

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/291330402>

# Reaping the Returns: Review on Risk Management in Real Estate

Article · December 2015

CITATIONS

0

READS

240

3 authors:



Saiyed Farhana

SSNNL

10 PUBLICATIONS 5 CITATIONS

SEE PROFILE



Dr. Jayeshkumar Pitroda

Birla Vishvakarma Mahavidyalaya Engineering College

295 PUBLICATIONS 706 CITATIONS

SEE PROFILE



Shakilmiya S. Malek

2 PUBLICATIONS 0 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Feasibility Report on Recycle and Reuse of Wind Turbine Blade Waste [View project](#)



Construction Management Approach [View project](#)

# Reaping the Returns: Review on Risk Management in Real Estate

(Paper ID: 31ET3012201501)

Saiyed Farhana  
*Student of final year,  
M.E. (Construction Engineering &  
Management)*

*B.V.M. Engineering College, Vallabh  
Vidyanagar, Gujarat, India  
farhasaiyed11@gmail.com*

Dr. Jayeshkumar Pitroda  
*Assistant professor  
Civil Engineering Department*

*B.V.M. Engineering College, Vallabh  
Vidyanagar, Gujarat, India  
jayesh.pitroda@bvmengineering.ac.in*

Shakilmiya S. Malek  
*I/C Principal  
M.E. (Construction Engineering &  
Management)  
F.D. (MUBIN) Institute of  
Engineering and Technology,  
Gandhinagar, Gujarat, India  
Shakil250715@yahoo.co.in*

**Abstract:** The boom of the real estate has been a motivating force for economic growth in India since past few years. However, the real estate market in India is still in the embryonic stage and juvenile. In context of the real estate projects it is a general situation observed that such projects cannot meet the target as the Indian real estate companies are deficient of scientific management technology to confront the risks. The purpose of this research is to identify the main problems and challenges of risk management in the Indian real estate companies to explore solutions for risk management. This paper gives a panoramic view of framework for risk management in real estate sector through critical literature review, finding the critical risks associated with the residential real estate sector as it is very important to take decision regarding the risk management in the real estate sector by the decision makers.

**Keywords:** Risk Management, Real Estate

## I. INTRODUCTION

“Real estate” one of the only perennial and traditionally preferred asset class and also with the inborn desire of Indians to own a house, this sector has become a natural choice for the excesses to be invested. This sudden spurt in demand caught the fancy of investors globally. The real estate sector in India obtained greater prominence with the liberalization of the economy, as the consequent increase in business opportunities and labour migration which has provided a framework to rising demand for commercial and housing space. The boom in the real estate and construction sectors are purveying a crucial role in the overall development of India’s core infrastructure.

The Indian real estate sector has traditionally been dominated by a number of small regional players with relatively low levels of expertise and financial resources. Historically, the sector has not benefited from institutional capital; instead, it has traditionally tapped high net-worth individuals and other informal sources of financing, which has led to low levels of transparency. Today, the real estate industry’s dynamics reflect consumers’ expectations of higher quality with India’s increasing integration with the global economy. The importance and urgency of understanding the performance of

risk management is due to fast growing economy. This study drives a panoramic view of the operations of real estate market sector in various property segments, the risk challenges it faces and its prospects.

## II. NEED OF STUDY

Investment in property is believed to be the smartest move as chances of loss is comparatively negligible. Real estate sector is also called as revenue generating sector. Indian real estate sector is one of the most beneficial industrial sectors in the country through the employment opportunities in construction or the contribution towards the GDP. The new government as well as the relaxed policies pertaining to foreign investment or the entire construction industry will definitely be able to pull in more investors and buyers too will have a good range of options to choose from. From the last few years there has been an increasing demand of real estate market which according to some experts will lead to the strong growth of India. It is forecasted that India will share a GDP in the world from the current 6% to 11% in 2015. This will make India as a third pole in the global economy after US and China. (86).

The study aims at providing a panoramic view of the risks in real estate sector and investigates the slow pace of real estate market identifying the key drivers that lead to the risk. Managing risks involves creating awareness of uncertainties, assessing the risks, managing the controllable risks and minimizing the uncontrollable risks by allocation.

The importance and urgency of understanding the performance of risk management is due to the highlighted fast growing Indian economy. This research explains why risks have mushroomed along the real estate investment process and focus on the Indian characteristics. The main objective of the paper is to identify the most critical risk and risk factors in real estate projects.

## III. CRITICAL LITERATURE REVIEW

Let’s have a look at some of the positivity that actually improved and beautified the cracked face of the sector. The

literature review is carried out about the various factors to identify the key driving factors of the real estate industry.

Hartzell et al. (1992) utilized a statistical methodology to estimate the total market value of real estate by property type and geographic location by dividing the property types in various subgroups i.e. commercial, residential and industrial.<sup>[4]</sup>

Cannon et al. (1995) examined the possible agency problems in Real Estate Investment Trusts (REITs) by contrasting the performance, structure and compensation of the two REIT forms from 1987 through 1992. Results show that “self-administered” REITs outperformed “advisor” REITs over the sample period even after adjusting for their greater market risk.<sup>[37]</sup>

Geurts et al. (1996) provided an explanation of problems i.e. first, naive diversification strategies have not always proven to yield sufficient risk-reduction results, secondly the question of the optimal allocation of real estate in International portfolios has not yet been resolved and finally a number of studies have found that investors seem to bias their investments towards the domestic country, despite the prospects of significant gains to diversifying internationally. This phenomenon has come to be known as the “home asset bias.”<sup>[12]</sup>

Chau (1997) studied research papers on Asian real estate markets published in 17 real estate selected academic journals. Characteristics of these studies were identified and future directions of research are speculated upon.<sup>[22]</sup>

Wu (2000) and Zhang (2000) examined the variables like economic globalization, marketization and privatization in the arena of urban land and housing. The work also explores the implications for the urban planning and real estate growth in china’s urban development .It also examines the salient features of the transitional economy with respect to land and housing reform.<sup>[10][41]</sup>

Mills (2001) suggested systematic management approaches to risk. He discussed the allocation of risk and suggested that risk needs to be identified and managed early in the procurement process by demonstrating the effectiveness of systematic risk management.<sup>[30]</sup>

Chen et al. (2003) captured different levels of market risk as it is necessary to identify and measure the factors leading to this uncertainty. He also worked out to raise important issues that need to be debated in considering the risks of investing in different countries. The work forms a basis to the future work that should include more prospective assessment of market risks and extension of the analysis to a subnational city specific level.<sup>[21]</sup>

Dixon (2005) assessed the impact of information and communication technology (ICT) on real estate. He deconstructed the myths of the “death of real estate” and “productivity increase means jobs loss”, in relation to office real estate.<sup>[6]</sup>

Blundell et al. (2005) developed a practical way for managing risk in property portfolios. The approach adopted was to identify the factors that cause volatility in property returns. They presented a risk profile for individual property portfolios showing their relative exposures on the different risk dimensions.<sup>[11]</sup>

Hoesli et al. (2005) and Lorenz et al. (2006) addressed the issue of uncertainty in valuing real estate to incorporate the uncertainty of valuation parameters. They also contributed to the debate about valuation variation and the margin of error in valuing properties.<sup>[16][28]</sup>

Motawa et al. (2006) proposed a fuzzy system to maintain the estimation of likelihood of occurrences of a change event in construction works which is a risk associated during project lifetime.<sup>[18]</sup>

Kryvobokov (2006) identified the list of statistically significant location attributes, which are the most important for market value of real estate in countries with well-developed markets. These lists of important location attributes can be used for practical specification of the valuation models for urban land and other real estate in countries where the market is underdeveloped, to increase the degree of objectivity and market orientation.<sup>[24]</sup>

Ling (2007) investigated how foreign firms manage financial and economic risks when operating in China’s construction industry. They identified the types of financial and economic risks foreign firms face and the frequency and severity of these risks. Finally they recommended a risk management framework that can be adopted by foreign firms to mitigate it.<sup>[26]</sup>

Junying et al. (2007) identified the key issues and challenges in risk management and insurance in the construction industry of China. Accordingly, an organizational learning of a risk management model is designed and proposed as an organizational learning process through collaborative teamwork to improve risk management and create a learning organization.<sup>[27]</sup>

Jiang et al. (2007) and Chauhan et al. (2014) proposed various risk factors and also demonstrated quantitative model of evaluating risk of a real estate project and the weight of each risk factor by using AHP and the sensitivity analysis of the influence of one factor or more factors combined on the real estate project has been made.<sup>[20][15]</sup>

Newell et al. (2007) reviewed the real estate markets in India and assesses the risk-adjusted performance and portfolio diversification benefits for the real estate markets (office, retail and residential) of New Delhi and Mumbai (two largest cities in India) over the 1998.<sup>[13]</sup>

Kaiser et al. (2008) classified and evaluated risk by its impact on the various components of portfolio returns. These risks were considered in the strategic contexts of core, value-added, and opportunistic investing. Examining the interplay of risks

revealed a particularly high concentration of risks in the opportunity fund arena.<sup>[36]</sup>

Tan Bee Khim (2008) studied the factors to determine the relationship between investor's investment satisfaction, investor's behavioral factors to gain some insight of investor's reinvestment intention and real estate investment.<sup>[46]</sup>

Mallick (2009) provided an understanding of economic and structural changes in private investment in the Indian economy. He addressed the short term and long term trends in private investment at the aggregate, sectoral and sub-sectoral levels and their contribution to the growth of private investment in India.<sup>[45]</sup>

Yang (2010) discussed the foreground of the real estate enterprise and the course of developing the information technology. He has analyzed the contents and essentiality of the customer relationship management. There are so many difficulties and risks in the course of customer relationship management implementation which can provide a basis for further study.<sup>[41]</sup>

Gill et al. (2010) carried out a surveyed investors to find out the factors that affect the direct investment abroad by examining the perception of risk factors that may hinder the direct investment in Indian sector. He also discussed several techniques by which investors can mitigate foreign direct investment risk in India. He also pointed out several techniques by which investors can mitigate foreign direct investment risk in India and gave some suggestions to overcome the challenges.<sup>[43]</sup>

Mazumdar (2010) presented the overview of the Real Estate Market and the Indian Construction Industry along with the Macroeconomic parameters pertaining to the Indian Economy and demographic patterns affecting the real estate sector. He also presented the entire overview of the real estate sector pertaining to the market scenario, market segments of the real estate and the growth drivers in context of the Indian scenario. Moreover, policy and regulatory framework and road ahead in the real estate sector is also highlighted.<sup>[48]</sup>

Bansal et al. (2011), presented a panoramic view of the operations of Indian real estate sector in various property segments, the challenges faced by the sector and its prospects.<sup>[7]</sup>

Demong et al. (2011), Li et al. (2014), Parekh (2015) and Wang et al. (2013) suggested a number of risk factors and risk sources that contribute to the level of dynamic risk prediction, which is dependent on what takes place from the initial investment to the later stages of the real estate development in various sectors including the residential real estate business.<sup>[32][25][34][40]</sup>

Wang et al. (2012) outlined few important reasons why the Chinese real estate market is probably one of the most important markets in the developing. They studied that firstly China is the second largest economy in the world. Secondly,

it has about 19.2% of the world's population. Thirdly, China has a political system, legal environment, and culture that are dramatically different from that of the Western world. Fourth and most importantly, China is a place that has experienced both a dramatic growth in its real estate markets and a huge increase in real estate values during the past decades. These provides a great laboratory to examine some important issues that cannot be analyzed using data from mature economies.<sup>[17]</sup>

Zysko (2013) analyzed the factors of price forming of real estates in terms of land and secondary apartments like price of land, distance from premises access from the fast roads and proximity of green areas.<sup>[9]</sup>

Wen et al. (2013) analyzed the real estate investment risk and general rules, causes of the risk of investment. They have objected the factors in macro and micro point of view of investment.<sup>[47]</sup>

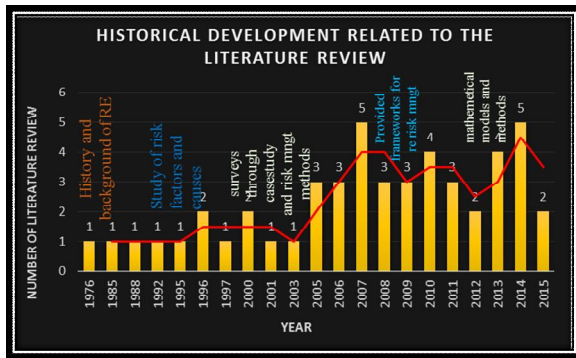
Green (2014) discussed the risks concerning to any business venture and that may be of any type, may it be related to environmental risks. He dealt with Vapor intrusion as relevant business concern, environmental concern and risk concern in real estate transactions and where property serves as security in a loan transaction.<sup>[23]</sup>

V.Chandrasekhar attempted to serve the background note on the global real estate market and cycles. He provided an overview of the real estate cycle and market dynamics therein, and explored the imperative indicators which affect the real estate cycle. He also made an effort to provide general information on dynamics of a real estate cycle.<sup>[2][3]</sup>

Himadri et al. analyzed the market forces that impact the dynamics of Indian real estate ecosystem by the driving factors: extrinsic and intrinsic factors.<sup>[41]</sup>

#### IV. MAJOR FINDINGS OF THIS LITERATURE REVIEW

The real estate developers have to deal with all kinds of risks and still there is no proper risk management technique and still if we don't identify the solution for this the investors from real estate will be exhausted. Such disturbance will influence the correct investment decision making. The Indian real estate industry changes their business environment which generates huge amount of new risks in industry. Hence it is required for Indian real estate companies to manage the risks in a more scientific and structured way. Figure 1 shows the historical development of real estate from the reviewed literature. Hence it is important to identify how to integrate risk management and how to make the effective use of the risk management into Indian real estate industry, for enhancing the Indian real estate sector competitive edge and survive in such a transformational period.



The risk factors are shown in the framework in the figure 2. About 91 risk factors have been identified and distributed in 8 different groups as follows:

Fig. 1. Historical Development of Real Estate Development

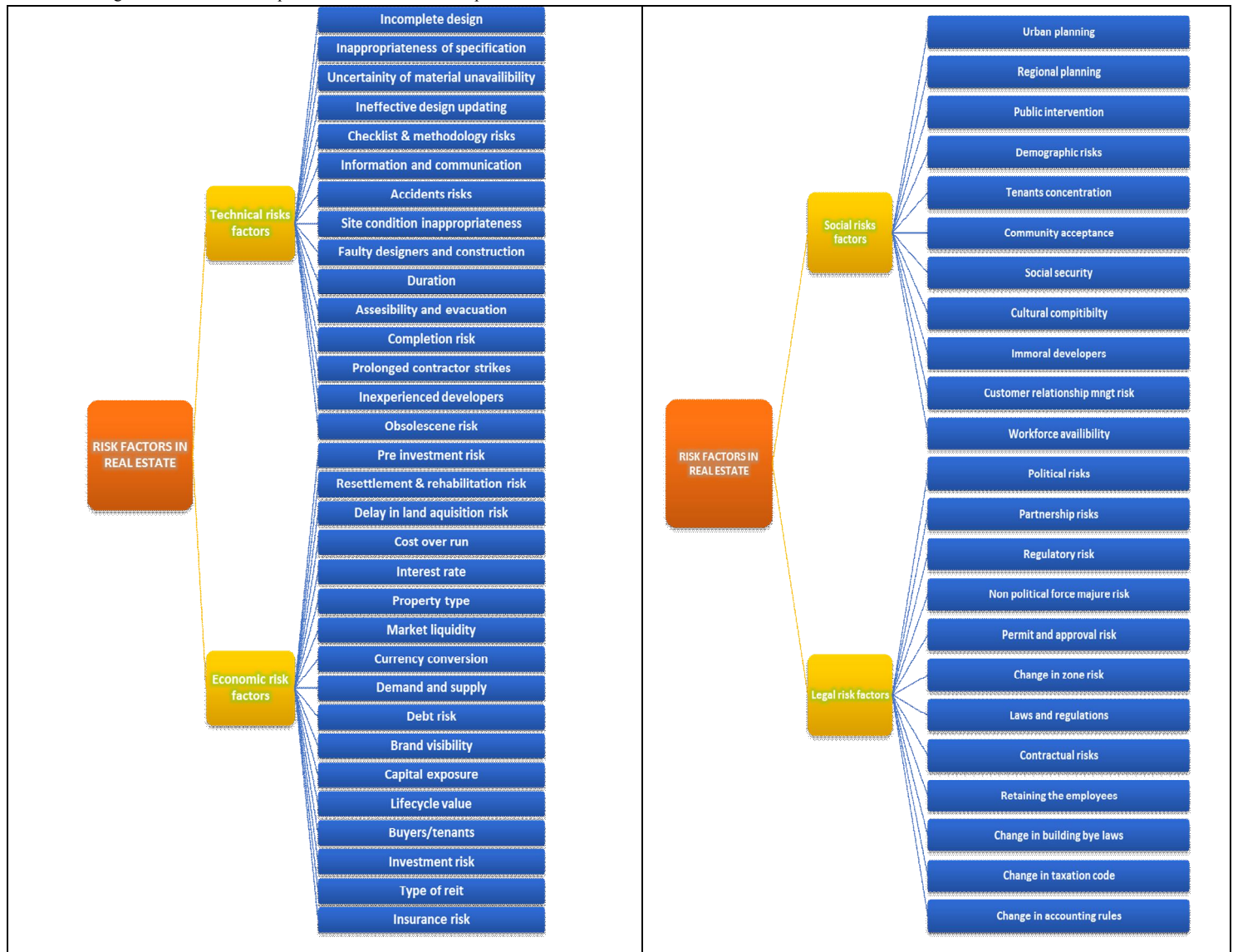


Fig. 2. Integrated Framework for Assessing Factors Affecting Risk Management in Real Estate

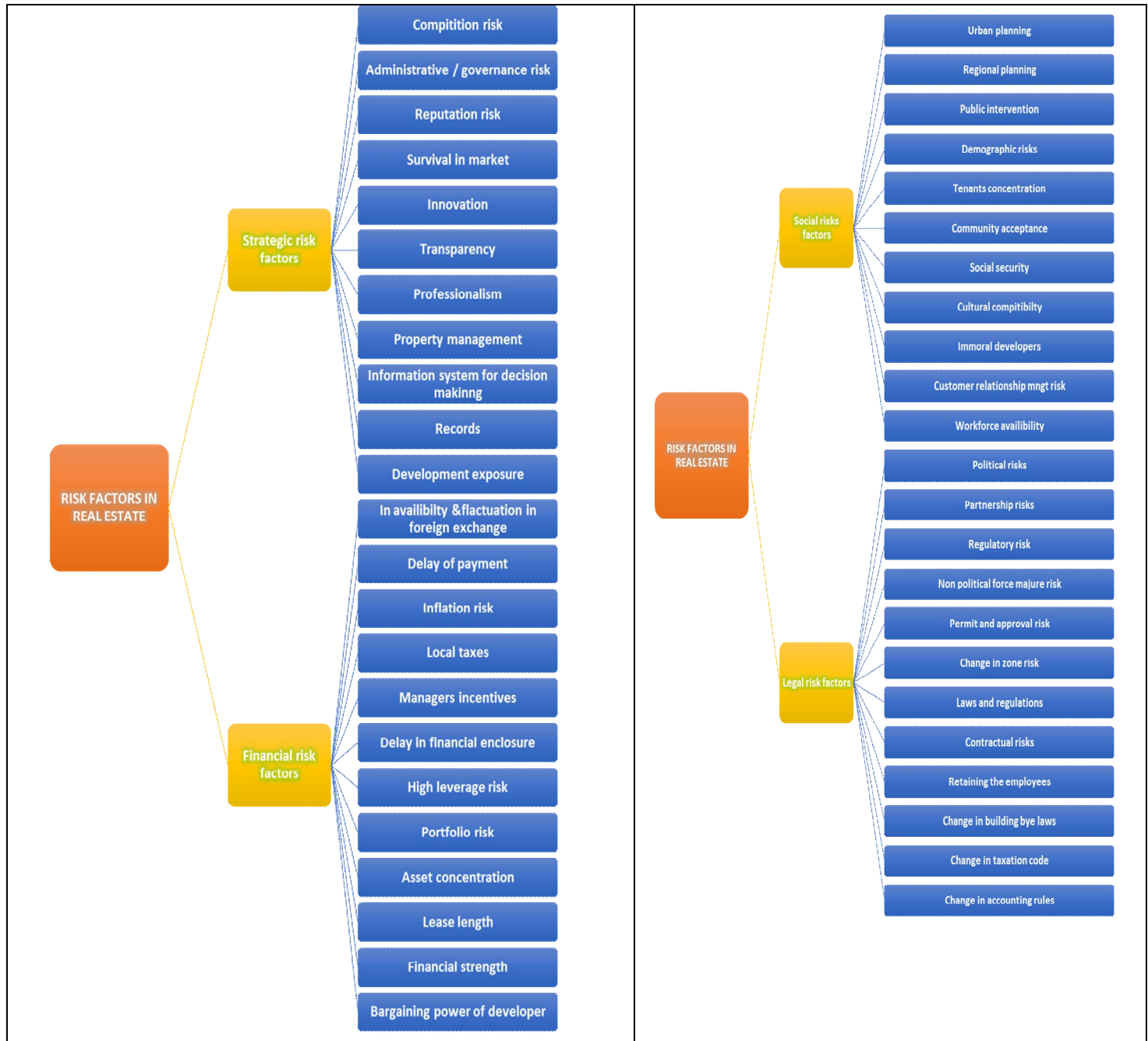


Fig. 3. Integrated Framework for Assessing Factors Affecting Risk Management in Real Estate

Table 1. Risk Identification Criteria for the Risk Management as per the Literature Review

<i>REPRESENTATIVE REFERENCES</i>	<i>RISK FACTORS</i>
<i>APGAR (1976)</i>	High leverage risk, decentralized products/market, market downturn, interest risk, prolonged contractors strike, competition risk, site characteristics, political risks, environmental risks
<i>CLAURETIE (1988)</i>	Geological conditions
<i>HARTZELL ET AL. (1992)</i>	Geographical Location risk, property type risks
<i>CANNON ET AL. (1995)</i>	property type risks, type of REIT
<i>CHEN ET AL. (2003)</i>	Market risks
<i>DIXON (2005)</i>	Information and communication risk
<i>BLUNDELL ET AL. (2005)</i>	Portfolio risk, tenant concentration, asset concentration, location concentration
<i>HOESLI ET AL. (2005) , LORENZ ET AL. (2006)</i>	Cash flow risk
<i>KRYVOBOKOV (2006)</i>	Demographic risk, efficiency risk of client, urban planning risk, cultural compatibility risk, accessibility and evacuation risk
<i>KE ET AL. (2007)</i>	Financial risk, contractual risk, local taxes risk, cash flow risk, interest risk, delay in payments, total value of the project, immoral developers, reputation, financing strength of developers, bargaining power of the developer, laws and regulation, inexperienced developer
<i>LING (2007)</i>	Fluctuation in foreign exchange, inflation risk, interest risk, defaults by contractors, labour and market price fluctuation.
<i>JUNYING ET AL. (2007)</i>	Insurance risk
<i>JIANG ET AL. (2007)</i>	Market competition, land price, material price, construction technique, social purchasing power
<i>CHAUHAN ET AL. (2014), LI ET AL. (2014), PAREKH (2015) ,WANG ET AL. (2013)</i>	Incomplete design risk, Inappropriateness of specification, Uncertainty of Material unavailability, Ineffective Design updating, Checklist & methodology problems, Information and communication risks, Accidents, Site condition in appropriateness risk, Faulty designers and construction, Multiple functionality, Duration, Interest rate , Property type, Market liquidity, Currency conversion, Demand and supply, Debt risk
<i>KAISER ET AL. (2008)</i>	Liquidity risk
<i>SHIWANG ET AL. (2009)</i>	Portfolio risk
<i>YANG (2010)</i>	Customer relationship management
<i>BULLOCH(2010)</i>	Information
<i>BANSAL ET AL. (2011)</i>	Change in zone risk, change in accounting codes, customer relation

## V. CONCLUSION

Indian realty sector is one of the most important industrial sectors in the country. Be it employment, activities or the contribution towards the GDP, the real estate sector in India gives away a good part to the government as well as the individual housing as well as the commercial sector. Control the identified attacks effectively, require further research. Hence it is important to identify how to integrate risk management and how to make the effective use of the risk management into Indian real estate industry, for enhancing the Indian real estate sector competitive edge and survive in such a transformational period.

## ACKNOWLEDGMENT

I express sincere and heartfelt thanks to Dr. F. S. UMRIGAR, Principal, Birla Vishvakarma Mahavidyalaya Engineering College, Vallabh Vidhyanagar, Dr. L. B. ZALA, Professor & Head of Department, Civil Engineering Department, Birla Vishvakarma Mahavidyalaya Engineering College, Vallabh Vidhyanagar and Prof. J. J. BHAVSAR, Associate Professor and PG Coordinator of Construction Engineering and Management, Civil Engineering Department, Birla Vishvakarma Mahavidyalaya Engineering College, Vallabh Vidhyanagar.

I express a deep sense of gratitude to Dr. JAYESHKUMAR PITRODA, Assistant Professor, Civil Engineering Department, Birla Vishvakarma Mahavidyalaya Engineering College, Vallabh Vidhyanagar for his extraordinary cooperation, invaluable guidance and supervision. This work is the result of his painstaking and generous attitude.

I would also extend my special thanks to Mr. SHAKIL MALEK, for his regular response to my needs promptly.

I am extremely thankful to my family for their continuous moral support allowing me to realize my potentials. Their support and love always encouraged me significantly and this is the greatest gift anyone can ever give. All my gratitude to my friends, thank you for your love, support and encouraging me in my work.

## REFERENCES

- [1] Ben Bulloch, John Sullivan, "Information – The Key to the Real Estate Development Process", Volume 8, Issue No. 1, Article 12, July 2010, 78-87.
- [2] Chandrasekar. V, and Gaurang Sanghvi, "Indicators of a Real Estate cycle - Implication for India", 2009, 2-27.
- [3] Chandrashekhar V. and Katyayini Krishnamoorthy, "Housing Finance and Housing", A view from India and beyond", September 2010, 2-23.
- [4] David J. Hartzell, Robert H. Pittman, David H. Downs, "An Updated Look at the Size of U.S. Real Estate Market Portfolio", April 1992.
- [5] Denise M. Guérin, "Project Management in the Real Estate Industry", paper presented by Master of Science in Management of Projects and Programs, Brandeis University, 2012.
- [6] Dixon Tim, "The impact of information and communications technology on commercial real estate in the new economy", Journal of Property Investment & Finance. Volume 23, Issue No. 6, 2005, 480-493.
- [7] Dr. Ashok Bansal, Mr. Rajeev Sirohi, Manish Jha, "A Review on Indian Real Estate: Trends, Challenges and Prospectus", KKIMRC IJRHRM, Volume1, Issue No.1, Sep-Nov 2011, 39-54.
- [8] Eli Beracha and M. Babajide Wintoki, "forecasting residential real estate price changes from online search activity", Journal of Real Estate Research(JRER), Volume 35, Issue No. 3, 2013, 284-312.
- [9] Elzbieta Zuzanska-zysko, "The real estate market in the Upper-Silesian metropolitan area", the 3rd International Geography Symposium - GEOMED2013, Social and Behavioral Sciences 120, 2014, 374 – 385.
- [10] Fulong Wu, "China's Recent Urban Development in the Process of Land and Housing Marketisation and Economic Globalization", Journal on Habitat International 25 (2001), 14 August 2000, www.elsevier.com/locate/habitatint, 273-289.
- [11] Gerald F. Blundell, Simon Fairchild, Robin N. Goodchild, "Managing Portfolio Risk in Real Estate", Journal of Property Research, ISSN 0959-9916 print/ISSN 1466-4453, DOI: 10.1080/09599910500456759, June–September 2005, Volume 22, Issue No. 2-3, 115–136.
- [12] Geurts Tom G, Austin J. Jaffé, "Risk and Real Estate Investment: An International Perspective", The Journal of Real Estate Research, Volume 11, Issue No. 2, 1996, 117-130.
- [13] Graeme Newell, Rajeev Kamini, "The Significance and Performance of Real Estate Markets in India", Journal of Real Estate Portfolio Management, Volume 13, Issue No. 2, 2007, 161-172.
- [14] Harihan, Ganesh, Shashaiik, Narayan, Shankar Devi, "Reaping the Returns", India Capital Market Report, Mumbai: Jones Lang LaSalle, 2011.
- [15] Hemant Chauhan, Prof. Pankaj Shah, "Ranking of Risk Factors in Real Estate: AHP Analysis", Global Journal of Research Analysis, Volume 3, Issue 9, September 2014, ISSN No 2277 – 8160.
- [16] Hoesli, Martin, Elion Jani, Andre Bender, "Monte Carlo simulations for Real Estate Valuation", Journal of Property Investment & Finance, Volume 24, Issue No. 2, 2006, 102-122.
- [17] Hongwei Wang and Ko Wang, "What is Unique about Chinese Real Estate?" Journal of Real Estate Research (JRER), Volume 34, Issue No. 3, 2012, 275-288.
- [18] Ibrahim A. Motawa, Chimay J. Anumba, Ashraf El-Hamalawi, "A fuzzy system for evaluating the risk of change in construction projects", Journal on Advances in Engineering Software37, 2006. DOI:10.1016/j.advengsoft.2006.01.006, 18 January 2006, 583–591.
- [19] Iroham, Chukwuemeka Osmonda, Oloyede, Samuel Adesiyana, Ajibola, Mayowa Olusolaa, Durodola, Olufemi Daniela, "Towards an Effective Real Estate Agency Education: A Stride to Efficiency in Nigeria", WCES 2014, Procedia - Social and Behavioral Sciences 191, 2015, 2687-2692, DOI: 10.1016/j.sbspro.2015.04.360.
- [20] Jiang Gen-mou, HU Zhen-peng, JIN Jun-yan, "Quantitative Evaluation of Real Estate's Risk based on AHP and Simulation", Systems Engineering - Theory & Practice, Volume 27, Issue 9, September 2007, 77–81.
- [21] Jun Chen and Peter Hobbs, "Global Real Estate Risk Index to capture different levels of market risk." Journal of Portfolio Management, Special Issue 2003, 66-75.
- [22] K.W.Chau, "Real estate research in Asia - Past, Present and the Future", Presidential address delivered at the Second Asian Real Estate Society Conference, 20-22 October 1997, Hong Kong.
- [23] Kevin W. Green, "Vapor Encroachment and Intrusion, What are Real (Estate) Risks?" Journal of Project Management (JPM), March- April 2014, 30-33.
- [24] Kryvobokov Marko, "What location attributes are the most important for market value? Extraction of attributes from regression models", Property Management, Volume 24, Issue No. 3, 2006, 257-286.
- [25] Li, Ling, David Isaac, "Environmental Management Issues in China: Problems and Strategies", Property Management, Volume 14, Issue No. 3, 1996, 17-26.
- [26] Ling, Florence, Hwee Loon Lim, "Foreign firms' financial and economic risk in China", Engineering, Construction and Architectural Management, Volume
- [27] Liu, Junying, Bingguang Li, Binshan Lin, Vanthuan Nguyen, "Key issues and challenges of risk management and insurance in China's



- construction industry: An empirical study", *Industrial Management & Data Systems*, Volume 107, Issue No. 3, 2007, 382-396.
- [28] Lorenz, David, Stefan Truck, Lutzkendorf Thomas, "Addressing risk and uncertainty in property valuations: A viewpoint from Germany", *Journal of Property Investment & Finance*, Volume 24, Issue No. 5, 2006, 400-433.
- [29] Mahlan Apgar, "Managing the risks in real estate", *The McKinsey Quarterly*, Spring 1976, 26-40.
- [30] Mills Anthony, "A Systematic Approach to Risk management for Construction", *Structural Survey*, Volume 19, Issue No. 5, 2001, 245-252.
- [31] Nan YANG, "Research on the Customer Relationship Management of Real Estate Enterprise", *Journal of IEEE*, 2010.
- [32] Nur Atiqah Rochin Demong and Jie Lu, "Personalized Multidimensional Process Framework for Dynamic Risk Analysis In The Real Estate Industry", *Sixth International Conference on Construction in the 21st Century (CITC-VI) "Construction Challenges in the New Decade"*, 5-7 July 2011, Kuala Lumpur, Malaysia.
- [33] Online-2005, <http://www.tandf.co.uk/journals>
- [34] Parekh Varunkumar Jagdishbhai, "Evaluation of factors affecting risk in real estate industry by Important Index method", *Journal of The International Association of Advanced Technology and Science (JIAATS)*, Volume 16, Issue No. 1, April 2015.
- [35] [projectmgmt.brandeis.edu](http://projectmgmt.brandeis.edu).
- [36] Ronald W. Kaiser, Jim Clayton, "Assessing and Managing Risk in Institutional Real Estate Investing", *Journal of Real Estate Portfolio Management*, Volume 14, Issue No. 4, 2008, 287-305.
- [37] Susanne Ethridge Cannon, Stephen C. Vogt, "REITs and Their Management: An Analysis of Organizational Structure, Performance and Management Compensation", *Journal of Real Estate Research (JREER)*, Volume 10, Issue No. 3, 1995, 297-317.
- [38] Terrence M. Clauretie, "Regional Economic Diversification and Residential Mortgage Default Risk", *Journal of Real Estate Research*, Volume 3, Issue No. 1, July 1988, 87-97.
- [39] Yu Shi Wang, Wang Jianping, Guo Na, "Application of project portfolio management in the real estate corporations", *Journal of IEEE*, 2009.
- [40] Yumeng Wang, Chenghua Shi, Yuelei Hu, "Real Estate Enterprises Investment Risk Evaluation Based on ACBP", *Advances in information Sciences and Service Sciences (AISS)*, Volume 5, Issue No. 10, May 2013 doi:10.4156/AISS.vol5.issue10.105.
- [41] Zhang ML (Zhang Minli), Yang WP (Yang Wenpo), "Fuzzy Comprehensive Evaluation Method Applied in the Real Estate Investment Risks Research", *2012 International Conference on Applied Physics and Industrial Engineering*, 1815 – 1821
- [42] Zhang, Xing Quan, "Housing Reform and The new Governance of Housing in Urban China", *International Journal of Public Sector Management*, Volume 13, Issue No. 6, 2000, 519-525.
- [43] Gill Amarjit, Nahuni Biger, Neil Mathur, and Rajendra Tibrewala, "Understanding and Mitigating Direct Investment Risk in the Indian Real Estate Market", *Business and Economics Journal*, December 2010, 1-10.
- [44] Himadri Mayank, Hariharan Ganesan, Abhishek Kiran Gupta, "Indian Real Estate- Charting a Global Course", *India Capital Market Report*, Mumbai: Jones Lang LaSalle, 2011.
- [45] Jagannath Mallick, "Trends and Patterns of Private Investment in India", *Working Paper*, Bangalore: The Institute for Social and Economic Change, 2009, 1-16.
- [46] Tan Bee Khim, Research report on "How Investor Behavioral Factors Influence Real Estate Investment Satisfaction and Reinvestment Intention in Penang, Malaysia", May 2008.
- [47] Fangfang Wen, Ling Li, "Based on AHP- fuzzy comprehensive evaluation method of real estate investment risk research", *Proceedings of the 2nd International Conference on Systems Engineering and Modeling (ICSEM-13)*, 2013.
- [48] Mazumdar, Deepak, "Sustainable Urbanization in Real Estate Sector", *Central Steering Committee for Housing and Real Estate Market Policy*, Vietnam, 2010.