CHAPTER – 2
REVIEW OF LITERATURE

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CHAPTER – 2
REVIEW OF LITERATURE

Significant research has been conducted in the real estate field of both developed and developing nations by many academics in order to study various factors such as determination of the highest growth segment, degree to which problems in the sector hinders growth levels, comparisons with stock markets returns, risk profile of the sector, industry dynamics and new opportunities offered by the market etc. However, most Asian real estate markets are much less well developed compared to western countries and efforts to gather real estate and economic statistics has only recently started. Real estate price indices have also been constructed in a very crude manner, which has undermined the reliability of the indices for serious empirical research. I attempt to cover the relevant studies conducted in the past along with secondary research in order to obtain a complete picture of the Indian real estate market and understand researchers’ views on investing in this market.

2.1 REVIEW ON GLOBAL REAL ESTATE CURRENT SCENARIO

Real estate is a rather popular area of research. Many studies were conducted in the field of modeling real estate price pattern, analyzing the relationship between real estate market and other economic sectors and estimating return on real estate assets. In developed economies the real estate market is rather efficient way of investing money and portfolio diversification. On the other hand, the market is closely connected with general economic cycles (Wang (2003); Case et al. (2000); Hilbers et al. (2001)). Therefore there is a necessity to analyze the market and to find tools for predicting its development. The articles relevant to the subject of my thesis can be grouped in two main categories. One includes studies, which analyze macro factors that affect real estate market. Summarizing the findings of these studies several main factors can be singled out: GDP, inflation rate, population level, level of unemployment, taxation, income level, vacancy rate etc. The second contains papers which examine micro determinants of housing prices. Micro analysis uses mainly different spatio-temporal methods and hedonic price models. There are also several
pure empirical studies that develop different techniques for analyzing and modeling real estate market.

There are various viewpoints concerning determinants of real estate price, different factors are highlighted as the most important. None of the studies includes all factors mentioned above. Each paper is concentrated on some main factors chosen for the analysis.

Glascock et al (2002) examine the relationship between REIT (Real Estate Investment Trust) returns and inflation by testing for the causal relationships among REIT returns, real activity, monetary policy, and inflation through a vector error correction model. REIT returns appear to be sensitive to interest rate changes, changes in monetary policy and real sector activities. There is no evidence of causality between inflation and REIT returns. The relation between these indicators can be explained by interaction of monetary policy and inflation, since REIT returns are affected by changes in monetary policy. The results indicate that REIT return anticipates changes in expected and unexpected inflation, so there is reverse relationship. Since the REIT returns are highly correlated with real estate prices, the similar relationship between real estate prices and analysed factors can be expected.

Hilbers et al (2001) focus on the relationships between the real estate market and financial sector. In the analysis expected growth in income, anticipated real interest rate, taxes, demographic situation, availability of credit resources are emphasized as main determinants of real estate prices. The analysis of real estate market cycle and financial cycle reveal close relation between them. Analysis concludes that unbalanced real estate price developments often cause financial sector distress and that trends in real estate market should be monitored closely in the context of the financial sector analysis. The other finding of the paper is that price changes in real estate markets may be used as indicator for financial system.

Wit and Di k (2003) investigate the determinants of direct office real estate returns by analyzing rents, capital appraisals, and total returns. It was explored that gross domestic product, inflation, unemployment, vacancy rate, and the available stock all have an effect on real estate returns. The change in vacancy rate and change in
unemployment rate influence the real estate returns the most. These factors can be considered the determinants of real estate cycle development as well.

Case et al (2000) discuss the correlation of cross country real estate cycles and define the main determinants of real estate returns movements. It is considered that real estate cycles are defined by fluctuations of main economic variables which are correlated across countries. The fact that real estate is not portable but differentiated good contributes to the restriction of the competition across markets and countries; therefore the correlation between markets should be low. Despite this there is empirical evidence of the cross country co-movements in international property returns. The conclusion of the research is that cross country correlation of real estate markets is due to the influence of the global GDP movements. Real estate markets are considered to be affected by the GDP changes which are highly correlated across countries. GDP is also indicated as an important determinant of the real estate cycle by other researchers, cited below. The other inference of the study is that the real estate market is affected by the mix of global and local economic factors. The same conclusion was made by Renaud (1997).

The study of Wang (2003) examines cycles and common cycles in real estate market and related sectors. It investigates the presence of common cycle characteristics and common patterns in the interaction between real estate market and the real sectors of the economy, including the short, medium and long cycles. Common cycles differ from common trends. Common cycle analysis considers the phase of the market cycle, since usually economic fluctuations and movement are not in the same phase. Thus real estate market reveals cyclical characteristics but may not be in the same phase as aggregate economic fluctuations. Examination of common cycles between real estate market and other economic sectors include the following variables: the aggregate GDP itself and its three main components: construction output, industrial production and the services sector, money supply and unemployment rate. Leading indicators of the long lead, short, coincident and lag indicators are also included. Real estate is represented by the JLW Total Return Index (JLW). Common cycle relationship appeared with the house price, the services sector and the manufacturing sector. The existence of common cycles between real estate market and the money supply and total production is also confirmed but at less level of significance. There is
no common cycle relationship found between real estate and the GDP. This result contradicts the studies mentioned above. Real estate shares no common cycles with the construction sector. It appears that real estate price cycle lag behind unemployment.

Huang and Wang (2004) present the analysis of the Shenzhen real estate market. They model the real estate cycle and create the system of indicators predicting the market development. The model was created as a tool to monitor the market and to form regulatory policy. Paper analyzes factors influencing real estate market. The main factors that are considered as 'warning factors' (indicators that reflect market development) are property sale rate or vacancy rate, property price index, housing price index. The paper single out the following factors affecting real estate market development: CPI, GDP, fixed assets investment, savings, population, completed amount of property investment, total constructing area of commodity houses, total completed area of commodity houses, total sold area of commodity houses, vacancy area of commodity houses, total sold area of residential houses, revenue of developers, related taxes and fees of developers, profits of developers, area of new commodity housing projects, total amount of development loans and individual mortgage loans. The system of indicators that predict the trend of real estate market is developed and it can be used for analysis and forecasting.

Bardhan, Edelstein and Leung (2004) analyze the influence of globalization and openness of the country on real estate rents. Since rents are highly correlated with the price this study can also be used for the price analysis. The paper considers 46 major world cities and concludes that higher openness increases rents and hence it can be assumed that real estate prices rise as well. In the analysis such variables influencing real estate market are chosen: urban wages and price of services, gross domestic product and gross domestic product per capita, city population, openness. The estimation results confirm the assumption that openness influence real estate prices positively as well as GDP. Besides, higher wages, higher services' prices and larger city population result in higher rents and it can be expected to lead to higher prices through an increase in demand.
Jin and Zeng (2003) develop a general equilibrium model that investigates the relationship between business cycle and residential investment as well as house prices. The study concludes that monetary policy and nominal interest rate affect real estate prices; taxation is also considered to have an effect on real estate market. Besides, a strong correlation between house prices and GDP was revealed.

Ewing and Payne (2003) examine the relationship between REIT returns and macroeconomic variables such as the real output growth, the inflation, the default risk premium, and the monetary policy. They use generalized impulse response analysis. REIT is highly correlated with real estate prices, therefore the relationship of house price and above mentioned variables should be very similar. As a result of the analysis it was found that shocks to monetary policy, economic growth, and inflation all lead to decline in REIT returns, while a shock to the default risk premium causes an increase in future returns.

Grissom and De Lisle (1999) present the modelling of real estate cycle. The consistency of real estate cycle with business cycles is explored. For this purpose two distinct models were developed: a model based purely on macroeconomic factors and a model based on a combination of macroeconomic and tax factors. The key independent variables in the first model included GNP as proxy of economic productivity, interest rates as an indication of capital markets and unanticipated inflation. The multiple series analysis was conducted. Based on the analysis it was concluded that real estate cycle is not completely consistent with business cycles. Real estate cycle can lead the business cycle and can lag it.

Many different approaches are used for analysis of the real estate market development. All of them have some drawbacks and advantages. The real estate analysis is rather complicated because of distinguishing features of the market. The property is not a portable good so it has specific features that should be taken into account; characteristics of the property are very different that makes any comparison rather problematic; supply of real estate is rather rigid, which hinders headustment toward equilibrium. (Hilbersetal.(2001); Case etal (2000))
The major problem that appears from the analysis of housing market is the heterogeneity of housing good. Numerous studies of housing market consider housing commodity in hedonic or characteristic form. They analyze the price of "housing unit" or "dwelling unit", which is defined as a bundle of individual attributes that contributes to the provision of one or more services. Different functional forms of hedonic price model are analyzed.

Cropper et al. (1988) present such analysis. Study examines linear, semi-log, double-log, linear and quadratic functions of Box-Cox transformed variables (for this transformation independent variables are constrained to have the same transformation, which is allowed to differ from the transformation of the dependent variables). (Box and Cox (1964)) Hedonic price functions are used to value housing attributes that is to define marginal attributes' prices. Analysis includes following housing attributes: number of bathrooms, air conditioned, fireplace, garage and neighbourhood characteristics.

Cropper et al. concluded that when all housing attributes included in the function are observed linear and quadratic functions of Box-Cox transformed variables provide the most precise estimates of marginal attribute prices. When some variables are not observed a simple linear hedonic price function outperforms the Box-Cox function. It also provides the smallest maximum bias. However a linear Box-Cox function provides accurate estimates in the presence of specification error as well as under perfect information. Therefore, this functional form is considered the best for estimating marginal attribute prices.

Noland (1979) also provide the estimation of housing attribute prices. He constructs the housing indexes, which present a cardinal measure for comparing heterogeneous dwellings. The index is calculated as a weighted sum of observable attributes. The weights are estimated from the regression of housing value on its attributes. The regression coefficients are interpreted as prices for attributes. The analysis contains housing quality characteristics (number of rooms, number of bathrooms, buildingage, lot size, presence of various items, interior quality ratings etc.), location characteristics (description and evaluation of neighbourhoods) and some occupant's characteristics. The analysis concludes that quality characteristics are the most
important for evaluating the dwellings value, the space also has significant influence, but location is less important factor.

Kim (1992) presents truncated regression model of housing market with stochastic and unobserved truncation points. Normally certain search process precedes the purchase or rent of the real estate. This search process is difficult to monitor and estimate therefore data on transactions for housing market are truncated. Hence, the standard housing demand model will suffer from truncation bias. The search model based on reservation price and rule of optimal choice allows point estimation of the hedonic price equation and reservation rent by the ML method. The model provides the point estimation of the hedonic price equation and the demand function. Hedonic price function includes such housing attributes as number of bedrooms, type of bathroom, existence of the parking, central air-conditioner, fireplace, quality of neighborhood and several buyers' characteristics. Compared to standard hedonic functions this model gives more reliable estimates.

Palmquist (1984) develops the estimation technique for the analysis of the demand for housing characteristics. Hedonic price model are based on observed housing attributes (floor space, year of construction, number of bathrooms, presence of garage, condition of the apartment, type of exterior finish, presence of fireplace, swimming pool, basement, air-conditioner and dishwasher and several neighborhood characteristics) Paper provides the estimates of cross-price elasticities and expenditure elasticities.

Case et al (2004) presents the results of the comparison of modeling spatial and temporal house price patterns. The first model is ordinary least squares proposed by Clapp. He develops standard cross sectional model including spatial characteristics. Model includes following explanatory variables: latitude, longitude, each variable squared and the interaction of latitude and longitude to control for spatial factors; housing attributes (number of rooms, number of bathrooms, fireplaces, age of building etc.); time dummies and several neighborhood characteristics. Case also develops local regression model to produce neighborhood price indices. LRM is also estimated as a standard cross-sectional hedonic model, but flexible function for the value of space and time is included as explanatory variable in the regression.
The next model is maximum likelihood estimation of the hedonic regression introduced by Dubin. He begins with estimation of the standard form of the hedonic function as well, except that the errors are allowed to be correlated. Regression includes age, lot size, number of rooms and bedrooms, fireplaces and half baths; time dummy is also included, spatial effect is controlled by included latitude and longitude. To control for inflation date of sale is included. Maximum likelihood estimation is used in this case.

After that the Case's hedonic price model that includes homogeneous within country districtscreated on the basis of cluster analysis is analyzed. This technique allows for differences in the parameters in the hedonic price function across local neighbourhoods. A hedonic price model is estimated separately for each district, the model includes available housing characteristics and time dummies. The estimated parameters of this estimated hedonic price model then used to cluster the districts into groups with similar parameter sets. (Case et al. 2004)

Comparing OLS and Case's cluster analysis it is concluded that the latter adds explanatory power and reveals spatial patterns at the expense of the substantial computational efforts required to estimate clusters. But none of the models provide consistent and efficient estimators of model parameters. Durbin's model produces consistent and efficient estimators, but it also rather computationally intensive.

Spatio-temporal analysis is also presented by Pace at al (2000). Paper develops several methods for spatial-temporal forecasting of real estate prices.

Case and Quigley (1991) provide a method of housing price trends estimation, which combines information on repeated sales of unchanged properties, on repeated sales of improved properties and on single sales. This approach takes into consideration the number of transactions and changes in the property value due to changes in some characteristics. Comparing with repeated sales method this method is considered more appropriate for estimating real estate market prices. The methods introduce the estimation of real estate prices based on property characteristics, spatial and temporal components of the price. Constructing the model that analyzes macro determinants
these approaches can be used to create the standardized estimator for the real estate prices.

Articles presenting macro analysis of the relationships between real estate cycle and economic sector apply various methods and give different results depending on methodology used and highlighted factors. The common conclusion for all studies is that real estate cycles are indeed connected with financial sector and real sector development. Factors influencing real estate price movements vary across different studies. There are some contradictions in the results indicated. The main disagreement concerns the effect of GNP and inflation on real estate cycle. These issues can give the field for the following analysis.

Papers that present investigation of micro determinants provide different techniques for analyzing the housing market. Each method has certain advantages and drawbacks. But all of the muse data for specific purchases, which include both housing characteristics and certain information about buyer to account for the demand side of the transaction. Such data is very difficult obtain, so there is no way for implementing the methods examined in considered studies. My analysis is limited to the investigation of the supply side.

The Indian real estate industry is on a high growth path having a current market size of $15 billion approximately as estimated by Desai & Rane (2006). Real estate prices have risen steeply across India over the last two years growing at 40% CAGR (compounded annual growth rate). The chart below depicts the market size which is estimated to reach $50 billion by 2010.

The market is growing at a rapid pace due to improved real estate prices and sustained demand from end users as well as investors. With a population growth of 1.7% per annum and a deficit currently of about 22 million houses as pointed out by Saunders (2007); the demand from end-users will materialize consistently making the long term fundamentals of this sector strong.

A number of studies on the newer and emerging markets have been conducted, that is on India and China. However, these studies (Acharya, 1988; Acharya, 1989; Leaf,
1993; Li and Walker, 1996 and Walker and McKinnell, 1995) are descriptive with very minimal formal analysis of empirical data. They typically pertain to institutional relationships, especially the legal and administrative system under which the real estate market operates. I have nonetheless covered most research papers relating to different aspects of the Indian real estate in the subsequent sections of the literature review.

Before I delve into explaining the academic point of view in this segment, it is mandated for any reader to be introduced to the major sub-sects and dynamics of this sector. To understand the real estate market, the key segments are discussed below along with relevant statistics to demonstrate the growth levels faced by the sector.

In the field of real estate various research article has made. Among those articles, this section reviewed some of the articles. Bansal A, Sirohi R and Jha Manish (2011) in their article explain that the real estate sector has playing a crucial role in SEZ (Special Economic Zone) and forming of township. As also, it helps the town to become cities. They also explain the concept of “green” building, adopted by the sector, testifying to a significant emphasis on sustainability consideration. They explain the infrastructure development is just before parallel to the real estate developments. Their paper presents a panoramic view of the operations of Indian real estate sector in various property segments, the challenges faced by the sector and its prospects.

Singh V and Komal (2009) explained in their article about the investment in India for property or industry use. And also they divide this sector into three division, under 1st one they explained the fundamental factor are affecting the real sector value like demand, supply, property, restriction to use and site characteristics. Under the 2nd and 3rd one, they explained the causes and constraints to the present real estate boom respectively in India. They also present the suggestion and future prospects of real estate in the country.

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. He also pointed out that the different segments which comprise real estate industry e.g. housing, retail, and commercial, hospitals and hotels are in fact different industries, with their own separate and distinct business models. Customers and investors in each of the above respectively, have different value perceptions and needs. Therefore, real estate industry is virtually a sector of economy and different segments e.g., retail, housing and commercial offices should be independently evaluated, and business models for each of them should be created keeping in mind specific client and investor requirements. The umbrella strategy of doing everything and being all things to all people, adopted generally by real estate developers, does not contribute any real value. He further underscored the absence of long term strategic vision and prevalence of “Deal Mindset” in minds of American Developers.

This research draws inspiration from Porters thoughts. I have tried to look at Indian Real Estate Industry through Porters prism of competitive advantage and long term value creation. To this end, I have evaluated the performance of six listed real estate companies, to understand their growth and performance historically; their strategies to become large pan India companies and promises held out by them in the IPO document. I have also analyzed their performance after the IPO; to look at actual delivery made on their promises, and whether the valuations claimed at the time of IPO were justified. Lastly I have attempted to identify factors helpful in formulating long term strategy for real estate developers in India.

In his book “Housing Sector and the Economy: Global Experiences”, T R Venkatesh echoes similar thoughts. 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.

Mintzberg’s (1987) Emergent Strategies model also underscores the need to balance the past, present and future. Predominance of Grass-root Strategies in the portfolio increases the risk and long term value creation becomes contingent upon the growth of the larger economy. In case of company valuation for the IPO, the entire value was driven by Grass-root Strategies. Large land banks and land purchase agreements, future development potential and calculation of NAVs on the basis of future cash flows; operations being funded almost entirely by debt and very small proportion of company valuations coming from Emergent or Deliberate Strategies or „projects under different stages of implementation is indicative of this.

- REVIEW ON RESIDENTIAL REAL ESTATE DEVELOPMENT

The residential market in India comprises of around 80% of the total real estate potential. The growth in this market has largely been driven by rising disposable incomes, a rapidly growing middle class, low interest rates as well as increased urbanization. Households are expected to rise to 235 million by 2010 from 210 million in 2005 as per Narkar & Neema’s (2006) estimates. A housing stock shortfall of 19.8 million was experienced in 2005 which increased to 22 million in 2006, despite the strong inflow of supply over the past one decade.

The dynamics that rule this segment are complex relationships existing between
- selling price,
- listing price,
- housing features,
- housing market conditions and
- Marketing time in the residential real estate market.

This relationship was analysed in a paper published by Kang & Gardner (1989) taking a large sample of single-family homes.

Research has shown that a decline in residential investments signals an impending decline in economic activity (Leamer, 2007). This is confirmed by the burst of the most recent housing bubble in 2007. The financial crisis that followed forced large
institutions to fail which caused a major recession. Specifically, Leamer (2007) shows that in the year proceeding recessions, problems in the residential investment market contributed to 26% of the decline in the economy. Many previous studies have focused on the housing market since it affects people on a personal level; however, the study of the commercial market is also important because this sector is large with a high financial leverage. Additionally, problems in housing market lead to problems in the commercial market. This is cause for great concern given the current state of the economy. Companies that are associated with the residential market, such as construction and retail industries, grew quickly as well and expanded the demand for commercial real estate. As a result of the housing bubble burst, a decline in residential investment caused greater declines in consumer spending, decreasing the demand for commercial real estate (Feldstein, 2007). Since the fundamental sources of demand for both real estate sectors are similar, the markets should move in the same direction over the long-run (Gyourko, 2009).

- **REVIEW ON COMMERCIAL REAL ESTATE DEVELOPMENT**

The market for offices in India has doubled over the past three years to 100 million square feet. Demand is estimated to grow at an annual rate of 20-25% over the next 10 years, which equates to 500-650 million square feet, states Crowe, Feldman & Harinarayanan (2006). This recent growth in India has been fuelled by increased revenues of companies in the services business, particularly in the Information Technology sector. The Indian off-shoring operations of multinational companies are expected to increase demand for commercial space. India leads the AT Kearney (Global Management Consulting Firm) ‘2004 Offshore Location Attractiveness Index’ by a significant margin which analyses the top 40 service locations on three main categories: cost, people skills and availability and business environment’. This emphasizes the continued need for office space in the years to come.

However, Rosen (1984) observes that high rise office buildings represent large capital outlays in very competitive markets. He suggests that investment decisions must require careful market analysis to assure sufficient demand to lease the office space at rental rates which will make the venture financially attractive. He is of the view that present methodology for analysing future commercial real estate market conditions is
inadequate and hence develops an alternative methodology- a statistical model of supply and demand to provide forecasts of space demand. Factoring his argument into the real estate segment, I believe that the sheer demand growth in the coming few years will encourage investors to own the property and lease it to companies for commercial purposes. This would also require adequate property being constructed and sold for consumption.

In order to study how real estate investments will perform, this paper also focuses on forecasting commercial and residential real estate loans. Previous research has focused on using investment returns to determine the state of the real estate market; however loans are used since they are a more direct measure of the investment. Since the loans series and other variables of interest display a tendency to move together in the long run, the Johansen test for co integration is first used to analyse whether real estate loans and other real estate variables and macroeconomic variables endogenously related to loans are co integrated. Several model specifications are used, including variables that seem to move together in the long run, to determine which combination of variables best models the real estate loan market. Using information criteria, the co integrated VAR models are assessed to choose the optimal model, which best represents each real estate sector. Models are assessed both with the inclusion and the exclusion of structural breaks because different models vary in regards to their sensitivity to breaks (Timmermann, 2006). This suggests that the model, and specifically the forecast, accuracy does not depend on the whether breaks are included in the model.

Though there have been several studies employing co integration techniques to the real estate market, much of that research has focused on finding long-run relationships between real estate variables and financial assets. Additionally, the real estate studies were more concentrated on the residential market, with the exception of Chaudhry, Myer,& Webb (1999), who studied the commercial real estate market. This is also the case with studies that looked at the connection between real estate variables and macroeconomic variables.

Furthermore, there have not been many studies undertaken that forecast real estate variables using the co integrated VAR model. Zhou (1997) forecasted residential sales
and prices using the recursive technique. However, the author used the Engle and Granger method of co-integration. On the other hand, Tuluca, Seiler, Myer, & Webb (1998) employed the Johansen method and performed a straightforward forecast with a holdout period of 8 observations to forecast the returns on securitized and un-securitized real estate as well as returns on other financial assets (including t-bill, stocks, and bonds). However, they were interested in the relationships between different financial assets for portfolio investment decisions, rather than the real estate assets relationship to the macro economy.

The lack of research on multivariate co-integrating relationships between real estate variables (including loans) and macroeconomic variables (including interest rates, GDP, and employment) and is due to the non-stationary of the real estate variables. Conventional time series analysis, such as ARMA and VARs, requires stationary variables. The use of non-stationary variables in these procedures would be incorrect because the standard assumptions for asymptotic analysis will not be valid (Brooks & Tsolacos, 2010). Also, the studies that applied co-integration techniques to the real estate sector were more interested in modelling and explaining the long-run relationships between the variables rather than forecasting certain variables.

• REVIEW ON INDUSTRY AND MARKET CONCEPTS OF COMPETITION

The market conditions facing companies vary considerably. Customers may feel they are exploited with high prices and bad service by companies who know that their customers have little choice of supplier. On the other hand, customers are wooed by many companies who are selling similar products or services in a market which provides a lot of variety for the customers.

(Palmer & Hartley, 1999, 146)

According to Philip Kotler (2000, 220) competition can be examined by looking at competition from an industry and a marketing point of view.

“An industry is a group of firms that offer a product or class of products that are close substitutes for each other.” (Kotler, 2000, 220)

As the action provided by the starting company in the study would be a service, the above statement also refers to services. What needs to be taken highly into account is
the construction industry which provides the need for the service provided by the company.

Competitors can be identified in addition to the industry approach by using the market approach. Competitors are companies that satisfy the same customer need. Once the competitors are identified in the market, their characteristics, strategies, objectives, strengths, weaknesses and reaction patterns should be found out. The resources and capabilities of the competitors decide whether they can carry out their strategies and reach their goals. Six competitive positions can be pointed out in the target market which a firm will occupy, they are: dominant, strong, favorable, tenable, weak and nonviable. Moreover, Kotler (2000, 226) has brought up four categories of competitors according to their reaction pattern, which are: laid-back competitor, selective competitor, tiger competitor and stochastic competitor.

2.2 REVIEW ON KEY INVESTMENT RISKS PRESENT IN THE INDIAN REAL ESTATE MARKET

While the Indian real estate sector offers huge opportunities for developers, some risks remain that may impact demand for real estate going forward.

The sharp rise in property prices over the last two-three years has greatly affected demand for real estate since demand is significantly price sensitive. This in turn has had a profound impact on the purchasing affordability of the buyer hindering real estate growth. On the other hand, sharp drop in property prices is also a key concern due to the cyclical nature of business. The reversal in cycle could be a result of either economic slowdown curtailing demand or increased supply coming to the market. Grenadier (1995) presents a model that explains the underlying causes of the prolonged cycles observed in real estate markets. The combination of demand uncertainty, adjustment costs, and construction lags leads to two phenomena that helps explain these cycles. The first phenomenon is the reluctance of owners to adjust occupancy levels while the second is the addition of new supply in the face of already high vacancy rates.

Since the property story is heavily based on overall market growth, a slowdown in economic growth in India could dampen the euphoria surrounding the sector. This can negatively affect the demand for the sector resulting in declining capital values and
rentals. A fall in property prices can also be caused by potential oversupply. A survey conducted by Narkar & Neema (2006) of fifteen large property developers in India reveals that they are scaling up from accumulative 30 million square feet per year now to about more than 200 million square feet per year by 2010.

The large step-up projected in property development activity over the next few years will expose the sector to execution risks. Execution risk can hit either in the form of delays to projects, as contractor resources are limited, or in the form of cost inflation. Hence large players will likely be better off versus smaller players as contractors would prefer larger developers because of timely payments and longer-term contracts, states Saunders (2007).

Rising mortgage rates is another obstacle to Real Estate development in India. Lower interest rates on housing finance from India’s retail banks and housing finance companies and favourable tax treatment of loans, have helped fuel the recent growth of the Indian real estate market. However, interest rates in India are heading north, which could discourage consumers from borrowing to finance real estate purchases and depress the market as is depicted in Chart below.

From a low of 7.25% per annum in 2004, Desai & Rane (2006) state that home loans are currently being offered at about 9.5% per annum.

Buckley (1994) suggests that in most developing countries, relatively little mortgage credit is voluntarily supplied. The main reason is the lack of credible contracts. He examines benefits involved in improving governance of mortgage contracts for the rapid growth of housing finance systems. However, the following paper discusses problems associated with mortgage markets. Linneman & Wachter (1989) utilize micro data to quantify the impact of mortgage on individual homeownership propensities. The research indicates that even in well-developed capital markets, the presence of borrowing constraints adversely affects homeownership propensities.

Infrastructure is improving but is still a significant issue. All modes of transportation are in dire need of modernization in India. Though the real estate sector is growing at a high of 30 per cent annually; cities in India have barely any concrete infrastructure. Traffic congestions, increasing pollution etc are all a result of inconsistent urban
planning, states Gupta & Nacard (2006) Government’s contribution to the real estate sector is a concern and a number of studies have been conducted to investigate this. The findings of most researches have produced different outcomes. This can be attributed to different aspects of the Government workings studied by different academicians. While several research work has been conducted on Asian real estate markets pertaining to policy issues, (Chen, 1996; Dowall, 1994; Firman, 1997; Winchester and Chalkley, 1990 and Zhu, 1994), housing issues (Dowall, 1992; Lodhi and Pasha, 1991; Peng and Wheaton, 1994; Seko, 1993 and Shefer, 1990) and urban planning and development policy issues (Alperovich and Deutsch, 1996 and Henderson, 1991); the two main studies conducted on Indian real estate markets are analyzed below.

The study by Sivam and Karuppannan (2002) discuss the Indian Government’s inability to provide lodging to the lower-income Indian population due to which numerous unauthorized housing settlements are scattered in and around the large cities of India. The paper reviews the role of the state, the market and non-governmental organizations (NGOs). It is found that formal housing agencies are neither building fast enough to meet demand nor cheaply enough to reach the poor due to which an informal sector has emerged in almost all cities in India. While this is a cause of concern, another prominent academician in contrast to their findings in his paper supports the Government functioning. Mukhiya (2001) examines the complexities involved in housing provided by the private sector, specifically the markets in developing countries. The paper presents evidence from slum redevelopment programmes in Mumbai, India, to demonstrate the same. He concludes that a more sophisticated role of the state is necessary to provide the institutional support for well-functioning property markets and to capture the opportunities high value property markets provide.

The changing real estate landscape along with government support is set to boost the sector, overcome sector risks involved and encourage foreign investment into the market. With urban areas contributing 60% to India’s GDP, a comprehensive urban development policy has been framed by the Government for upgradation of Indian infrastructure. The government has constituted the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) - a national level framework covering 63 cities which
focuses on integrated development of infrastructural services in cities. Change from
the rigid laws of the government to progressive legislation is paving way for larger scale land acquisition and projects. The Urban Land and Ceiling Act being repealed and a Model Rent Control Legislation framed are a few examples illustrated by Desai & Rane (2006).

Also, the real estate developers over the past few years have started improving their compliance standards to avail of income tax benefits under section 80 IB of the Income Tax Act 1956. Cash transactions have also reduced with the rising share of mortgage financed houses in the residential segment. Furthermore, major developers have adopted better corporate governance standards and improved their disclosure norms with an intention of raising capital through the financial markets. Some of the larger developers have started expanding across cities to leverage on the growth opportunities offered by non-metro cities. Growth in real estate development is spreading to suburban areas with high levels of economic activity and job creation. Hence, the problem of a regional, fragmented real estate market is getting resolved with more players acquiring a national footprint.

Desai & Rane (2006) are supportive of the fact that an extremely fragmented market and lack of transparency is replacing large scale projects and improving governance standards due to progressive regulations and organized approach to urban planning and development. Coupled with robust economic growth, the sector is expected to undergo positive, rapid changes on its path to high levels of growth over the next five years.

India is soon developing an increasingly sophisticated housing market. Unclear titles, poor building standards and ridiculous tenancy laws that have historically plagued Indian real estate and alienated foreign investors have been replaced by computerisation of land records. So confident is the Indian financial sector in the changes that institutions have filed for permission to introduce $1billion worth of real-estate mutual funds in India. (Money Week Magazine 2005)
2.3 RESEARCH GAP

From the above Literature review following research Gap is found.

- The previous study focused on using investment returns to determine the state of the real estate market.
- The study was also focused more on finding long-run relationships between real estate variables and financial assets.
- The present study takes into account comprehensive liquidity profitability and efficiency ratios of the selected companies.