the opportunity cost for holding money, future inflation uncertainty in future may discourage investment and savings, and if inflation is rapid at an adequate amount, goods shortages as consumers begin hoarding out of concern of prices will increase in the future. Positive effects is to be ensured, that central banks can adjust real interest rates (to mitigate recessions), and to encourage investment in non-monetary capital projects.

iii) Loss Due to Fluctuation of Interest Rate

The level of interest rate risk attributed to the bank’s CRE lending activities depends on the composition of its loan portfolio and the degree to which the structure of its loans, such as tenor, pricing, and amortization, expose the revenue of the bank’s to changes in interest rates. Much of the CRE financing provided by banks is on a floating-rate...
basis, meaning the interest rate sensitivity is relatively low for the lending bank. Banks which are providing with fixed-rate financing for extended terms, nevertheless, are exposed to interest rate risk to the extent that these loans are funded by shorter-term liabilities.

An interest rate is the cost of borrowing money. Real Estate/Construction projects and banking perhaps are the most impacted due to fluctuation in interest rates. Increase in rate of interest rate, borrowing cost becomes more expensive and dampening the consumer demand for and other loan products and negatively affecting residential real estate prices. Due to higher payment of interest amount due to rise in interest rate, increases the defaulter rates due to high payments. Mortgage backed securities of vendors, consist of bundled mortgages, will see their ability to monetize the securities lessens as a result of the deterioration of the quality of the underlying asset.

Interest rate will affect the project in terms of borrowing and debt payments. Any fluctuation in the interest rate will directly or indirectly affect the lenders. A fixed/appropriate interest rate should be agreed upon for the project duration. The lenders generally have to pay extra cost if the interest rate is far high or benefit them if the interest rate is low. More foreign investors or private sector could be attracted by providing interest rate guarantee.

Project finance debt tends to be fixed rate. It helps providing a foreseeable, or at least to some extent stable, repayment profile over time to reduce fluctuations in the cost of infrastructure services. In case where the lenders are unable to provide a fixed rate debt and non of the project participant is willing to bear the risk, hedging or some other alternate arrangements may need to be implemented to manage the risk that interest rates increase to a point that debt service becomes unaffordable to the project. Question of balancing fixed rate debt with foreign exchange rate risk or local currency debt subject to interest rate risk is due to tension between local and foreign currency debt.

### iv) Fluctuation of Exchange Rate

Risk management techniques vary with the type of exposure (accounting or economic) and term of exposure. Accounting exposure is also called a translation exposure, which results from the need to restate foreign subsidiaries’ financial statements into the parent’s reporting currency and is the sensitivity of net income to the variation in the exchange rate between a foreign subsidiary and its parent. Exposure to economic is the extent to which a firm's market value, in any particular currency, and it’s sensitive to unexpected changes in foreign currency. Fluctuations in currency affect the value of the firm’s income statement operating cash flows, and competitive position, hence market share and stock price. Fluctuations in Currency also affect a firm's balance sheet by changing the value of the firm's assets and liabilities, payable account’s, receivable account’s, inventory, loans in foreign currency, investments (CDs) in foreign banks; this type of economic exposure is called balance sheet exposure. Short term economic exposure due to fixed price contracting in an atmosphere of exchange-rate volatility is a form of Transaction Exposure.

The most common definition of the measure of exchange-rate exposure is the sensitivity of the value of the firm, proxied by the firm’s stock return, to a change in an exchange rate which is unanticipated. Partial derivative functions are used to calculate it, where the dependant variable is the firm’s value and the independent variable is the exchange rate (Adler and Dumas, 1984).

**Essentiality of managing foreign exchange risk**

A key assumption in the concept of foreign exchange risk is that exchange rate changes are not predictable and that this is determined by how efficient the markets for foreign exchange are. The research work in the area of efficiency of foreign exchange markets has thus far been able to establish only a weak form of the efficient market hypothesis conclusively which implies that successive changes in exchange rates cannot be predicted by analysing the historical sequence of exchange rates.(Soenen, 1979). On the other hand, when the efficient markets theory is applied to the foreign exchange market under floating exchange rates there is some evidence to suggest that the present prices properly reflect all available information.(Giddy and Dufey, 1992). It also implies that exchange rates react to new information in an immediate and balanced fashion, so that no single party makes profit using the information and in any case, exchange rates also fluctuate randomly as the information on direction of the rates arrives randomly. It insinuates that foreign exchange risk management cannot be done away with by employing resources to predict exchange rate changes.

### v) Rise in Fuel Prices

Contractors use diesel to power earthmoving and other off-road equipment as well as construction vehicles such as concrete mixers dump trucks, and pumpers, and, JCB’s, proclains, tower cranes, etc... In addition, contractors pay fuel surcharges on deliveries of equipment and materials to job sites and on backhauls of dirt, debris, and equipment. Diesel costs and fuel surcharges also work their way into the prices of many materials that require fuel to mine, manufacture, mill, mix, and move throughout the production process. For instance, concrete is made from crushed stone (known as aggregate), sand, cement, and water. The quarrying, crushing, sorting and delivery of aggregate and sand take large amounts of diesel fuel. Cement is made from limestone that must be transported to a cement kiln, heated to an extremely high temperature and ground to a powder; carrying the dense cement to a ready-mixed concrete plant (batch plant) is also fuel-intensive. Mixing the ingredients at a batch plant or moving concrete building materials also uses diesel fuel.

### vi) Insurance Risk:

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As construction projects become larger and more complex, the risks associated with them are also more complex and harsher. Theutter scope, size, and timing of today’s projects pose significant challenges in risk management, including risk identification, determining the allocation of risks among the involved parties, developing mitigation and risk treatment plans and opportunities for cost savings in single project applications or across an entire portfolio of projects. Increase in complexity and size of project risks, sponsors view risk on an enterprise-wide project or portfolio basis to properly and consistently identify risks, development of optimal risk allocation strategies, and, if necessary, obtain "project specific" insurance.

A typical Contractors’ All Risks insurance or Erection All Risks Insurance covers material damage to the works or the machinery being erected and includes coverage for third party liability for bodily injury or property damage to the adjoining property. Consequential losses or losses due to delay in start up following loss or damage under material damage section can also be extended to included in the policy. It is also termed as advanced loss of profit. Insurance on Contractors’ Plant and Equipment pays for the losses or damage to the equipments at site which are owned by the contractors and are used as a tool for the construction work.

Fortuitous losses can’t be eliminated but can be managed by the combination of risk control and risk financing techniques and therefore a sound insurance programme for large construction projects are integral to any project planning exercise. Metculous planning are required for large projects, and so do project insurance. Excellent project insurance not only finances the risk but also helps to implement safety rules at work place. In an Overall scenario, it is a win-win situation for all: project owners, contractors & sub-contractors, architects and lenders; and it’s also good for the economy too.

vii) Currency Exchange Risk

Project finance debt is often sourced from foreign lenders, and in foreign currencies, yet project revenues are generally denominated in local currency. The cost of debt can increase and often very dramatically, where the exchange rate between the currency of revenue and the currency of debt diverge. Though under the theory of purchasing power parity, inflation pressures on the currency devalue will eventually bring the foreign exchange rate back to parity. The project finance lenders are generally not prepared to wait quite so long (with average periods of about 10 years).

Where revenues are to be earned in some currency other than that in which the debt is denominated, the lenders expect to see the revenue stream is adjusted to compensate for any relevant change in exchange rate or devaluation. If this is not available, the lenders will want to see appropriately robust hedging arrangements or some other mechanism to manage currency exchange risk.

viii) Liquidity Risk

CRE loans are customarily illiquid. The exchange of CRE loans to cash can be accomplished by

1. Refinancing the loan amount with an another lender;
2. Through the sale of the loan to an investor (either on a participation, whole-loan, or portfolio basis);
3. By securitizing the loan;
4. Through normal repayment of loan by the borrower; or
5. By serving as collateral for borrowings.

Sales of CRE loans are difficult to execute largely because of their lack of homogeneity. Unlike consumer loans, the due diligence process can be time-consuming and expensive for a prospective purchaser because of variations in property type, location desirability, tenant quality and other rent roll features, underwriting, loan documentation and structures. CRE loans tend to be even less liquid in times of market stress, when potential funding sources diminish as lenders allocate fewer funds for real estate. This can make the sale of loans or their refinance by other lenders as a strategy to manage concentrations ineffective.

ADC loans are particularly illiquid because of their short tenor and because the full collateral value is not realized until the project is completed and reaches a stabilized level of occupancy or is ready for sale. While securitization can provide liquidity, the CRE loans originated for securitization employ underwriting, structures, and documentation that conform to standards established by market participants. This type of standardization permits a more efficient due diligence process and results in better pricing. Loans originated will be parts of the bank’s portfolio typically do not meet the standards for market, making securitization of these assets inefficient and likely to result in prices that represent a material discount to book value. Market disruptions after origination and before sale can reduce the liquidity of loans that were originated for securitization.

ix) Change In Bank Formalities and Regulations:

Bank regulations are a form of government regulation which subject banks to certain requirements, guidelines and restrictions. This regulatory structure creates transparency between banking institutions and the individuals and corporations with whom they conduct business, among other things. A rule is sometimes defined as a standard or an instruction or custom. Issuing of regulation is the act of providing rules for the way that individuals, companies or organisations should behave. Regulations could possibly be regarded as being a sub-set of rules, but the demarcation of these two concepts is difficult to define.
3. CONCLUSION:
A closer understanding of the relationship between the two inter-related topics of risk management and finance on construction projects, it is becoming increasingly crucial to achieve the objectives of the investor, the owner (end – user) and the constructor and its supply chain. Financial risk have broadly be classified as Bankruptcy of project partner, Fluctuation of inflation rate, Fluctuation of interest rate, Fluctuation of exchange rate, Rise in fuel prices, Insurance risk, Currency exchange risk, Liquidity Risk. Financial risk are one of the critical risk faced by any construction industry as financial failures may lead to complete closer of the company leading to huge losses and legal suits.

REFERENCE:

AUTHOR:
Dr. M. J. Kolhatkar M.Com,MBA,M.Phil,MIRPM,Ph.D, with an industrial experience of 3 years, teaching experience of 8 years and research experience of 6 years. Presently having 5 students doing research and 4 have submitted their research work in university have presented papers in international and national conferences and journals