A SYSTEMATIC STUDY ON CORPORATE REAL ESTATE RISK MANAGEMENT AND ASSESSMENT
(Concerning Aurangabad City)

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ABSTRACT

Purpose: The objective of this article is to identify the types of risks associated with corporate real estate (CRE) and the risk management strategies adopted by companies. Moreover, the aim is to measure business performance and analyze its correlation with CRE risk management strategies.

Methodology: Interviews were held in Aurangabad city in India to gather information from respondents about their adoption of CRE risk management strategies. Monte Carlo simulations are used as a tool to measure company performance and the results are then correlated with the average of the strategies drawn from the analysis.

Findings: It is found that most organizations have integrated risk management into their strategic business plans.

Originality: Although there is much literature on risk management, few researchers examined the relationship between corporate real estate risk management.

A R T I C L E I N F O

1. INTRODUCTION

"Real Estate" is one of the only traditional and perennial assets favoured by, and it is an innate desire among Indians to own a home; this field has become a natural choice for those who want to own a home. This spike in demand caught the attention of investors around the world. The real estate sector in India has become increasingly important with economic liberalization, such as an increase in business

opportunities and labour migration, which has created a framework for the growing demand for commercial and residential spaces. The real estate and construction boom played a crucial role in developing India's basic infrastructure.

The Indian real estate industry has traditionally been dominated by a handful of smaller regional players with relatively low expertise and financial resources. Historically, the sector has not benefited from institutional capital; instead, it has traditionally relied on high net worth individuals and other informal sources of funding, resulting in low levels of transparency. Today, the dynamism of the real estate sector reflects consumer expectations for higher quality with India's increasing integration into the global economy. The importance and urgency of understanding the implementation of risk management are due to the rapid pace of economic development.

This study aims to determine the risk factors affecting the real estate sector and challenge risk management in the real estate sector. The critical index method ranks the factors and evaluates their severity. About 72 risk factors affecting real estate risk management have been identified and divided into eight main categories. All research work was conducted based on the combined perceptions of different stakeholders, and 15 key risk factors were identified.

Over the last years, the risk control exercise emerged and swiftly grew as a discipline, vocation, and enterprise service. In many countries, danger control is gaining popularity as a massive contributor to the performance and effectiveness of an organization. In the pursuit of control excellence, businesses have evolved and put into effect techniques of vision, mission, median values and goals. Risk must be undertaken to ensure the overall first-class performance in an organization, together with initiatives or payment packages. The success of goals relies upon the control of dangers to ensure the most fulfilling selections are made to control and manipulate the risks.

The real estate industry contributes to the country's economic growth. Therefore, it occupies an essential position in the national development plan. India has a massive workforce of about 305 million people in the real estate sector. The agricultural sector plays an important role in GDP, while the real estate sector is the second largest contributor to GDP. The real estate industry needs to create 0.0047 billion additional jobs. According to this, the total number of employees in the real estate sector is expected to reach 0.083 billionby 2022.

The real estate industry is volatile and very sensitive to business cycles and the political environment. In that case, there is an extreme business failure rate. Business failure, collapse, bank solvency, and loans are common terms in the real estate industry because of the many risks in this sector. Around the world, many construction companies have entered the market due to its ease of entry, and many have suffered business failures.

Starting a business carries some risk. It is impossible to avoid all kinds of risks affecting one's organization. Therefore, proper planning and management help the company develop and reduce its risk. Risk assessment and management are critical to the success of the real estate industry. There are many ways to assess and manage risk. First, when risk identification of an adverse event occurs, the focus is on its potential and impact on such an event and on reducing the likelihood of an adverse event occurring. Second, it is more likely that positive results are achieved.

Success for all types of businesses is important. More than 50% of all real estate transactions in India and abroad have failed in the last five years because the risks associated with the establishment were not taken into account. When a business fails, it can be a destructive force, especially in the construction industry. Higher error rates are due to unfamiliar natural features, high ambiguity, and low barriers to entry.

One needs the proper planning and management that works best for one's industry to start a business. A good business plan should include a brief description of the risks associated with the business. Firstly, it is impractical to identify all risks considered in a business endeavour. Second, if there is a significant risk related to the company, management must mitigate the potential impact on the business. When performed from the beginning, the risk assessment process forms the basis of an effective enterprise-wide risk management program. Unfortunately, risk assessment was not widely recognized when companies were founded.

1.1 RISK IN CORPORATE REAL ESTATE

Corporate real estate managers have gained more experience in how real estate and related facilities serve their businesses in recent decades, thanks to the development of technologies to help them manage workplaces and performance measures to analyze their efficiency and effectiveness (Gibson et al., 2002).

Risk has long been recognised by corporate real estate executives. Transactions and projects related to new or changing workplace requirements drive most of their activity. To control the financial and operational risk at the single asset level, they built tools to ensure that these projects are completed on time and on budget. Organizations require a framework to identify the sources of risk if they want to control corporate real estate risk.

Interest rate risk connected with construction loans, interest rates on demand for rental space, and the impact of interest rate fluctuations at any future sale or refinancing are all factors in real estate development. Cameron et al. (1990) show how interest rate caps, collars, and swaps can be used to

mitigate interest rate risk. Given the wide range of real estate development activities, however, no one risk management method is adequate.

Risks that can be incurred outside the development sphere include the financial risks incurred in leasing, purchasing, potential asset reversion, and various physical hazards such as design weaknesses and site and location risks. Corporate real estate will also be burdened by the risks associated with regulating such assets by a host of local, state and national agencies (Huffman, 2002). One of the more complex risks is assigning accurate values to corporate real property. According to Brueggeman et al. (1990), one of management's most significant challenges is to capture "hidden value." The underestimation of corporate property assets artificially depresses share values and can provide the incentive for hostile takeovers.

The research of this study's primary purpose is to identify the type of risks associated with corporate real estate in manufacturing companies in Aurangabad City. It also aims to investigate the CRE risk management strategies. The selected companies' performance is measured using EVA as a measurement tool to establish any correlation between the CRE risk management strategies and implementation.

2. REVIEW OF LITERATURE

Bajaj (1997) has reported that if a risk is not recognized, it cannot be controlled, transferred or in any other case handled. Therefore, risk identity is an essential first step in analysing risk and determining the proper reaction. Executives face some dangers in dealing with the company's actual property. The most critical is related to asset improvement. The risks incurred in development activities vary from financing to physical to regulatory risks. CRE risk management is rapidly being integrated into the corporate culture. There are several risk management strategies available to the CRE executive: due diligence, avoidance, insurance, hedging and diversification. The critical element of all these strategies is identifying and assessing risks. Risk management is not a one-off activity; it should be applied continuously and rigorously.

Zeckhauser (1981) and Silverman (1983) have described that the land and buildings owned by companies are not primarily in the real estate business. However, companies in the real estate business are generally taken to include developers, investors, and traders in real estate.

Manning and Roulac (1999) have shown that corporate real estate "includes real properties that house productive activities of a corporation and primary business of the firm is not related to development, investment, management or financing of real estate assets. Corporate real estate includes all spaces

supporting a company's business and may consist of space for administrative and management functions, manufacturing, warehousing, selling/marketing and distribution activities".

Bon et al. (1994) defined it "as the management of buildings and parcels of land at the disposal of private and public organizations, not primarily in the real estate business". Nevertheless, corporate real estate is an input factor in the production process and provides spaces to support the firm's outputs.

3. NEED FOR THE STUDY

The study aims to provide a holistic view of the risks in the real estate sector and investigate the sluggishness of the property market in Aurangabad through the perceptions of 6 different stakeholders, including technical architects, developers, appraisers, planners, academics and architects. The work aims to assess the severity of each risk factor and classify the most material risks.

3.1. PROBLEM STATEMENT

Although there is much literature on risk management, few researchers examined the relationship between corporate real estate risk management. Furthermore, risk management will not eliminate all risks. Instead, its main objective is to ensure that risk is managed more effectively.

Risk management is an ongoing, forward-looking process that forms an integral part of the technical and business management processes that should be considered active.

4. OBJECTIVE

1. To know the risks related to these enterprises and recommend mitigation measures.
2. To Prepare an enterprise risk management model for the business.

5. DATA COLLECTION

The primary goal of this research is to become aware of and determine the diverse dangers related to the housing enterprise in Aurangabad city. This questionnaire survey was primarily based on the risk recognized via the literature review. After figuring out the diverse dangers, the appropriate Likert scale rated the chance of prevalence and effect of every risk of housing enterprise. Finally, data gathered was analyzed via the predicted economic cost approach to prioritize the danger, concluding relative rating.

5.1. METHODOLOGY

The primary purpose of data collection is to focus on the risk and toencountered in this industry andconclude a relativeranking.Forthispurpose,aquestionnaire surveywascarriedouttocollect the data. The questionnaire consists of 7 differentrisk categories and 49 types of risk associated with thehousingbusiness. In addition, datacollection and ratings aboutthelikelihood of occurrence and impact

of each stake were collected.Two Likert scales were selected toratethe probability ofoccurrenceandimpactofeachrisk.Twodifferentratingscalesareshownbelow.

Table 1- Scale of the likelihood of occurrence

LIKELIHOODOFOCCURRENCE	
VeryLow	1
Low	2
Moderate	3
High	4
VeryHigh	5

Source: Authors' Compilation

Table 2- Scale of Impact

IMPACT	
NotSignificant	1
FairlySignificant	2
Significant	3
VerySignificant	4
ExtremelySignificant	5

Source: Authors' Compilation

- Once the questionnaire was developed, a pilot study was carried out to validate the questionnaire.
- The survey was carried out based on the validated questionnaire to collect the data.
- Based on a 95% confidence level, 10% confidence interval and population size of 130, a sample size of 50 respondents was selected.

5.2. DATA ANALYSIS

5.2. (a) RELIABILITY TEST

Reliability is defined as the consistency of results from a test. The method is a split-half ratability method. Then after calculation, Rsb = 1 > 0.91, hence it has good reliability.

5.2. (b) EXCEPTED MONETARY VALUE METHOD

For this research, the collected data was assessed through a predicted financial cost approach to prioritize a risk quantitatively. The expected financial cost approach prioritizes the dangers with the best chance of prevalence or the troubles with the best economic impact. During information collection, the Likelihood of prevalence and Impact for every aspect was rated on a scale of 1 (Very Low) to 5 (Very High) and 1 (Not Significant) to 5 (Extremely Significant), respectively.

TABLE 3- Result of Data Analysis

Riskcategory	Risk description	EMV likelyhood	EMV impact	Sevecity	Rank	Significance level
Strategic risk	Competition risk	3.408	3.449	11.75	1	Veryhigh
	Demand risk	3.347	3.327	11.14	2	Veryhigh
Financialrisk	Interestrate risk	3.286	3.408	11.2	1	Veryhigh
	Availability offunds	3.224	3.347	10.79	2	Veryhigh
Humanresourcemanagementrisk	Performance risk	3	3	9	1	Veryhigh
	Dedicationof employees	2.959	2.939	8.7	2	Veryhigh
Marketrisk	Capital market risk	3.286	3.122	10.26	1	Veryhigh
	Spatial Marketrisk	2.857	3.02	8.63	2	Veryhigh
Operationalrisk	Timely completion risk	3.102	3.265	10.13	1	Veryhigh
	Availability oflabour, materials, Machinery.	3	3.122	9.37	2	Veryhigh
Politicalrisk	Entering an Unregulated Business Sector	2.98	3.163	9.43	1	Veryhigh
	Accounting changes	2.673	3.041	8.13	2	Veryhigh
Marketingrisk	Aggressive Pricing by Exiting Players to Kill Startup	3.388	3.388	11.48	1	Veryhigh
	Pricing Risk	3.224	3.286	10.59	2	Veryhigh

Source: Authors' Compilation

5.2. (c) MONTE CARLO SIMULATION METHOD

From the rating provided, maximum extreme risks in every category changed into deciding to become aware of the contingency that ought to be covered so that the finances stage might be performed with a certain degree of confidence. In the study, Data regarding the base cost associated with the most severe risk that company should have kept as a risk cost in total project cost as well as the data regarding the

minimum value and maximum value for most severe risk was collected. The assumed expense of the venture is a 100 crore, and based on this assumption the above data was collected.

5.2. (d) OUTPUT OF MONTE CARLO SIMULATION

The output of the Monte Carlo simulation shows that when the simulation is done with a 95% confidence interval, total risk cost changes are shown below: (All Figures in Indian rupees)

- Total Risk cost of 100 Crore Project   1130
- Total Risk Cost at 99% Confidence   1472.05 lacs

• Total Risk Cost at 95% Confidence	1400.39 lacs
• Total Risk Cost at 90% Confidence	1350.01 lacs
• Contingency@ 95%Confidence	270.39 lacs
• % Contingency	23.92%

Source: Authors' Compilation

6. RECOMMENDATION

To appropriately estimate the contributing risk of CRE assets, a set of CRE risk management principles can be devised. Included in these operating guidelines should be:

- Developing CRE risk management strategies that complement the corporate risk preference profile
- Selection of appropriate CRE assets given corporate production needs and risk preference profile
- Implementing appropriate CRE risk management strategies begins with due diligence and includes avoidance, insurance, hedging, and diversification.
- Coordination of CRE risk management strategies with corporate strategies and corporate mission

7. FUTURESCOPE

This study focuses on the housing business in the Aurangabad real estate market. However, more study can be done in other areas of the real estate industry, such as commercial, institutional, and industrial real estate. After the ideation stage, analysis can be done to analyze and manage risks in order to keep the market going.

8. CONCLUSION

- Overall, a combined ranking considering the perception of all the stakeholders is done.Based

on the risk criticality analysis, 15 risk factors have been identified as "very critical"inAurangabad real estateprojects.

- Preliminary design, faulty designers and construction, cost overrun, duration, market downturn, workforce availability, demand and supply, interest rate, payment delay, urban planning, transparency, inflation risk, customer relationship management, cash flow risk, and laws and regulations are listed in decreasing order of criticality.Only one risk has been identified as not critical for Aurangabad real estate sector, i.e.unavailabilityand fluctuation in foreign exchange.

- Critical and very critical risk factors identified by the CIM shall be furtherstudied to prepare arisk management model.

- The major risk class that any employer residential actual property should bear in mind for the duration of their conceptualization level.

- The result of EMV of Likelihood of Occurrence & impact, Risk Severity of every danger were calculated.

- The professional survey observed that during a residential challenge of a hundred crore, approx. 11.30% of the price is stored for general danger evaluation and control for the maximum intense risks.

- From the data evaluation, one observes that at 95% confidence, the self-assurance price for danger evaluation and control can go upwards as much as 14%. At 99% confidence, the self-assurance price can go up as much as 14.72%. The Monte Carlo simulation version for every danger was produced, which indicates the contingency required for every threat. Simulation results are proven in "Fig no 1. - Total risk cost".

- Then, the 95% self-assurance general Risk Cost can shoot up as much as 14%, and the contingency of prevailing danger price is 23.92%. Then available danger evaluation and control for the maximum intense danger are considered while beginning an actual property enterprise.

- This records evaluation shows that 95% self-assurance of the full Risk Cost related to an enterprise can go up as much as 14%. So, whilst one creates an enterprise, it is essential to remember that danger is related to an enterprise. So, it can help develop an enterprise.

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