

A Study on Capital Market Performance Analysis of Few Selected Companies In Indian Real Estate Sector

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Capital market performance of a stock can be analysed from different dimensions such as return, risk, liquidity etc. The proposed study will provide emphasis on computation and interpretation of return, risk and coefficient of variation of five selected real estate companies such as Brigade Group Limited, Godrej Properties Limited, DLF India Limited, Housing Development Infrastructure Limited (HDIL) and Oberoi Realty Limited for the financial year 2018-19. Apart from that, financial performances of these companies will be evaluated on the basis of few selected profitability ratios including gross profit margin, net profit margin, operating profit margin, return on asset, return on equity and return on capital employed for a period of five accounting years such as 2014-15, 2015-16, 2016-17, 2017-18 as well as 2018-19. Annual report of the five companies will be analyzed for a period of five years to discuss their financial performances. Stock price data of these companies will be considered from the website of Bombay Stock Exchange to evaluate their capital market performances.

Keywords: return, risk, coefficient of variation, gross profit, net profit, return on equity.

1. Introduction

Capital market is a mechanism through which fund can be borrowed or lent in the long run. It can be categorised into two broad groups- primary and secondary market. Primary market is the mechanism where fund can be raised by the companies from the market by issuing equity shares. Initial public offer, Follow on Public Offer, Right Issues, Preferential Allotment and Depository Receipts are examples of primary market. Secondary market is the mechanism where already issued shares are being traded. Stock Exchanges such as Bombay Stock Exchange and National Stock Exchange are examples of secondary market. There are different parameters to measure the secondary capital market performances of a stock such as risk, return, coefficient variation etc. The study will focus on capital market performance analysis of few selected real estate companies.

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Apart from that, financial performances of these companies will be evaluated on the basis of few selected profitability ratios.

2. Survey of Existing Literature

Worzala and Sirmans(2003) have advocated an investment strategy that uses ‘indirect’ real estate investments, sometimes called property securities (in the US typically proxied by REITs), as the real estate asset class in an investment portfolio.

Narayan and Reddy (2018) studied the impact of traditional (Return on Asset, Return on Equity, Return on Invested Capital) and modern performance measures (Economic Value Added) on stock returns.

Andrei, Hasler and Jeanneret (2019) opined that uncertainty influences investors’ decisions and hence it affects equilibrium asset returns. Investors’ learning amplifies the impact of uncertainty on asset prices. This amplification seems counterintuitive as learning is expected to reduce uncertainty and to attenuate its impact.

Kalev, Saxena and Zolotoy (2019) said that investors demand a higher risk premium for holding stocks with greater exposure to covariation risk, that is, stocks that have low returns when investors simultaneously receive bad news about both future cash flows and future discount rates.

3. Objectives

- To analyze the financial performances of five selected companies of Indian real estate sector.
- To discuss the capital market performance of five selected companies
- To rank the companies on the basis of their financial as well as capital market performances.

4. Research Design

This is discussed under different dimensions including methodology, sample of study, time horizon, tools and techniques used as well as sources of data.

- **Methodology**

The proposed study will combine explanatory and empirical research.

- **Sample of the study**

Five real estate companies will be considered for the study such as Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited .

- **Time horizon**

Study has been made for a period of five accounting years such as 2014-15, 2015-16, 2016-17, 2017-18 as well as 2018-19.

- **Tool and Techniques used**

Different Financial ratios will be calculated such as gross profit margin, net profit margin, operating profit margin, return on asset, return on equity and return on capital

employed. Apart from these, different capital market indicators will be computed such as daily return, risk and coefficient of variation.

- **Sources of data**

Annual report of the five companies will be analyzed for a period of five years to discuss their financial performances. Stock price data of these companies will be considered from the website of Bombay Stock Exchange to evaluate their capital market performances.

5. Financial Statement Analysis

It incorporates computation and interpretation of different ratios such as gross profit margin, net profit margin, operating profit margin, return on asset, return on equity and return on capital employed of Brigade Group Limited, Godrej Properties Limited, DLF India Limited, Housing Development Infrastructure Limited (HDIL) and Oberoi Realty Limited for a period of five accounting years such as 2014-15, 2015-16, 2016-17, 2017-18 as well as 2018-19. Thereafter these five selected companies have been allotted ranks on the basis of their financial performance in 2018-19.

- **Gross Profit Margin** = Gross Profit Margin² is a profitability ratio that measures how much of revenues is left after deducting the cost of goods sold (COGS). The higher the percentage, the more the company retains as revenue of sales after deducting the COGS.

Exhibit-1 Gross profit margin of five selected companies for a period of five years from 2014-15 to 2018-19

Company	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
Brigade Group Ltd.	21.85	21.96	22.36	18.85	21.65
DLF Ltd.	22.91	27.49	34.79	32.55	32.40
Godrej Properties Ltd.	5.81	-1.08	15.04	5.76	13.41
HDIL	54.79	102.06	83.64	65.56	77.32
Oberoi Realty	43.03	49.48	46.72	44.30	51.31
<i>Source: Annual reports of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2014-15, 2015-16,2016-17,2017-18,2018-19</i>					

Interpretation

In year 2018-19 and 2017-18 HDIL had the highest gross profit margin as compared to other companies. The lowest gross profit generated over the years is of Godrej properties and the company has incurred loss in 2017-18.

²Gross Profit Margin (%) = (Net Sales – Cost of goods sold)/
Net Sales x100

- **Net Profit Margin**= Net profit margin³ is a measure of profitability. It is how much percentage of profit a company generates from its total revenue. It is calculated deducting all company expenses such as depreciation, interest and tax from its total revenue. The higher net profit margin percentage, higher profits a company generates from its revenue.

Exhibit-2 Net profit margin of five selected companies for a period of five years from 2014-15 to 2018-19

Company	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
Brigade Group Ltd.	8.07	7.33	7.56	6.08	7.26
DLF Ltd.	15.76	66.55	8.69	3.08	7.06
Godrej Properties Ltd.	8.98	12.43	13.06	7.47	10.35
HDIL	14.79	24.68	24.72	28.16	21.38
Oberoi Realty	31.63	36.25	33.99	30.75	34.36
<i>Source: Annual reports of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2014-15, 2015-16,2016-17,2017-18,2018-19</i>					

Interpretation

In year 2018-19 Oberoi Realty has the maximum net profit margin of 31.63%. DLF Ltd has increased its net profit margin from 7.06% in 2014-15 to 15.76% in 2018-19. In year 2017-18, DLF Ltd has the maximum net profit margin of 66.55%

- **Operating Profit Margin** =Operating profit margin⁴ reflects the percentage of profit a company produces from its operations, prior to subtracting taxes and interest charges. It is also known as EBIT (earnings before interest and tax) margin.

Exhibit-3 Operating profit margin of five selected companies for a period of five years from 2014-15 to 2018-19

Company	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
Brigade Group Ltd.	25.56	29.22	28.37	24.05	29.22
DLF Ltd.	25.59	35.44	41.76	40.27	39.53
Godrej Properties Ltd.	6.31	-0.23	15.96	6.43	13.95
HDIL	55.55	103.82	84.68	66.24	78.82

³Net Profit Margin = (Net Sales – Cost of goods sold- Operating Expense –depreciation –interest-tax) /Net Sales X100

⁴Operating Profit Margin = (EBIT / Total Revenue) * 100

Oberoi Realty	44.73	53.36	51.16	47.76	55.68
<i>Source: Annual reports of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2014-15, 2015-16,2016-17,2017-18,2018-19</i>					

Interpretation

In year 2018-19 and 2017-18 HDIL had the highest operating profit margin as compared to other companies. The lowest operating profit generated over the years is of Godrej properties. In 2017-18, Godrej properties incurred a loss.

- **Return on Assets**

Return on Assets⁵ tells us how profitable a company is relative to its total assets. ROA gives a manager, investor, analyst an idea as to how efficient a company's management is in using its assets to generate earnings. It is used for comparing performance of similar companies and performance of a company with its previous year's performance. Higher the ROA, higher will be the earning generated from the utilisation of the assets. Hence we can say that the management is using its assets to the fullest.

Exhibit-4Return on Asset of five selected companies for a period of five years from 2014-15 to 2018-19

Company	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
Brigade Group ltd.	2.22	1.77	2.04	2.06	2.21
DLF ltd.	1.97	7.12	1.11	0.49	0.81
Godrej Properties ltd.	3.12	3.29	2.87	2.41	2.59
HDIL	0.58	0.51	0.97	1.86	1.24
Oberoi Realty	7.34	4.48	4.46	5.82	4.45
<i>Source: Annual reports of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2014-15, 2015-16,2016-17,2017-18,2018-19</i>					

Interpretation

Oberoi Realty has the highest ROA over a period of 5 years as compared to the other companies, which means it is generating the highest income by utilisation of its assets. It has increased its ROA from 4.45% in 2014-15 to 7.34% in 2018-19. Godrej properties has the second highest ROA over a period of 5 years and has increased its ROA from 2.59% in 2014-15 to 3.12% in 2018-19. The ROA of HDIL has decreased from 1.24% in 2014-15 to 0.58% in 2018-19.

⁵Return on Assets = $\frac{\text{Net Income}}{\text{Total Assets}}$

- **Return On Equity (ROE)**

Return on Equity⁶ means indicates how efficiently the company is using shareholders money to generate profit. In other words it measures the profitability of the company in relation to the shareholders fund. Higher the return on equity ratio, better the company is utilising its shareholders fund in generating income and growth. So a higher ROE is always preferred

Exhibit-5 Return on Equity of five selected companies for a period of five years from 2014-15 to 2018-19

Company	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
Brigade Group Ltd.	11.10	6.22	9.31	8.10	7.01
DLF Ltd.	3.92	12.64	3.04	1.27	1.97
Godrej Properties Ltd.	10.25	10.48	10.32	8.98	10.33
HDIL	0.89	0.82	1.55	2.95	2.02
Oberoi Realty	10.17	7.53	6.61	8.15	6.84
<i>Source: Annual reports of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2014-15, 2015-16,2016-17,2017-18,2018-19</i>					

Interpretation

Brigade group has increased its ROE from 7.01% in 2014-15 to 11.10% in 2018-19. Brigade group has the highest ROE for the year 2018-2019 of 11.10%. It implies that the Brigade group has utilised its shareholders fund efficiently as compared to other companies. DLF Ltd had highest ROE for the year 2017-2018 of 12.64% but in the year 2018-2019 its ROE has decreased from 12.64% to 3.92%. The ROE of HDIL has decreased from 2.02% in 2014-15 to 0.89% in 2018-19. Hence HDIL is not generating enough profits by utilising shareholders fund. The ROE of Oberoi Realty has increased from 6.84% in 2014-15 to 10.17% in 2018-19.

- **Return on Capital Employed**

Return on Capital Employed or ROCE⁷ is a profitability ratio. It measures how efficiently the company generates profit from its capital employed. This ratio is based on two things

⁶Return on Equity = $\frac{\text{Net Income}}{\text{Shareholder Equity}}$

Shareholder Equity

⁷Return On Capital Employed (%) = $\frac{\text{Operating Profit}}{\text{Capital Employed}}$

Capital Employed

capital employed and operating profit or EBIT (earnings before interest and tax). Higher return on capital means that the company is generating more income from the capital used and low return means that the company is generating low income from the capital employed.

Exhibit-6 Return on Capital Employed of five selected companies for a period of five years from 2014-15 to 2018-19

Companies	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
Brigade Group Ltd.	12.05	8.68	13.18	12.48	3.90
DLF Ltd.	6.28	6.14	7.09	0.65	1.09
Godrej Properties Ltd.	19.06	8.53	8.32	5.40	7.21
HDIL	3.30	3.30	4.86	2.46	1.83
Oberoi Realty	13.48	6.62	5.75	7.58	5.79
<i>Source: Annual reports of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2014-15, 2015-16,2016-17,2017-18,2018-19</i>					

Interpretation

Brigade group has the maximum return on capital employed in the year 2016-2017 of 13.18 %, after that it has decreased in year 2017-2018 to 8.68 % and then increased to 12.05 % in 2018-2019. In year 2018-2019, Godrej properties ltd. has generated the highest return on capital employed of 19.06% and it has increased its return from 7.21% in 2014-15 to 19.06% in 2018-19. In year 2018-2019, Oberoi Ltd. has generated the second highest return on capital employed of 13.48% and the ROCE of Oberoi Ltd has increased from 5.79% in 2014-15 to 13.48% in 2018-19.

Exhibit-7 Rank Allotments on the basis of financial statement analysis

Companies	GPM (18-19)	Score	NPM (18-19)	Score	OPM (18-19)	Score	ROA (18-19)	Score	ROE (18-19)	Score	ROC (18-19)	Score	Total Score	Rank
Brigade Group Ltd.	21.85	2	8.07	1	25.56	2	2.22	3	11.1 0	5	12.0 5	3	16	3
DLF Ltd.	22.91	3	15.76	4	25.59	3	1.97	2	3.92	2	6.28	2	16	3
Godrej Properties Ltd.	5.81	1	8.98	2	6.31	1	3.12	4	10.2 5	4	19.0 6	5	17	2
HDIL	54.79	5	14.79	3	55.55	5	0.58	1	0.89	1	3.30	1	16	3
Oberoi Realty	43.03	4	31.63	5	44.73	4	7.34	5	10.1 7	3	13.4 8	4	25	1
<i>Source: Annual reports of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2018-19</i>														

Interpretation

Here companies are ranked based on their profitability ratios such as Gross Profit Margin, Net Profit Margin, Operating Profit Margin, Return on Asset (ROA), Return on Capital Employed (ROC) as well as Return on Equity (ROE) in 2018 -19. Higher the Gross Profit Margin, Net Profit Margin, Operating Profit Margin, Return on Asset (ROA), Return on Capital Employed (ROC), Return on Equity (ROE) , companies are doing good and vice versa. 5 is the highest score and 1 is the lowest. The total score is nothing but the sum total of scores obtained on the basis of these six ratios. Higher the total score company is doing well and vice versa. As per the financial performance of these selected companies, Oberoi Realty has the highest score and so is ranked 1st. Godrej Properties is allotted 2nd rank. Brigade Group, DLF and HDIL have scored the lowest. Jointly these three companies have been allotted 3rd rank. So Oberoi Realty is the top performer followed by Godrej Properties in terms of financial performance.

6. Capital market performance analysis

It incorporates computation and interpretation of different indicators such as return, risk and coefficient of variation of Brigade Group Limited, Godrej Properties Limited, DLF India Limited, Housing Development Infrastructure Limited (HDIL) and Oberoi Realty Limited for 2018-19. Thereafter these five selected companies have been allotted ranks on the basis of their capital market performance in 2018-19.

- **Return**

Return of a share is defined as the difference between today's closing price and yesterday's closing price divided by yesterday's closing price. Rational investors prefer to sacrifice current conspicuous consumption and block their hard earned money in different equity shares in order to derive a higher rate of return in the future. Higher the return, security is doing well and vice versa. Return is normally measured by arithmetic mean.

- **Risk**

The rate of return from investments in equity shares vary widely. The risk of an investment refers to the variability of its rate of return. The total risk is measured by standard deviation which is considered as an absolute measure of dispersion. Rational investors prefer to invest in a security where risk is less. Lower the risk, security is doing well and vice versa.

- **Coefficient of Variation**

Risk premium implies additional return investor is enjoying due to taking additional risk. It indicates higher return is accompanied by higher risk. To do a tradeoff between risk and return, Coefficient of Variation (CV) is calculated for the stocks. CV is measure of relative measure of dispersion. It is calculated as standard deviation divided by mean multiplied by 100. Therefore CV is used to compute risk per unit of return from the stock. Lower the CV, stock is doing good and vice versa. If investors have to choose between few stocks on the basis of their invest-worthiness stocks will least CV should be selected as it ensures minimum risk per unit of return.

Exhibit-8 Rank Allotments on the basis of Capital Market Performances

Companies	Average daily Return (18-19)	Score	Average daily risk (18-19)	Coefficient of Variation	Score	Total Score	Rank
Brigade Group Ltd.	(0.01)	2	2.39	(239)	1	3	4
DLF ltd.	0.02	3	2.71	135.5	3	6	3
Godrej Properties ltd.	0.1	5	2.55	25.5	5	10	1
HDIL	(0.61)	1	2.48	(4.06)	2	3	4
Oberoï Realty	0.05	4	2.24	44.8	4	8	2
<p align="center"><i>Source: Daily Closing Stock Price data of Brigade Group Limited , Godrej Properties Limited , DLF India Limited , Housing Development Infrastructure Limited(HDIL) and Oberoi Realty Limited for 2018-19 from Bombay Stock Exchange</i></p>							

Interpretation

Here companies are ranked based on the basis of different capital market indicators such as daily return, daily risk, coefficient of variation in 2018 -19. Higher the return, company is doing well in capital market. Lower the coefficient of variation, company is doing well. Least coefficient of variation implies risk per unit of return is the minimum. 5 is the highest score and 1 is the lowest. The total score is nothing but the sum total of scores obtained on the basis of return and coefficient of variation. Higher the total score company is doing well and vice versa. As per the capital market performance of these selected companies, Godrej Properties has the highest score and so is ranked 1st. Oberoi Realty has ranked 2nd. Brigade Group and HDIL have scored the lowest and so they are ranked 4th. So Godrej Properties is the top performer followed by Oberoi Realty in terms of capital market performance.

7. Conclusion

Oberoi Realty has been allotted 1st rank and Godrej Properties is allotted 2nd rank on the basis of their financial performances. Godrej Properties has been allotted 1st rank and Oberoi Realty has scored 2nd positions on the basis of their capital market performances. Brigade Group and HDIL are providing negative return in capital market so these two companies will not be considered for investment. Therefore investors can invest their hard-earned money in the stocks of Godrej and Oberoi Realty without any ambiguity. Both the companies are doing well in terms of financial as well as capital market performance. It can also be concluded that there is a strong interdependence between financial and capital market performance of the companies. Companies having good financials are outperforming in capital market and vice versa. Hence, investor should take into consideration the financial as well as capital market analysis before judging invest-worthiness of a stock.

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