Analysis the Investment Alternatives Asset Class of Indian Real Estate Market

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Abstract: The present research aimed to study the real estate market in India brimming with enormousgrowth yet lacking academic presence. The research involved both primary as well as secondary data.The study's target audience consisted of investors in India who use real estate as a vehicle. The survey'ssampling unit consisted of individuals who purchased an apartment or built floors with the aim of rentingthem out in order to benefit from their real estate investment. Participants in the survey had to haveinvestments made after 2008. Utilizing multistage (3 stage) stratified sampling, primary data wasgathered. HPI data from Q4 2008–09 to Q2 2017–2018 was used to get secondary information about homeprices. A sample of 747 respondents has been contacted for the study. The sample has been trim downto 543 after accounting for missing data. Utilizing frequency tables, frequency charts, crosstabs, thedemographic profile of the 543 respondents has been described.

Keywords: Real Estate, Investment, Market, India, Alternative Asset Class

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INTRODUCTION

One of the industries with the highest recognition on a global scale is real estate. After agriculture, real estate is the second-largest employer in India, and it is expected to expand by 30% during the following ten years. Housing, retail, hotel, & commercial are the four subsectors that make up the real estate company. The expansion of the business environment & demand for office space, as well as for urban & semi-urban lodging, are excellent complements to the growth of this industry. In terms of the direct, indirect, & generated effects on all areas of the economy, the construction industry comes in third among the 14 key industries. Additionally, additional non-resident Indian (NRI) investments are anticipated in this industry throughout the long and short terms. NRIs are predicted to prefer Bengaluru above other cities for their real estate investments, which will be accompanied by Ahmedabad, Pune, Chennai, Goa, Delhi, & Dehradun.

A fundamental part of our economy is the real estate industry. It is a considerable driver of financial development since it has a massive multiplier effect on the economy. Following farming, it is the largest business-creating sector. Approximately 5-6% of India's GDP has been coming from this region, which has been growing at a rate of about 20% each year. Since 2005, the Indian real estate market has been seeing tremendous growth. The administration's decision to allow FDI in this sector led to a boom in speculative activities and educational endeavours. The area not only witness the entry of multiple new domestic real estate players, but also the arrival of various remote land speculation companies, including private value reserves, annuity assets, & improvement companies drawn by the region's excellent venture yields. Since then, the land area has experience a number of highs & lows. The company reached new heights between 2013 & middle of 2014, as evidenced by a development sought after, significant advancement, and increased remote projects. However, by the middle of 2014, the effects of the global financial crisis were

also evident here, & economy made a "U" turn. What had developed as one of the most enticing markets for outside speculators saw a decline as FDI inflow into land substantially decreased.

One of the fastest growing or most comprehensively regarded markets is Indian real estate. Housing, retail, hospitality, & commercial are its four subparts. The growth of the real estate industry is correlated with advancements in the retail, hospitality and entertainment (lodging, resorts, movie theatres), financial services (doctor's offices, schools), and information technology (IT)-enabled administrations (like call centres) sectors, among others, and vice versa. By 2020, it is anticipated that the nation's total real estate market will reach US$ 180 billion.

With almost 12 million square metres, India ranks third globally for the largest LEED (Leadership in Energy & Environmental Design)-guaranteed space. The most widely utilized rating system governing the design, construction, use, & preservation of green constructions is the LEED framework.

Due to appealing prices and the area's low level of bank subsidies, private equity (PE) financing has increased over the past year. In the first quarter of 2014, Delhi NCR alone attracted PE investments totaling Rs 80 crore (US$ 13.22 million). The outlook for the land sector in 2014 also appears positive as the administration works to provide designer & purchaser helpful arrangements.

The open financial arrangements, adopted by the Indian government to increase private assistance, have aided in advancing the country's economy's strong fundamentals, which include a young population, increasing urbanisation, and a growing working class. Indian GDP has quadrupled since 2000, reaching USD1.8 trillion in 2012, and must reach USD6.6 trillion by 2028 to become the third-largest economy.
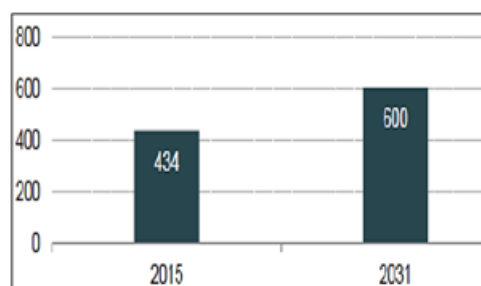

Figure 1: Indians living in urban areas (million)

- Rapid urbanisation bodes well for the sector

- The number of Indians living in urban areas will increase from 434 million in 2015 to about 600 million by 2031
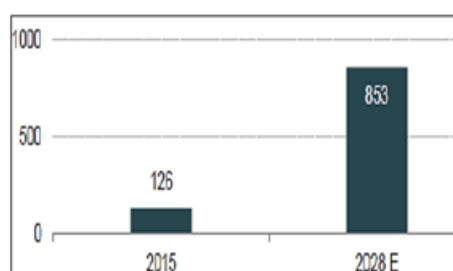
Figure 2: India's real estate market

- By 2028, India''s real estate market size is expected to increase by 7 times

- By 2028, India''s real estate market size is expected to reach US$ 853 billion, increasing from US$ 126 billion in 2015
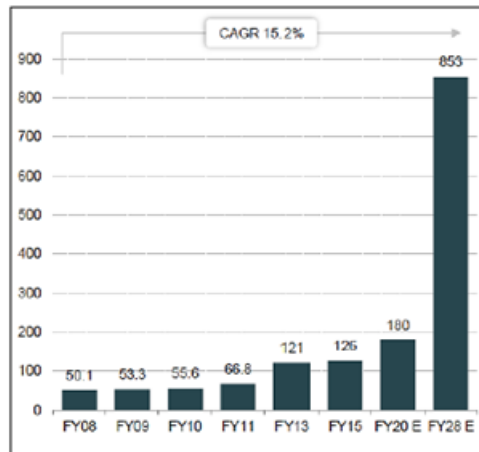

Figure 3: Market size of real estate in India (US$ billion)

The market size for real estate in India is anticipated to grow at a CAGR of 15.2% between FY2008 & 2028E and is projected to be worth US$ 853 billion by 2028. • An increase in industrial activity, an increase in income levels, and urbanisation are presumed to support the growth of real estate in the GDP. By 2028, it is predicted that real estate will contribute about 13% of India's GDP.

According to rankings, the best places in Asia for real estate investments are Mumbai & Bengaluru.

In addition, the government introduced 10 significant real estate policies in 2016, including:

- Act governing real estate

- Act on Benami Transactions

- Encourage the creation of affordable houses

- Subsidized interest for homebuyers

- Modification of arbitration rules

- Exemption from service tax

- Exemption from Dividend Distribution Tax (DDT)

- Goods & Services Tax

- Demonetisation

- PR for international investors
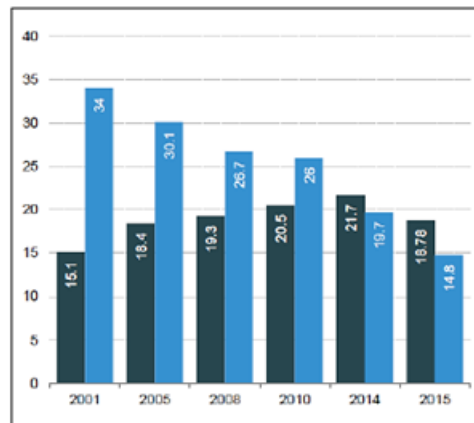
Figure 4: Urban-rural housing shortage (million)

- 18.78 million people are thought to be homeless in urban areas in 2015.

- As of 2015, India had a total shortage of 14.8 million rural homes, and during the XII plan period, that number is projected to rise to 48.8 million (2012-2017)

- The real estate sector has been boosted by the substantial increase in real estate activities in areas like Indore, Raipur, Ahmedabad, Jaipur, or other 2-tier cities, which has created new opportunities for growth for the industry.

- In 2017, nearly US$4.2 billion worth of investments are predicted to be made in India's real estate sector, as the nation is evolving as the preferred investment destination due to favourable government initiatives. The government's plan to build 100 smart cities would decrease the migration of people to metro or other developed cities.

- A 3 year Memorandum of Understanding (MoU) to cooperate toward the growth of the real estate sector was signed by the SBI & Confederation of Real Estate Developers Association of India (CREDAI) in March 2017.

- 20 towns & cities in Haryana will be developed with a total investment of US$378.4 million under the Swachh Bharat Mission, which was approved in April 2017.

The purpose of this study was to examine the Indian real estate market, which is experiencing tremendous growth but lacks academic attention. A number of unanswered questions remained as the study moved forward, including whether or not direct real estate investment is sufficient in the Indian context to be define as an asset class, its role in asset portfolios alongside equity investments, and the macroeconomic & investor-specific factors that influence it.

OBJECTIVES OF THE STUDY

1. To study the direct real estate investment in India is a viable alternative asset class.

2. To examine the relationship between India's stock market & real-estate market

HYPOTHESIS

1. There will be no significance the direct real estate investment in India is a viable alternative asset class.

2. There will be no significance the relationship between India's stock market & real-estate market

RESEARCH METHODOLOGY

Descriptive & analytical methods are used in the study. Surveys are utilized to assemble information about what's happening in the real estate market, so this research is descriptive. Analytical, in that the study relied on already-collected data to observe the Indian real estate market critically.

RESEARCH DESIGN

The survey data was taken at a specific point in time, so the 'Cross-sectional design' was used in the study. When two or more variables are linked, cross-sectional design collects data on multiple cases or at a single point in time to gather a large body of quantitative or quantifiable data (normally many more than two), that are then analysed patterns of association"

SOURCES OF DATA

Primary & secondary data were used in the study. People in India who invest in real estate are the focus of this investigation. The sampling unit for the survey was people who have invest in real estate for the purpose of profiting from it (i.e., purchasing a flat in an apartment or building floors for rent). Participants in the survey who had invested after 2008 were eligible to participate. Using multistage stratified sampling, primary data has been gathered. In order to obtain secondary data on house prices, HPI was used from 2008-09 to 2017-2018. Other variables' secondary data was gathered from a variety of sources.

Secondary Data

Variables

Dependent Variable

Indian housing prices have traditionally been based solely on a combination of the CPI (UNME) & CPI (IW). RESIDEX by the NHB, HPI by the RBI, & Residential Property Price Index (RPPI) by the RBI are the three main methods currently used to monitor housing prices.

Explanatory Variables

An emerging economy like India was the focus of this study, which examined the relationship among macroeconomic variables & real estate prices.

Primary Data

To gather primary data, an online & offline survey that was structured or closed ended was used to gather data.

Target Population & Sample

The study's target audience was Indians who invest in real estate for financial gain. Participants in the survey were those who had made an investment in real estate with the purpose of profiting from it (by purchasing a unit in an apartment or constructing floors to rent). Participants in the survey who had invested after 2008 were eligible to participate. There isn't a single place in India where you can find out who is investing in real estate and get their contact information. As a result, there was no way to collect data from the intended demographic. People are not rational, according to Statman (2014), who claims that behavioural biases are to blame for most of our mistakes. In behavioural finance, ordinary people take the place of rational ones. Due to their irrational nature, retail real estate investors were chosen as the sampling unit for this study.

Sampling

Due to the lack of formal data on real estate investors, they will be utilized as a sampling unit in the current study's analysis. The study relied on purposive & snowball sampling to collect data because no sampling frame was available. Three levels of stratification were used in the study to ensure a more homogeneous sample.

TOOLS OF ANALYSIS

Analysis was carried out using the following tools. Descriptive tools such as SPSS 20 crosstabs and frequency charts; a percentage analysis; Data analysis software, such as STATA 14, CFA & SEM employing AMOS, & IRT utilising STATA.

RESULTS AND DATA ANALYSIS

Direct Real Estate Investment As An Alternative Asset Class In India

This section deals with the Ist research objective of the study i.e., to evaluate the suitability of direct real estate investment as an alternative asset class in India.

An essential step toward the securitization of the Indian real estate market is the emergence of commercial real estate assets in the form of REITs in India. So, it becomes important to find out whether direct real estate investment is adequate to be demarcated as an asset class or does it need standardisation in order to become a preferable investment. To determine if direct real estate meets the criteria for an alternative asset class in terms of risk-return characteristics, Brooks (2010) evaluated descriptive statistical attributes of sample log return series.

The expected value (sample mean), risk (standard deviation), if or not the extreme returns exceed the expected value (positive skewness), & relative probability of frequency of severe returns are the 4 stylized facts about the returns to an asset (kurtosis) that an investor would like to know about when investing in an asset, as per Brooks (2010). To find out the suitability of the direct real estate as an investment vehicle the above mentioned descriptive statistics of the sample real estate return series (RHPI) have been used. For analysis, the NSE return series (RCNX, a proxy for the stock market) has been used as a benchmark for comparison.

Table 1: "Descriptive statistics of the log return series of real estate market and stock market"

	RCNX	RHPI
Mean	0.038617	0.036294
Median	0.025110	0.040285
Maximum	0.444773	0.080407
Minimum	-0.080208	-0.011728
Std. Dev.	0.090618	0.022796
Skewness	2.639792	-0.079831
Kurtosis	12.92594	2.296813

Table 1 demonstrates that the real estate return series has a low kurtosis (relative probability of occurrence of extreme returns), its is desirable because investors prefer returns that are closer to expected returns. The standard deviation, that measures risk, is also low for the real estate return series. Skewness is undesirable since it is bad for real estate. Using the stock market as the benchmark, return-wise real estate seems to be slightly on a lower end but standard deviation wise it seems to be more desirable. So, in order to reach a single conclusion, the study has used Sharpe ratio (Sharpe, 1994) which is the measure for risk-adjusted return. It has been used to find out the desirability of the asset class which is real estate in this case (Sehgal & Pandey, 2012). The formula used is –

"$S = (R_i – R_f)/\sigma_i$

where,

S = Sharpe ratio,

R_i = mean return of asset type

σ_i = standard deviation of an asset type."

R_f = Risk-free rate, here it is 1.58% 8

Sharpe ratio for the stock market came out to be 0.251039 and for real estate market, it came out to be 0.89602. Greater Sharpe ratio for real estate proves it a desirable asset class (Sharpe, 1994). In addition to skewness, real estate also performs well on other metrics, making it a favourite asset class for investors.

The Relationship Between Equities & Real Estate In India

This section deals with the IInd research objective of the study i.e., to analyse the nature of the correlation amongst the real estate market & stock market in India.

For this, both short-term & long-term relationship, existing between the stock market & real estate market has been examined. Market Integration or segmentation testing can be used to access the type of association among the real estate price series & stock market price series. Johansen (1990) cointegration technique has been used to test such relationship. The null hypothesis for this test is that there is no cointegration. Rejection of this hypothesis proves that price series of these two markets are integrated and in long run will touch equilibrium. In long run, both the price series will move in the similar direction, which establishes them as substitutes. Acceptance of this hypothesis proves that these two markets are segmented. In long run, both the price series will not move in the equivalent direction, which establishes them as good diversifiers. YAMAMO (1995) It has been utilised to provide a short-run diagnostic analysis of the long-run equilibrium relationship using Granger causality in VAR block exogeneity. For this analysis, raw data (quarterly data from Q 4 2008-09 to Q2 2017-2018 of raw HPI series and CNX adjusted

closing prices) has been used as Sims (1980) advocated that it would be more productive in the first or second phase of the analysis not to try to transform to stationarity, so one can see how the original series co-move in their original metrics.

Before performing the above-mentioned analyses, the stationarity of data has been checked by ADF Test report in Table 2. The findings showed that both variables are stationary at their first variances but nonstationary at their corresponding levels.

Table 2: "Augmented Dickey-Fuller test statistic"

	CNX NIFTY		HPI	
	t-Statistic	Prob.*	t-Statistic	Prob.*
Unit root estimation at level	-0.858243	0.7891	-0.115048	0.9398
Unit root estimation at first difference I	-5.160893	0.0000	-6.640986	0.0000

Table 3 shows the result of Johansen Cointegration Test, which has been used to test the long-run relationship between both the series. The λ trace and λ max test has been used to determine a maximum number of cointegrating vectors. The p-values for both the tests are more than 0.05 per cent, which shows the acceptance of the null hypothesis of no cointegration. This proves that in long-run both the series will not be moving together, which establishes them as good diversifiers.

Table 3: Result of Johansen Cointegration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.260492	11.09700	15.49471	0.2056
At most 1	0.065861	2.043898	3.841466	0.1528

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.260492	9.053099	14.26460	0.2817
At most 1	0.065861	2.043898	3.841466	0.1528

Series: HPI CNX

The long-run relationship has not been detected between both the series but there are probability for a short-run dynamic correlation, which has been tested by utilizing the "Toda Yamamoto Granger's Causality Test" in the "VAR block exogeneity". The outcome is details in Table 4.

Table 4 VAR Granger Causality/Block Exogeneity Wald Tests

Dependent variable : HPI

Excluded	Chi-sq	Df	Prob.
CNX	2.783084	4	0.5948
All	2.783084	4	0.5948

"Dependent variable": CNX

Excluded	Chi-sq	Df	Prob.
HPI	11.23481	4	0.0240
All	11.23481	4	0.0240

"Granger causality, despite its misleading name, only refers to the relationship between the present & past values of two or more variables and does not imply that changes in one variable cause changes in another."(Brooks & Tsolacos, 2010). Table 4.5 shows that HPI series leads CNX series (p-value -0.024 < 0.05), and there is no feedback effect (p-value – 0.5948 > 0.05). Thus, it can be concluded that segmentation exists between the stock market price series and the real estate price series, so "these two assets can be held in a portfolio for diversification purpose". As far as short-run dynamics are concerned, HPI series leads CNX series.

Hypotheses Development

Behavioural biases & reinvestment intention

Decision-making is made easier by behavioural biases, when people rely on their common sense, gut instinct, or rule of thumb, especially in markets that are very uncertain, suffer from significant information asymmetry, and lack transparency. There is a favourable correlation amongst behavioural biases and the choice to invest since they also offer a clear set of criteria to solve the issues (Bakar & Yi, 2016). Heuristic bias & investment decision are positively & significantly correlated, according to Qureshi (2012) research. Additional research by Bashir et al. (2013) also supported the existence of the link. This hypothesis is taken from research looking for this association that are concerned with stock market investing and applied to the real estate market in this study. The following hypothesis is made in an effort to test whether this holds true for the real estate market:

H1. The intention to reinvest will be positively & significantly impacted by behavioural biases. behavioural biases & satisfaction with investments

The real estate market serves as the fertile ground where behavioural biases develop and greatly influence the decision-making process of investors due to a higher level of market inefficiencies & information asymmetry. Investors' systematic tendencies (biases) that aid people in reaching their financial goals develop over time when they consistently rely on these instruments when making decisions. "The individual

investor's past judgments based on heuristics and biases produce results that, when assessed by the individual based on their internal standards, influence their levels of financial satisfaction" (Sahi, 2017). Investing in more secure & creditworthy homes helps investors avoid regret and helps them make better decisions (Copur, 2015). People make decisions based on incomplete knowledge, which causes them to make snap judgments that might increase the temporal value of money (Copur, 2015). The following hypothesis serves as the basis for the study's attempt to test this relationship:

H2. The impact of behavioural biases on investment satisfaction will be both positive & significant.

The link between behavioural biases & reinvestment intention & mediation effect of investment satisfaction

Investment satisfaction serves as a mediating factor amongst behavioural biases & correlation between reinvestment & behaviour because it is the causal outcome of behavioural biases & causal antecedent of reinvestment intention. The investor's happiness in achieving their financial & personal goals may be what motivates them to reinvest in real estate (Shim et al., 2008). Studies like this one show a substantial positive correlation between investment satisfaction & inclination to reinvest (Shim et al., 2008).

CONCLUSION

The research aimed to study the real estate market in India brimming with enormous growth yet lacking academic presence. So, the study proceeded with some research questions - whether or not direct investment in real estate is sufficient to qualify as an asset class; its role in asset portfolio along with the equities; macroeconomic factors affecting it; best suited time series model for Indian real estate market return series; behavioural factors influence it; and how these behavioural factors influence it. The research involved both primary as well as secondary data. The study's target audience consisted of investors in India who use real estate as a vehicle. The study covered the relationship between behavioural biases, happiness with investments, and inclination to reinvest. This study provides further information about investor behaviour that can be applied to future studies.

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