CHAPTER - 1

RESEARCH DESIGN

AND

METHODOLOGY
CONTENTS

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1.0 INTRODUCTION

“Real Estate is an imperishable asset, ever increasing in value. It is the most solid security that human ingenuity has devised. It is the basis of all security and the only indestructible security.” Russell Sacg

The term ‘Real estate’ refers to land as well as building. The word ‘Land’ includes-the air above and the ground below and any buildings or structures on it. The oldest use of the term “Real Estate” that has been preserved in historical records was in 1666. This use of “real” also reflects the ancient and feudal preference for land, and the ownership (and owners) thereof. Some people have claimed that the word real in this sense descended (like French Royal and Spanish Real) from the Latin word ‘King’. In the feudal system, the king was the owner of all land, and everyone who occupied land paid him rent directly or indirectly (through lords who in turn paid the king), in cash or goods or services (including military service). For almost half of human history, our ancestors moved with the four-legged food supplies of their respective areas, leaving only trace signs of their lives-a cave painting here, some

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stone axes there and the odd carved trinket in the belly of a saber-toothed tiger. Our ancestors abandoned the hunter-gatherer life style gradually over the period from 30,000 B.C. to 15,000 B.C. This change was far from global and hunter gatherer societies still surviving in some areas of the world today, but it did mark a transition towards an agrarian society – a transition that also heralded the advent of home ownership.

Many aristocracies were eventually displaced – usually by displacing an aristocrat’s head from the body – with supposed meritocracies – a system where the best and brightest lead a nation for the good of all. Title lands were broken into smaller parcels and sold on free market of sorts. But the people with the money to buy the deeds were either merchants or former aristocrats who managed to escape been shortened by revolutionary fervor. The industrial revolution was one of the great equalizers in human history, perhaps only matched by the invention of firearms. After the industrial revolution, however, the wealth of the world increased to the point where, banks opened themselves to “higher-risk” mortgage loans to common people. This allowed individuals to own their own homes and, if so desired, to become landlords themselves. It took 30,000 years, but home ownership is now opened to many people. Ownership, specifically ownership of land, was the basis of all the investment opportunities that is seen today.

The Real Estate covers residential houses, commercial offices, trading spaces such as theatres, hotels and restaurants, retail outlets, industrial buildings, factories and also government buildings. Thus, the term real estate connotes immovable property which can be either land or building or both. Real Estate sector is a large, huge diversified sector, with many verticals such as land, design/construction, development, investment, lending etc. India, emerging as one of the most important business locations in the world with its favourable demographics and strong economic growth, makes it an attractive place for property investors as the demand for property is determined mainly by business development and demographic trends.

2.0 REVIEW OF LITERATURE

A brief review of relevant literature to acquaint with the topic of research study is undertaken as a prelude to the statement of the problem.
Mintzberg's (1987) Emergent Strategies model underscores the need to balance the past, present and future. This paper finds that in India all the developers are doing almost everything, across the board prevalence of deal mindset; lack of specialization or efforts towards creating a niche market, and a rush for unrestricted geographical expansion without factoring in economic benefit or even long term sustainability.

In his well known doctrine of Competitive Advantage and Five Forces Model, Micheal Porter (1980), argues that businesses should strive to create and sustain competitive advantage, either in terms of lower cost of production or in terms of product differentiation, which can provide justification for the existence of the firm. In his lecture on application of competitive strategy and five forces model for development of strategy for real estate development companies (1989), he pointed out that this industry in America was characterized by low barriers of entry, identical cost structures and high degree of competition. In his opinion the companies engaged in this industry should try to deliver customer value by differentiation.

The article entitled “Evaluation and Growth of Real Estate in India” by K. Gowri Shankar, outlines the beginnings of four real estate majors and goes on to elaborate on the steady march of the real estate sector in attaining the capability to deliver, with regard to a wide range of projects in various property segments. The author touches on the various aspects, such as, sustainability concerns being addressed by the sector, its move to the smaller cities, the maturity of real estate sector as reflected in projects being undertaken overseas, the current investment potential of the sector and the ways and means of funding in the real estate sector.

N. Janardhan Rao, “Real Estate in India – Flying High” conveys in his article that the real estate sector is the second largest employer after agricultural sector. The

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author states that the Government has become investor-friendly and is ushering in foreign investment through the favourable FDI policy. He also says that proper urban planning, the abolition of the Urban Land Ceiling Regulation Act and the repeal of age-old Rent Control Act should receive the attention of the Government, so that the right conditions are created for nurturing the real estate sector.

Nayan A Shah, in his article entitled “Synergies in development of Urban Infrastructure, Airports, Highways/Public Transport and Real Estate”, states that infrastructure developments precedes real estate development that the synergy between both is not always achieved, due to degradation of the urban environment and the shortage of funds with the Government. The author says that whereas, urbanization entails pressure from the growth of the population, congestion and deterioration of the physical environment, all of which lead to a poor quality of life, there is a widening demand – supply gap in the provision of essential services in urban centres. The author draws attention to the initiatives of the Government through which institutional finance and funds from the market are being leveraged for urban development. He recommends the harnessing of investments both, from the private sector and from overseas- for the infrastructure sector through suitable policy initiatives.

The article “Real Estate Investment Scenario” by Ramesh Nair, paints a rosy picture with regard to the real estate sector, characterizing it as one that is getting corporatized- making research – based decisions, aiming for multi-city operations and attracting private equity. The author highlights that following liberalization in the FDI norms, USD7-8 billion is expected flow in the real estate sector over the next 18-30 months. The author looks in depth at the current trends in each segment of real estate such as commercial, residential, retail, manufacturing and hospitality and indicates the size of investments required in order to meet the demand of the segments.

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K. Gowri Shankar in his article, "Outlook for Indian Real Estate" focuses on the shape of things to come with regard to Indian real estate sector. Attention is drawn to the recent trends in each segment of real estate, and its emerging direction forward. The author throws light on some new subsectors that have emerged are grown due to the impetus provided by real estate discusses the investment scenario in the sector and pin points options of funding real estate projects. The initiatives being taken by the Government and the real estate sector in tackling the housing shortage with regard to the Economically Weaker Sections (EWS) and Low Income Group (LIG) are also covered in the article.

T R. Venkatesh (2008), in his article, Recent Trends in Real Estate Marketing in India, writes about the contribution of IT Sector to fast growth of real estate sector in India. He highlighted that the expansion of Indian IT industry impacted profoundly the real estate industry. Highly paid young IT professionals led the boom by buying into high priced apartments in major IT centers across the country. The consequential rise in prices and boom leaves him wondering about the sustainability of the whole growth rate.

Miles, William, expressed that housing represents a form of 'irreversible' investment. Theoretically, increased uncertainty should lower housing investment. Empirically, finding a proxy for uncertainty has proven problematic. Some recent papers have investigated the effect of uncertainty on real estate investment, with varying proxies for uncertainty and mixed results. This paper employs a technique used in modern macro-economic studies, the Generalized Autoregressive Conditional Heteroskedasticity-in-Mean model, which has been shown to correspond as closely as any known measure to theoretical concept of uncertainty. Results indicate that uncertainty indeed has a negative impact on housing starts.

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Manning Margie examined that banking industry observers are keeping a careful eye on commercial real estate loans, fearful that loans made during the earlier part of the decade may trigger the next crises in the industry. Commercial real estate loans generally have a shorter duration than residential real estate loans and often do not involve much repayment of the principle loan balance until they come due. Particularly hard hit could be community and regional banks where lending on commercial real estate is a core business.

James III, Russell abstract the explosive growth of real estate investment trusts (REITs) is changing the ownership structure of rental housing in the US and across the World. This paper reports the impact REIT ownership on renter satisfaction by analyzing nearly one-half million ratings posted on the largest US consumer comment web site for apartments. Descriptive statistics and ordered Logic analysis (both with and without zip code fixed effects) indicated that REITs following an aggressive branding strategy had positive effects on residential satisfaction, while non-branding REITs had negative effects. This dichotomous outcome is consistent with an asymmetric-information model of consumer choice in apartmental rentals.

Industrial organization has received considerable attention over time in both political and scholarly arenas focusing on industry generally and on specific economic sectors like media, telecommunications, food, retailing and air transport - Coiacetto and Eddo. Real Estate development is a large industry and major shaper of the built environment whose structure has implications for the form and structure of cities, for sustainability and for power relations with industry regulators. This article investigates the nature of the development industry structure and suggests that it is not necessarily competitive and, in some instances, can be highly oligopolistic. It discusses factors including industry regulation (planning), that may shape structure. This discussion further suggests that the industry is not competitive and that it is likely to concentrate further.

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Feng, Manhong\textsuperscript{14} observed that housing prices have increased at a historically fast pace since the late 1990s in most developed nations, puzzling many observers. The fluctuations in housing markets attract the attention of both researchers and consumers, as real estate is very important sector of the economy as well as major factors in the acquisition of wealth. The aim of this paper is to uncover the dynamics of housing prices during the period of the mid 1990s to 2006 especially from 2003-2006, and to understand the determinants of the remarkably fast-growing housing markets.

Addae-Dapaah, Kwame and others in their thesis entitled "Financial performance of Indian Real Estate Industry – A study for Select Enterprise"\textsuperscript{15} have used empirical industrial real estate investment return data from 1985Q1 to 2005 Q3 for the US and some Asia Pacific cities in order to ascertain the relative superiority of "value" and "growth" industrial real estate investments. The results show that "value" industrial property investment out performed "growth" industrial property investment in all the holding periods under consideration. The authors expressed that the superiority of the contrarian strategy is sustainable and the results of stochastic dominance tests validate the relative superiority of "value" over "growth" industrial property investment. This implies that fund managers who traditionally have been favouring prime (i.e. growth) industrial property investment may have to reconsider their investments strategy if they want to maximize their return.

Assaf, Sadi A and Others\textsuperscript{16} in their article discussed the main factors that affect the construction cost of affordable housing in Saudi Arabia. It was found that inadequate labour availability, material standards, design quality and design changes are the most severe factors with relatively high overall scoring. The paper provides a holistic approach that considers all factors affecting affordable housing in Saudi Arabia and the interplay between them. It will serve as a guide to the focus areas to be

\textsuperscript{14} Feng, Manhong, \textit{Unraveling Housing Price Inflation}, PROQUEST 70(6), 2009, P 2153.
considered in policy development aiming at improving conditions in construction industry for affordable housing programmes.

Elguezabal, Eleonora\(^{17}\) explores how architects and city planners use scholarly research and writing? How can we understand their academic production from the point of view of the sociology of professions? This paper explores the way how and the possible reasons why, city planners and architects make use of academic writing when they discuss in terms of dualization the changes of the city of Buenos Aires. The academic production city planners and of architects is, as we intend to show, actually related to the reconfiguration of their profession. This reconfiguration is fostered by the growing dominance on one hand, economic values in urban policies and on the other hand of the global real estate sectors in city making. Academic writing is, as we can see in this paper, a way for some critical architects and city planners to take part on local urban debates and at the same time, to establish some autonomy regarding the dominance of the real estate sector in city making.

Goukasian, Levon and Majbouri, Mehdi\(^{18}\) have studied the impact of changes in US monetary policy on the equity returns of real estate related industries. They found that monetary policy impacts the stock prices in real estate-related industries through its impact on the future expected stock returns and not on real interest rates or expected future dividends. There is also some evidence of asymmetry in the responses of the industry returns to the monetary policy actions. A strong price response to reversals in the direction of the Federal Reserves’ monetary policy is reported.

Grum Bojan and Grum, Darja Kobal\(^{19}\), in their article show partial results of the survey conducted in Slovenia and Japan and is aimed at establishing factors which essentially influence the potential real estate buyers. The article also discusses the role of satisfaction considering the real estate factors related to the real estate, in which participants live. According to the results, Slovene participants show a higher

\(^{17}\) Elguezabal, Eleonora \textit{How architects and city planners write about urban change: An approach from the sociology of professions}, International Sociological Association, 2010.


satisfaction than the Japanese participants in terms of physical, living and socioeconomic factors. The level of residential property ownership is also higher in Slovenia.

Khumpaisal, Sukulpat and others have examined in the article, the expectation of real estate practitioners regarding risk assessment techniques. It also examines their perception of risks caused by social, technological, environmental, economic and political factors. Owing to the existence of risks in real estate development projects, there is a need for risk assessment technique that can be used to evaluate their impact. The study revealed that Thai practitioners are concerned with the impact of economic and political risk and that there is no systematic risk assessment technique to deal with their consequences. Therefore, risk assessment technique need to be developed. This article proposes an analytical network process model that can be used to assess the impact of risks in the Thai real estate industry.

Liu, Peng expressed that the volume of research specifically directed at lodging Real Estate Investment Trusts (REITs) is slender, although numerous studies have been conducted on REITs generally. Studies of REITs generally have found that regulatory requirements disperse ownership and focus management’s attention on its position as the shareholders’ agents. While REITs have carried more uncertainty of results than conventional real estate investments, they remain a vehicle for relatively small investors to participate in large real estate holding. Despite the presence and apparent success of lodging REITs, no study has specifically addressed which ownership format is most suited to the hotel industry.

Lundgren, Berndt A, have investigated whether residential buyers’ beliefs about the built environment in a specific place influence their willingness to buy in a large scale Real Estate Development (RED) by developing and testing a new attitude scale, design-methodology-approach. The empirical study is carried out in two

phases. The first phase is a qualitative laddering study to capture the beliefs of potential buyers visiting open sales of apartments on sales in the RED of Frosunda, Sweden. In the second phase, a multivariate analysis is carried out to identify and measure factors that have an influence on their willingness to buy. Five factors are found that describe buyers' beliefs about the built environment: urban environment, architecture, relaxation, safety and liveliness. Buyers and non-buyers attitudes towards these factors vary depending on the characteristics of the built environment.

Stadlhofer, Georg\(^23\) has studied to identify and quantify the impact of corporate real estate (CRE) performance on shareholder value and its contribution to core business competitiveness. The selected approach intended first to identify CRE performance in Global Industrial Corporation by using a questionnaire focusing on pharmaceutical companies. The results than were evaluated to classify the participating companies in to CRE outperformers and CRE underperformers. Finally, the participants were compared based on three selected financial measures: share price performance, expenses ratio and assets intensity. No evidence could be found that companies outperforming in corporate real estate management (CREM) perform better in terms of share price performance. The same holds true for asset intensity where, no difference is identified when comparing asset intensity between both groups. Looking at the expense ratio per EUR sales, CRE outperformers perform better indicating that CREM is able to manage and optimize cost. Finally, it provides insight into CRE practices in global pharmaceutical companies.

Amarjit Gill, and others\(^24\) in this paper seeks to extend the findings regarding factors that affect Canadian propensity to under take direct investment abroad by examining the perception of risk factors that may hinder direct investment in the India Real Estate Market. This study utilised survey research (a non-experimental field study design). 226 Canadian investors were surveyed and reported their perceptions of various risk factors regarding investing in the India Real Estate Market. The findings suggest that perceptions of political and legal nature, corruption, confiscation and


economic risk can hinder investments and may lead to capital losses on investments in the Indian Real Estate Markets. They also found that investors' foreign direct investments behaviour does not differ based on their age and the level of education. This paper discusses several techniques by which investors can mitigate foreign direct investment risk in India. It also points out how real estate can implement these technique and the challenges that they might face through this implementation process.

"Impact of IFRS on Indian Infrastructure and real estate industry" by Bansal, Atul\(^{25}\) deals in detail with Indian Infrastructure and Real Estate Companies which are booking revenues even before they start the construction. This is possible under the currently used percentage of completion method of accounting which allows companies to book revenues provided an agreement of sale has been signed with buyer and specified percentage of the project cost has been incurred. As a result Indian Infrastructure and Real Estate Companies' revenues are higher by as much as 30 per cent as compared to the work done by them. The adoption of International Financial Reporting Standards (IFRS) will reflect more appropriately the revenues of Indian real estate developers and their ability to deliver projects. They also believed that IFRS deals with market risks that are related to real estate projects more effectively than the percentage completion method.

He, Canfei\(^{26}\) in his article "Foreign direct investment in Real Estate development (FDIRE)" in China opined that, the real estate development is disproportionately agglomerated in the coastal region while, has considerably diffused to some inland provinces along the Yangtze River. There is also significant spatial autocorrelation in the provincial distribution of FDIRE controlling for the spatial effects, statistical analysis indicates that FDIRE follows their international customers to China and pursues local profit opportunities as well. They avoid high financing cost and labour cost provinces, but favour provinces with higher housing prices. FDIRE in China response to the provincial difference in land and housing commercialization and demands good regional governance, strong law enforcement and developed


services. The findings imply that foreign investors in China's real estate industry stress returns to capital, while appreciated the conductive institutions when choosing locations.

Vivek Sah\textsuperscript{27} in his paper observed the decision making behavior of real estate investors both novice and experts. In doing so, the study looks at the information content of the decision making process of these players involved in Real Estate investments. The paper uses a controlled experiment to directly observe the decision making process of the two groups of investors (novices and experts) used in this study. The findings give an insight on the type of date utilised by the two groups. The findings suggests experience may sensitize experts to the importance of some attributes of real estate over looked by novices. This study also finds evidence of order of presentation of cues influencing the sequence of cue access by the subjects suggesting the possibility of recency behaviour and its impact on real estate investment decision making. However, the findings are not conclusive and have to be tested further in future research. The paper gives an insight into the area of real estate decision making, which is a critical aspect of any company involved in real estate investments. The findings from this study can help in inputs for building a normative model of real estate investments that may help streamline the real estate decision making process across the industry.

Chattopadhay, S and Others\textsuperscript{28} investigated the correlation between the variables viz. geographical, social, economic and a hybrid of the three: on residential choice. Residential choice includes choice of location, choice of type of dwelling unit and choice of ownership. The target group considered for the study is a middle income group (MIG). The motivation of the study lies in finding an optimal and sustainable allocation of land and other resources for residential functions according to the responsiveness of changing urban housing demand in metropolitan cities—particularly for middle income groups. Thus, affordability and enabling strategies is


of upper most importance for economically weaker sections (EWS) and Lower Income Group (LIG) while non-priced items i.e., individual preferences, image of a locality etc., are significant for Higher Income Group (HIG). Whereas, the mid range with its increasing, purchasing forms a significant bandwidth in the 1.1 billion population of the country. It is increasingly targeted by the multi-national companies (MNCs) of fast-moving-consumer goods (FMCGs), as well as, housing-market players.

Naderi, Iman and others29 in their paper have investigated some behavioural aspects of real estate decision makers, i.e., buyers and appraisers. This study shows that buyers and appraisers may have different views about property valuation and that the appraisal process of residential housing in Iran contains substantial inconsistency with respect to buyers' needs. In addition it was found that financial status is a significant factor affecting buyers attitude towards housing valuation. The finding may shed greater light on understanding behavioural aspect of the valuation process, in general and the importance of individual differences, in particular, that could be applicable to different markets or different types of properties. The model developed in this study could be use by both appraisers, as a guideline in valuation process and buyers, as a check-list of attribute they choose to consider in the decision making process. It could also be used by policy makers, banks and other financial institutions providing mortgage loans and real estate agencies, to name a few. The lack of conformity between buyers and appraisers on property valuation may result in buyers paying a higher price for amenities that may not be considered crucial from their perspectives. As a result this study reveals the necessity of creating an integrated appraisal system based on customer needs.

Right from independence (15th August 1947), land has been an intensely emotional issue in India. In order to correct the imbalances in society, symbolized by large hereditary land holdings being concentrated in the hands of few feudal families, successive Indian Governments followed a socialist path. “Right to Property” was classified as “Legal Right” as opposed to “Fundamental Right”. Poor landless

peasants and sharecroppers constituted majority of people across the country. It was
considered critical for the development of the country to mitigate the problems of
landless and poor peasantry. Land reforms were implemented to redistribute land for
mitigating poverty following adoption of socialism as the guiding principle for
development of the country. Zamindari System (a system of right to collect land
revenue over large tracts of land) was abolished and Land Ceiling Acts were enacted
by various State Governments, prescribing the limits of land holdings of individuals.
Separate limits were prescribed for agricultural and urban land holdings. All extra
land holdings were compulsorily vested in the Government. Various Urban
Development Authorities and State Housing Boards were formed and entrusted with
the work of acquiring the extra land and developing the cities and towns across the
country.30

3.0 STATEMENT OF THE PROBLEM

The Real Estate sector in India is recognized as an "infrastructure service that
is driving the economic growth engine of the country" according to industry experts.
Real estate development in India has spread from the large metros to smaller cities
and towns. Several factors such as sustained GDP growth, higher disposable incomes,
proactive Government policies etc. have induced this transformation. The IT/ITIS
sectors accounts for 80 per cent of absorption of office space: this sector is seen as the
driver foremost importance of current scenario. The rapid pace of urbanization in
India is another factor that is contributing to the growth of real estate. The
Government has aided the growth of real estate by allowing access to overseas equity
while at the same time it has put in place checks and balances to control the sector and
avoid any speculative bubble formation. Equity participation in the real estate sector
has been encouraged to promote a long term development vision. The Government
has also taken steps to regulate the liquidity in the real estate sector through debt.
Currently the offerings in the market are at various stages of readiness vis-à-vis the
development cycle and pose varying levels of risk to the investors. These offerings
range from projects where, land is not acquired, to projects where, all the structures
are in place.

30 Sharad Jhingan, Growth Strategy, IPO & Performance Of INDIAN REAL ESTATE COMPANIES
RESEARCH PAPER for MA In Practicing Management, P 7-8
The review of literature points to limited studies conducted on certain issues of financial performance in Indian Real Estate Industry (IREI). But, no specific study on the financial performance (Strengths and Weakness) of IREI has been undertaken. Further, without any factual information, it is difficult to evolve norms for sound financial performance of the IREI. Hence, the present study is an attempt to fill this research gap.

4.0 SIGNIFICANCE OF THE STUDY

Financial management is responsible for maintaining right amount of funds at the right time for a right purpose. It plays a dominant role in the continuity and growth of a business, since no business can be established or expanded without adequate financial resources. Improper management of finance leads not only to loss of profit but also ultimate failure of business. Financial management is concerned with the overall management like taking policy decisions relating to line of business, size of firm, acquisition of fixed assets, extent of debt, liquidity, solvency, retention of earnings and payment of dividend which in turn determine the size of the profitability. Therefore, financial management assumes vital importance in any industry. Hence, the present study “financial performance of Indian Real Estate Industry – A study of select enterprises” assumes significance from the point of view of all the stake players involved in the industry apart from the academic and research dimensions.

5.0 OBJECTIVES OF THE STUDY

The study is primarily aimed at examining various dimensions of management of finances of IREI represented by select Real Estate companies. The specific objectives set for the study are:

- to analyze the capital structure of the select Real Estate companies;
- to evaluate the acquisition and utilization of fixed assets;
- to study the efficacy of working capital;
- to examine the profitability performance; and
- to suggest measures to ensure sound financial performance.
6.0 HYPOTHESIS

The present research study is based on the null hypothesis \(- H_0 \) that there is no significant difference between the industry's financial performance as reflected by the combined position of the select enterprises and the select Real Estate companies.

7.0 SAMPLE DESIGN

Multi-stage Sampling Technique is adopted in selecting the sample for the study. Indian real estate industry is dominated by private sector comprising several small, medium and large Real Estate companies. Money Control.com of Bombay Stock Exchange\(^{31}\) has provided a list of 36 top Real Estate companies under private sector. The universe for selection of sample consists of these 36 companies at the first stage.

In the second stage, companies with turnover of more than Rs.1000 crores alone are considered for making out the sample. Accordingly, 16 companies are identified with this characteristic, while the rest of 20 eliminated.

In the third stage, these 16 companies are categorized into three groups such as Better Performing Companies (BPC), Moderately Performing Companies (MPC) and Low Performing Companies (LPC) based on their respective ROCE. Two companies from each of these three groups are drawn at random totaling to 6 units as sample for the present study. Table 1.1 depicts the preliminary details of sample Real Estate companies in India.

8.0 PERIOD OF STUDY

The IREI was exposed to plethora of challenges both nationally and internationally since 2006. Henceforth, this period is significant in the history of IREI. Further, the study also requires a moderate period so as to arrive at meaningful and purposeful inferences. Consequently, a six year period beginning with the financial year 2006-07 and ending with 2011-12 is adopted.

\(^{31}\) Money Control.com, List of 36 Top real estate companies.
9.0 SOURCES OF DATA

The study is based on the secondary data. It includes:

(i) Annual Reports of select Companies;

(ii) Reports published by the Ministry of Commerce, Government of India, New Delhi;

(iii) Reports of the Stock Exchanges;

(iv) Profile of Top 36 Real Estate Companies;

(v) Published and unpublished reports of various seminars and conferences held on Real Estate industry;

(vi) Unpublished theses of universities and other research institutions on real estate

(vii) Journals and magazines in the field of Real Estate Industry and Finance; and

(viii) Web sites of the real estate and finance companies
## Table – 1.1

**PRELIMINARY DETAILS OF SAMPLE REAL-ESTATE COMPANIES IN INDIA**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Name and address of the company</th>
<th>Short Form</th>
<th>Year of Establishment</th>
<th>Age as on 31st March, 2012</th>
<th>Average ROCE of the study period (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DLF Limited, (Delhi Land and Finance Ltd) CORPORATE OFFICE, DLF CENTRE, Sansad Marg, New Delhi-110 001</td>
<td>DLF</td>
<td>1946</td>
<td>67</td>
<td>11.41</td>
</tr>
<tr>
<td>2</td>
<td>Vascon Engineers Limited, 201 'Phoenix' bund garden road, Pune - 411001 ; tel. 020-30562100 fax 020-26131071</td>
<td>Vascon</td>
<td>1986</td>
<td>27</td>
<td>9.56</td>
</tr>
<tr>
<td>3</td>
<td>Sobha Developers, SOBHA' Sarjapur - Marathahalli ; Outer Ring Road (ORR) Devanobisanahalli, Bellandur Post, Bangalore - 560103Karnataka, India. Tel : 080 49320000Fax : 080 49320444; URL : <a href="http://www.sobha.com">www.sobha.com</a></td>
<td>Sobha</td>
<td>1995</td>
<td>18</td>
<td>8.78</td>
</tr>
<tr>
<td>4</td>
<td>Omaxe Limited, Omaxe House, 7, LSC, Kalkaji, New Delhi, 110019, India, Telephones:011-41893100, 4189680-85, 41896776, Fax 011-41896773, 41896799, 41896653</td>
<td>Omaxe</td>
<td>1989</td>
<td>24</td>
<td>8.08</td>
</tr>
<tr>
<td>5</td>
<td>Brigade Enterprises, 29th &amp; 30th Floor, World Trade Center, Bangalore Brigade Gateway Campus, 26/1, Dr Rajkumar Road, Malleswaram, Rajajinagar, Bangalore, Karnataka 560 055 Phone:080 4046 7600</td>
<td>Brigade</td>
<td>1995</td>
<td>18</td>
<td>6.90</td>
</tr>
<tr>
<td>6</td>
<td>Indiabulls Real-Estate Limited, Indiabulls House, 448-45, Udyog Vihar, Phase-V, Gurgaon 122 001, India, Phone: 0124 3081680</td>
<td>Indiabulls</td>
<td>2000</td>
<td>13</td>
<td>2.83</td>
</tr>
</tbody>
</table>

**Source:** Profiles and Annual Reports of select real-estate companies
10.0 OPERATIONAL DEFINITIONS OF CONCEPTS

10.1 Capital Structure

Capital structure means the composition of long-term sources of funds such as paid up equity capital, retained earnings, preference share capital, debentures, long-term loans and their relative proportion to the total fixed capital.

10.2 Fixed Assets Management

Fixed assets management refers to the decisions with regard to investment of funds in fixed assets and the sources of funds to acquire these assets. A fixed asset is one which is not meant for resale but is meant for use in the business.

10.3 Working Capital Management

Working capital management means decisions about procurement of current assets and the methods adopted to raise the funds to get the current assets. A current asset is one which converts into cash within short period.

10.4 Profitability and Rate of Return

It means the ability of the company in making the profits in relation to capital employed, sales and the pattern of dividend payments.

11.0 TOOLS AND TECHNIQUES OF ANALYSIS

The following tools and techniques of financial analysis are used as measures of judging the degree of efficiency of financial management in the select units:

- intra-company analysis;
- inter-company analysis;
- industry (consolidated) Vs company analysis; and
- ideal standards Vs company/industry (consolidated) analysis.

Further, various statistical tools such as arithmetic means, standard deviation, co-efficient of variation and co-efficient of correlation, linear multiple regression analysis have been applied at appropriate contexts to analyze the data. The figures and facts have been highlighted through graphs and diagrams.
12.0 FORMULAE AND METHODS FOR STATISTICAL TOOLS

With the usual notations, the formulae and methods for the various statistical tools are given below:

(a) Arithmetic Mean \( \bar{X} \)

\[
\bar{X} = \frac{\sum x_i}{n}
\]

(b) Standard Deviation \( \sigma \)

\[
\sigma = \sqrt{\frac{\sum x_i^2}{n} - \left(\frac{\sum x_i}{n}\right)^2}
\]

(c) Co-efficient of Variation (C.V.)

\[
C.V = \left(\frac{\sigma}{\bar{X}}\right) * 100
\]

(d) Correlation Co-efficient between \( X \) and \( Y(r_{xy}) \)

\[
r_{xy} = \frac{\sum XY - \left(\frac{\sum X}{n}\right)\left(\frac{\sum Y}{n}\right)}{\sqrt{\sum X^2 - \left(\frac{\sum X}{n}\right)^2}\sqrt{\sum Y^2 - \left(\frac{\sum Y}{n}\right)^2}}
\]

(e) The regression model used in this analysis is

\[
ROIR = \alpha + \beta_1NPTAR + \beta_2DTR + \beta_3CR + \beta_4QR + \beta_5LT+STD
\]

Where \( \alpha, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5 \) are the parameters of the ROIR line.

13.0 LIMITATIONS OF THE STUDY

The study is confined to private sector only. The sample size is also limited in view of the constraints of time and finance on the part of the researcher. The annual reports of the sample enterprises are readjusted and recast as on 31\textsuperscript{st} March every
year. The figures reported in the annual reports are rounded to two decimals of rupees in millions.

14.0 PLAN OF THE THESIS

This thesis is divided into Nine Chapters:

Chapter-1 Introduces the Research Problem and Methodology of the Study.

Chapter-2 Deals with the Conceptual Framework for Financial Management.

Chapter-3 Provides an Overview of Indian Real Estate Industry.

Chapter-4 Briefs Profile of Select Real Estate Companies.

Chapter-5 Evaluates the Pattern of Capital Structure of Sample Units.

Chapter-6 Evaluates the Fixed Assets Performance.

Chapter-7 Provides an Analysis of Working Capital.

Chapter-8 Scans the Profitability Performance.

Chapter-9 Summarizes the Findings and Suggestions.