AN ESSAY ON THE MARKET EFFICIENCY AND INFORMATION ASYMMETRY IN INDIAN REAL ESTATE SECTOR: THE IMPACT OF DEMONETIZATION

JACOB MATHEW, 1st M.com Business Finance, Dept. Of Commerce, Pondicherry University

SIVANANDINI S, 1st M.com Accounting Taxation, Dept. Of Commerce, Pondicherry University

NITHYA R, 1st M.com Business Finance, Dept. Of Commerce, Pondicherry University

ABSTRACT

The Government of India on 8thNovember 2016 announced demonetization of all 500 and 1000 rupee notes which had adversely affected the Indian economy to some extent. This paper elucidates the impact of such a move on the availability of credit, spending, and level of activity in the Real Estate sector of the country. The investors' decisions to buy or sell the shares are purely based on the information available to them about the share price volatility. The market in which the share prices always reflect all the available information to investors is known as an efficient market. This study is mainly based on the efficient market hypothesis using the closing price data of 5 Real estate companies for one year. The statistical tool used for analysis is the Market model because using this model the intrinsic value of shares and risks are measured by stock's price volatility. It was found that the market efficiency of the real estate companies are difficult, apart from the event window considered, it shows an information asymmetry for the last 1 year that is mainly before declaring demonetization.

Keywords: *Demonetization, efficient market, event window, intrinsic value, Real estate sector*

1. INTRODUCTION

"I take the market-efficiency hypothesis to be the simple statement that security prices fully reflect all available information."- Eugene Fama.

One of the most globally recognized sectors is real estate. In India, after agriculture the second major employer is the real estate sector and expected to grow by 30 percent over the next decade. This sector consists of sub-sectors like retail, housing, commercial, and hospitality. For the past few years, the Indian real estate sector is facing considerable challenges in terms of sales and existence. There was a flow of unaccounted black money in the property sector and the Indian government took measures to crack down it through Demonetization. It eventually brought a lot of perplexity and uncertainty. This affected the market which results in scarcity of cash and many buyers went off and sellers have no role. Hence, studying the effects of demonetization in depth was imperative.

The significance of the real estate industry in the financial markets has been growing over the last ten years which witnessed by the increase in market value by approximately 150%.

On 8th November, India witnessed a massive fall in the economy, share market, and in every nook and corner. Demonetization was a big challenge for society, companies, and many sectors. The major indicator of demonetization is the stock market; it depends on the perceptions of investors of the different sectors during the event period. Stock price movements could be quick perceptions indicators, which could be affected by various other factors such as company-related developments or industry-related issues, on a real-time basis. On the other hand, it can be used as an indicator of how companies are expected to be impacted by the issue of demonetization.

This study examines the impact of Demonetization in Real estate sector based on its nifty stock price and analyzed using event study methodology. The event date is 8th November 2016 and the impact of demonetization is analyzed from 22nd September 2016 to 21st December 2016.

1.1 CONCEPT OF EFFICIENT MARKET HYPOTHESIS

The empirical study on portfolio theory, asset pricing and the efficient-market hypothesis is best known by the American economist Eugene Fama and he is regarded as the father of the efficient market hypothesis and he analyzed the behavior of stock market prices which he claimed to exhibit fat-tail distribution properties, implying tremendous movements were normal than the predicted on the assumption of normality. He proposed three concepts (i) strong-form (ii) semi-strong form and (iii) weak efficiency.

In weak form efficiency the information set is just historical prices, which can be predicted from historical price trend; thus, it is impossible to profit from it. Semi-strong form requires that all public information is reflected in prices already, such as companies' announcements or annual earnings figures. Finally, the strong-form concerns all information sets, including private information, are incorporated in price trend; it states no monopolistic information can entail profits, in other words, insider trading cannot make a profit in the strong-form market efficiency.

The second degree of market efficiency, that is the Semi-strong form tests whether information known to the public is incorporated into stock prices or not. Under this concept the marketing efficiency can be tested using event study, it examines the market reactions and the excess Market returns around a specific information event like acquisition announcement, stock split, corporation events, or unexpected world events and economic news. The main aim of event study is know whether the stock market is efficient that is, the stock prices react quickly and accurately to new information.

2. REVIEW OF LITERATURE

- Swati Chauhan and Nikhil Kaushik (2017), in their study 'IMPACT OF DEMONETIZATION ON STOCK MARKET: EVENT STUDY METHODOLOGY' they examined the impact of demonetization announcement on market reaction of S&P BSE100 index, its analysis shows that no significant impact of demonetization is found stock market prices and the effect of demonetization was only for a shorter duration.
- Bansal, C. J. (2017), in their study 'IMPACT OF DEMONETIZATION ON INDIAN ECONOMY' analysed the impact of demonetization on Indian economy. The study analysed the impact on manufacturing, service and agriculture sector. The result showed that only agriculture sector grows positively while manufacturing and service sectors were crashed down.
- SouravMazumder(2017), in his thesis 'A STUDY OF EFFICIENT MARKET HYPOTHESIS AND ITS IMPACT ON VALUATION MODELS IN INDIAN STOCK MARKET, WITH SPECIFIC REFERENCE TO POST LIBERALIZATION PERIOD' clearly shows that the Indian capital market fails to satisfy the test of semi-strong form of efficiency and showed existence of insider trading and no investor can earn an extra return analysing the historical seasonal pattern of stock returns in an efficient market.

3. OBJECTIVE

The main aim of this study is to investigate whether the Indian real estate market is efficient based on event study methodology.

4. RESEARCH METHODOLOGY

The research is based on checking the market efficiency of the real estate industry, and it is descriptive and analytical in nature, the study is confined to 1 year closing price of shares of 5 real estate companies listed in National stock exchange of India naming- Godrej properties, DLF limited, Omaxe limited, Prestige limited, and Shoba limited.
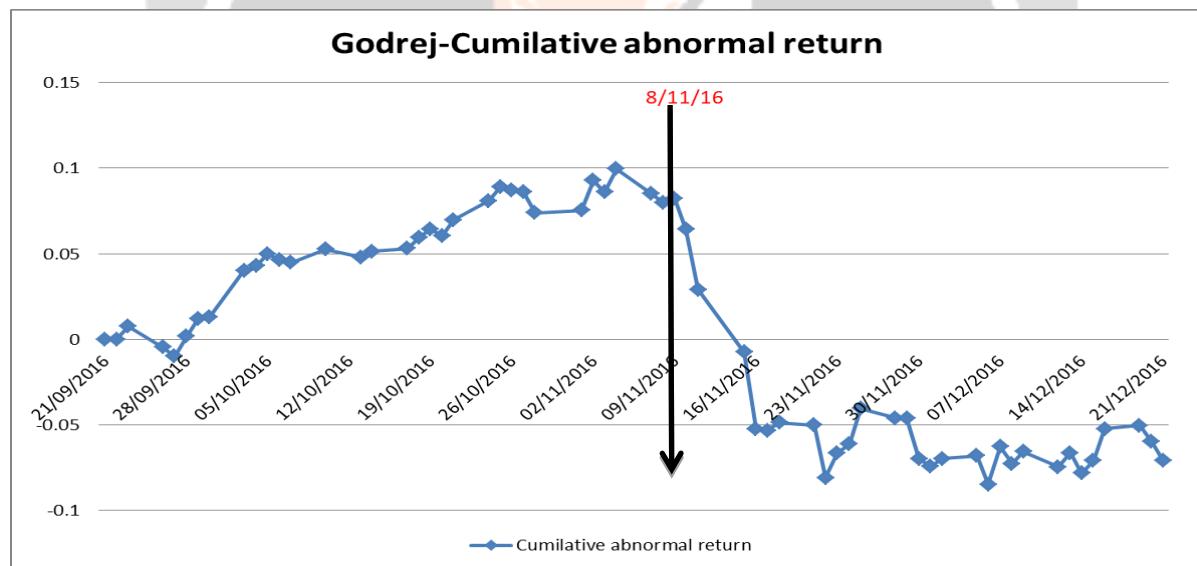
DATA COLLECTION: The closing market price of shares of thecompanies for the period starting from 9/10/2015 to 21/9/2016. For the event study thirty days before and after the event date is considered for understanding the event window. The data are mainly collected from yahoo finance.com.

DATA ANALYSIS: Event study is used to analyse the impact of demonetization announcement on security return. In order to satisfy the Event Study following procedures are to be followed:

- Estimating the event study time line;
  Event day: 8th November 2016, Estimation period: 9/10/2015 – 21/9/2016, Observation period: 22/9/2016 – 21/12/2016
- Calculate the abnormal returns, around the announcement date   (observation period) for each firm in the sample, Abnormal return for the firm 'j' and on the event date 't' is given by,
  $ARjt = Rjt - E(Rjt)$, were $Rjt = (P1- P0)/ P0$
  ARjt: abnormal return for firm j for day t
  Rjt: actual return for firm j for day t
  E(Rjt) is the expected rate of return and it is calculated using Market Model.
  Market model: $E(Rjt) = \alpha + \beta* Rmt$
  Rmt: market return calculated as the difference between closing price of NSE nifty at day t and day t-1 and dividing it by t-1.
- Compute the standard error of abnormal returns across all firms. Standard error (SE) is the standard deviation of the sample average.
- Assess whether the abnormal returns around the announcement date are different from zero, using T-test for each day.
  T statistic for return on day't'= Abnormal return/ SE
  Test statistics helps to know the significance level of AAR and CAAR during the event window caused by the announcement of demonetization.

5. DATA ANALYSIS AND INTERPRETATION

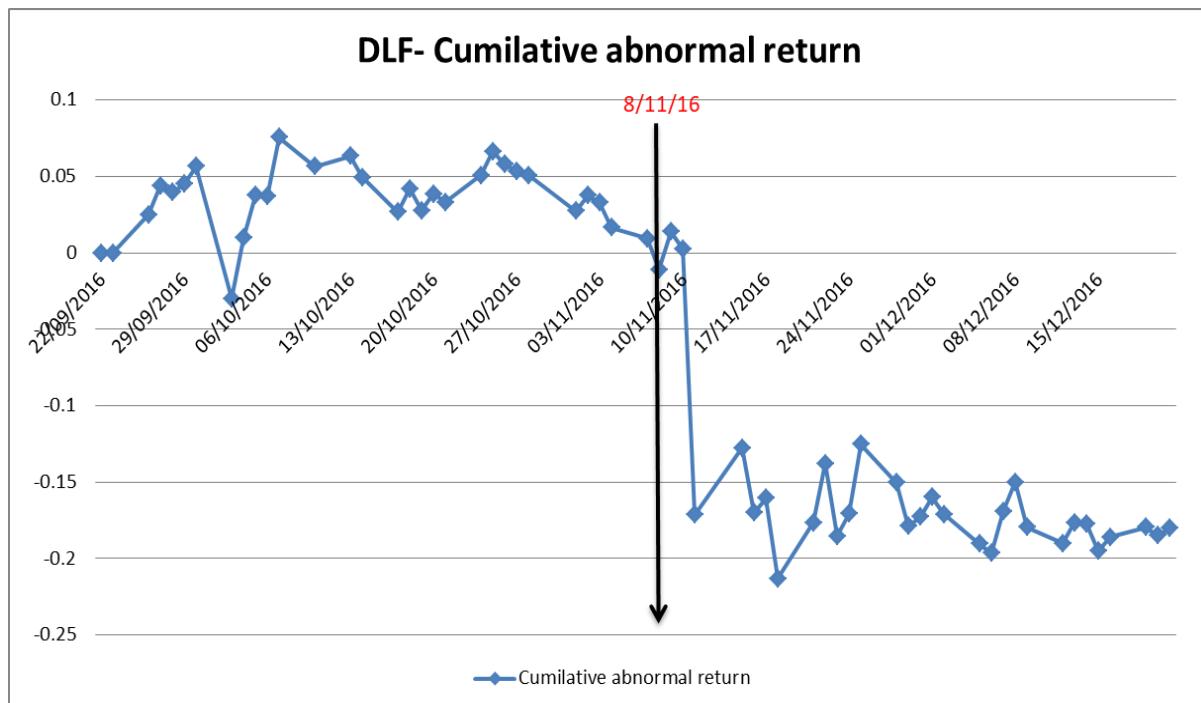### 1. GODREJ PROPERTIES LIMITED

Source: Yahoo finance

The above figure shows that the CAR is increasing from 28/9/2016, on 8/11/2016 CAR is (8.22%), after the event date return started decreasing as it shows a great fall in price of shares,and the CAR is continuously decreases up to 21/12/2016.
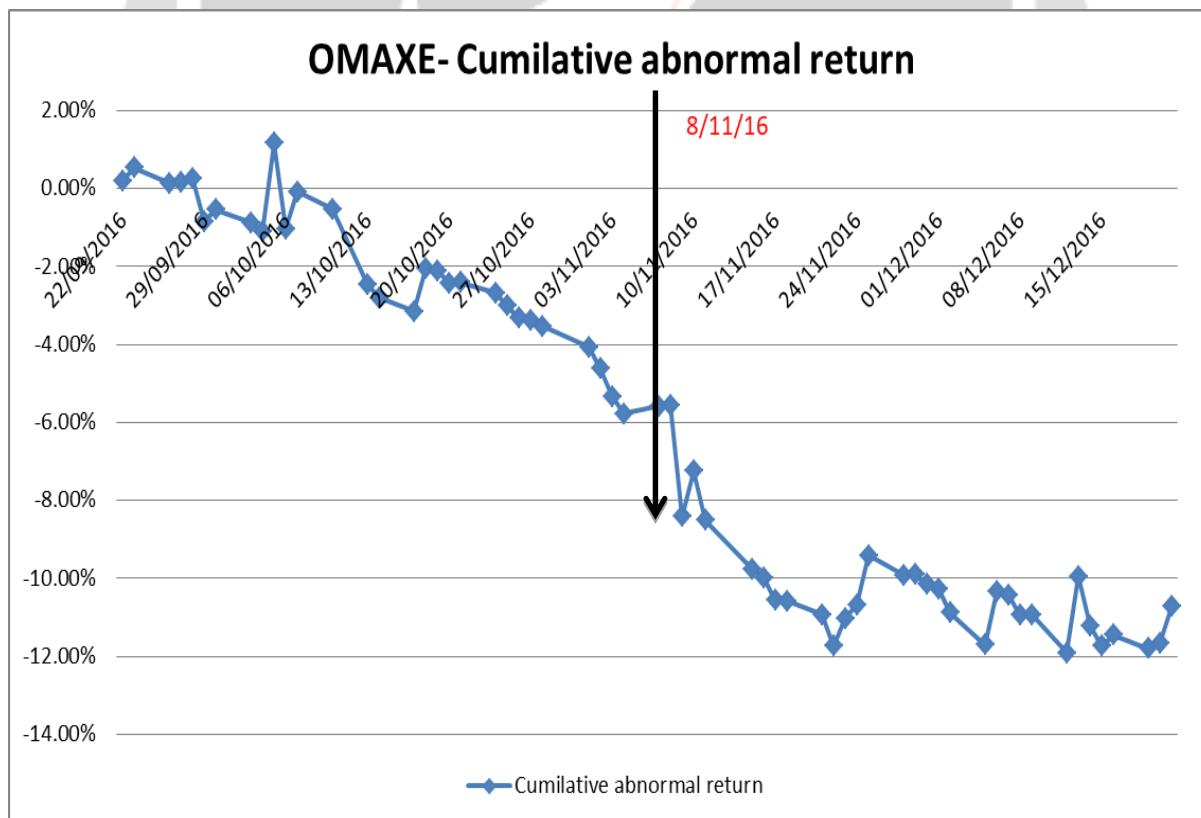
2. DLF LIMITED

From the above figure it understood that CAR is showing a decreasing trend from 6/10/2016 and on 8/11/2016 it shows a fall, but the impact of demonetization affects after 2 days, as it shows a great fall on CAR of the company and then it continuous.
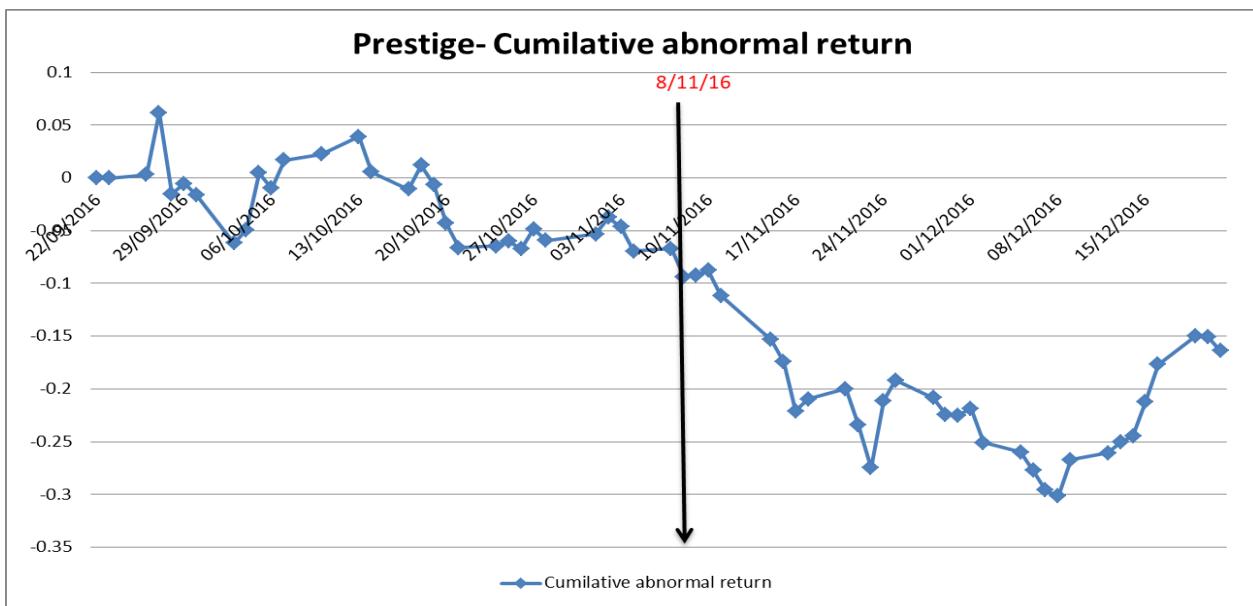
Source: Yahoo finance

3. OMAXE LIMITED

The following figure shows a diminishing trend on CAR from the 22/9/2016, on 8/11/2016 the CAR was (-5.56%), it still continues the fall up to 21/12/2016. The share price decreases and can assume that the shareholders get awareness about the event before it has come into force.
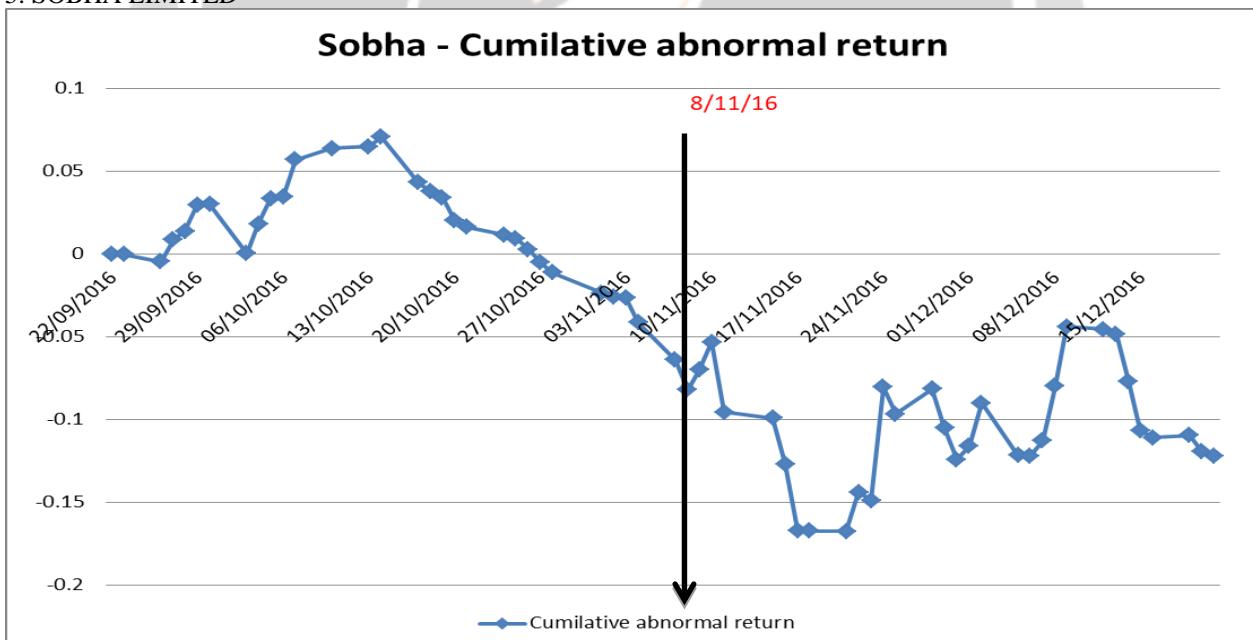

Source: Yahoo finance

4. PRESTIGE GROUP LIMITED

Source: Yahoo finance

The above figure show that CAR is decreasing from 29/9/2016 onwards, while reaching event date on 8/11/2016 the CAR was(-8.76%), it continues up to 14/12/2016, and then it starts increasing in a decreasing rate. The prices of the shares are decreasing as the institutional investors start selling their respective shares.

5. SOBHA LIMITED

Source: Yahoo finance

Above figure shows that, initially CAR increases, but on 13/10/2016 as it shows an information asymmetry as the car curve start falling downward. CAR falls up to 8/11/2016, later it increases at a decreasing rate. The prices of the shares are less and the investors start selling their shares as they can be known about the event which is going to happen.

6. FINDINGS

1. The results show that there is a severe information asymmetry in the majority of selected companies in the real estate sector as three out of five companies show a decreased trend in the CAR from the beginning itself. And other two companies do not have a severe asymmetry problem.
2. The study reveals that there is a combination of both information symmetry and asymmetry in the Real estate sector based on the selected sample and here the majority confirms information asymmetry.

7. SUGGESTION

Even though the regulatory mechanism of the country argues that the announcement of demonetization is quite accidental, typically solid, and fulfills confidentiality, it implies the system should be much more focused and careful in terms of this kind of a path-breaking decision.

8. CONCLUSION

As per the study, the impact event demonetization had severely affected the market of companies that are considered for analyzing. As per the analysis, it comes to know that each company has an information leakage which makes its market affected for long days.

As to satisfy the condition for a semi-strong form of efficiency, abnormal return should be observed on the date of the announcement but not on other days. In our experiment, abnormal positive returns were observed on the days from -30 till +30. The study clearly shows that the Indian real estate industry fails to satisfy the test of the semi-strong form of efficiency. Therefore we understand that the market efficiency is not fully achieved as per the theory suggested, in this meantime of demonetization the market seems to be inefficient.

A study conducted on the movement of the share price of the 5 selected companies around the Cumulative Abnormal Return (CAR) is calculated and plotted. We can also see that the CAR falls after the date announcing demonetization in each company considered in the study, this is because of the decrease in share price after the impact of demonetization up to the end of the observation period, so we can also conclude that the graph fails to generate a pattern which shows that the Indian real estate sector satisfies the strong form of efficiency and also shows the low demand and supply of real estate properties.

REFERENCES

1. Eugene F. Fama, 'Efficient Capital Markets: A Review of Theory and Empirical Work', The Journal of Finance, Vol. 25, No. 2, Papers and Proceedings of the Twenty Eighth Annual Meeting of the American Finance Association New York, N.Y. December, 28-30, 1969 (May, 1970), pp. 383-417
2. Robin Jonsson& Jessica Radeschnig, 'From Market Efficiency to Event Study Methodology − An Event Study of Earnings Surprises on Nasdaq OMX Stockholm',Division Of Business And Social Sciences Mälardalen University Se-721 23 Västerås, Sweden
3. Ramaratnam, J. (2012). A study on testing of efficient market hypothesis with special reference to selective indices in the global context: an empirical approach. Vol.2, No.1
4. SouravMazumder 'A Study Of Efficient Market Hypothesis And Its Impact On Valuation Models In Indian Stock Market, With Specific Reference to Post Liberalization Period' Doctoral Thesis ICFAI University, Jharkhand Ranchi August 2017
5. Swati Chauhan and Nikhil Kaushik (2017), 'Impact Of Demonetization On Stock Market: Event Study Methodology', Indian Journal of Accounting (IJA), 2395-6127 (Online) Vol. XLIX (1), June, 2017, pp. 127-132
6. Bansal, C. J. (2017). Impact of demonetization on Indian Economy. International Journal of Science technology and Management, 598-605.