AN EMPIRICAL ANALYSIS ON THE IMPACT OF SIZE-EFFECT OF THE FIRM ON STOCK RETURNS OF SELECT BANKING COMPANIES LISTED IN NSE

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ABSTRACT

The present study aims to examine the impact of size effect on the stock returns of selected banking sector companies listed in NSE. The results of the earlier studies show that the stocks of small firms have earned higher returns than the stocks of large firms, and that the firm size effect is still significant when risk-adjusted returns are controlled for difference in earnings/price (E/P) ratios. The major objectives of this study are to analyze the impact of size effect of the firm on the stock returns of the banking sector companies and to offer suitable suggestions to the investors in constructing their portfolio. This study was conducted with the secondary data already published during the previous financial years (2012-15). The study is to prove the size effect of firms on the stock returns in select banking sector companies listed in NSE. The select banking sector companies are AXIS, HDFC, ICICI, KOTAK, PUNJAB NATIONAL and STATE BANK OF INDIA. The results of this study confirm the theoretical background regarding the impact of size effect on stock returns. The size effect of the firm is tested and proved.

Key words: Size Effect, Stock Return, S&P CNX Nifty, Beta Value.

INTRODUCTION

A theory holds that smaller firms, or those companies with a small market capitalization, outperform larger companies. This market anomaly is a factor used to explain superior returns in the Three Factor Model, created by Gene Fama and Kenneth French - the three factors being the market return, companies with high book-to-market values, and small stock capitalization. The theory holds that smaller companies have a greater amount of growth opportunities than larger companies. Small cap companies also tend to have a more volatile business environment, and the correction of problems - such as the correction of a funding deficiency - can lead to a large price appreciation. Finally, small cap

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stocks tend to have lower stock prices, and these lower prices mean that price appreciations tend to be larger than those found among large cap stocks. The relative advantage the size of a company has on returns. Some analysts suggest that investing in a small company can lead to a higher return than investing in a large company, even after accounting for unsystematic risk. Banz (1981) demonstrated that small cap securities generated greater returns, and attributed this over performance to the remuneration of an additional risk factor. This phenomenon is known as the size effect. On the American market, numerous studies revealed the cyclical nature of the size effect; others hailed the disappearance of this anomaly. Reinganum (1999) suggested that the size effect could be predicted and that large companies outperformed small companies during economic crises. This hypothesis was confirmed by Kim and Burnie (2002), as well as by L'Her, Masmoudi and Suret (2002). Similarly, concerning the American market, Dijk (2005) noticed that the size effect had been cyclic in the period between 1927 and 2005. He also observed that between 1980 and 1999, small caps were clearly underperforming when compared to large caps. Conversely, the studies conducted by Horowitz, Loughran and Savon (2000) and Schwert (2003), demonstrated that the size effect had disappeared during the periods ranging respectively from 1981 to 1997 and from 1982 to 2002. These observations have led to analyze recent changes to the size effect on the banking sector companies listed in NSE. Thus, this paper contributes to the existing finance literature by investigating the size effect in the stock market during the recent period.

LITERATURE REVIEW

In the 1980s and early 1990s. Banz (1981) wrote what may be the first empirical paper that presents evidence of a size effect in U.S. stock returns. He analyzes all common stocks listed on the NYSE between 1936 and 1975. Banz reports that stocks in the quintile portfolio with the smallest market capitalization earn a risk-adjusted return that is 0.40% per month higher than the remaining firms.

Fama-MacBeth (1973) regressions show a negative and significant relation between returns and market value. The size effect is not linear and is most pronounced for the smallest firms in the sample. Banz conjectures that many investors do not want to hold small stocks because of insufficient information, leading to higher returns on these stocks. This argument is related to the investor recognition hypothesis developed by Merton (1987).

Reinganum (1981) analyzes the size effect in a sample of 566 NYSE and Amex firms over the period 1963-1977. He finds that the smallest size deciles outperforms the largest by 1.77% per month.

Brown, Kleidon, and Marsh (1983) re-examine the size effect using the Reinganum data and find that there is an approximately linear relation between the average daily return on ten size-based portfolios and the logarithm of the average market capitalization.

Past studies in the KLSE (Kuala Lumpur Stock exchange) using smaller samples and less elegant methods have reported preliminary findings about the effect of changes in accounting variables in term of 38 Journal of Money, Investment and Banking – Issue 3 (2008) direction and magnitude (eg. Cheng, Ariff and Shamsher, 2001) without measuring the firm sizes magnitude effect. In this study, the effect firm size on prices from both sign and magnitude will be done.

Cheng FAH, Shamsher Mohd and Anuar Nasir investigates the impact of firm size on stock prices during earning announcement, in their article published in Journal of Money, Investment and Banking (2008).

International Research Journal of Finance and Economics (2009), issued article in the topic “Does size really matter? A study of size effect and macro economic factors in Malaysian stock returns.” this investigate the relationship between stock returns of different sizes of firms with Consumer Price Index, Industrial Production Index, Money Supply (M3), Interbank Money Market, three months Treasury Bills Discount Rate, six months Treasury Bills Discount Rate and Crude Oil Price.(SHAHARUDIN.ROSELEE S and HON SU FUNG)

PU SHEN(2010) an economist at the Federal Reserve Bank of Kansan city, conduct study on the topic of “The P/E ratio and stock market performance” This article examines the historical relationship between price-earnings ratios and subsequent stock market performance and discusses why history might not repeat itself this time. The article finds strong historical evidence that high price earnings ratios have been followed by disappointing stock market performance in the short and long term. Specifically, high price-earnings ratios have been followed by slow long-run growth in stock prices.
Moreover, when high price-earnings ratios have reduced the earnings yield on stocks relative to returns on other investments, short-run stock market performance has suffered as well. Despite this evidence, however, we cannot rule out the possibility that these historical relationships are of little relevance today due to fundamental changes in the economy.

In a 2011 report, CRESTMONT Research examined the historical relationship between stock market performance and the volatility of the market. For this analysis, Crestmont used the average range for each day to measure the volatility of the Standard & Poor's 500 Index (S&P 500) index. Their research tells us that higher volatility corresponds to a higher probability of a declining market. Lower volatility corresponds to a higher probability of a rising market.

HANS WAGNER (Feb 2012) investigates that many investors realize that the stock market is a volatile place to invest their money. The daily, quarterly and annual moves can be dramatic, but it is this volatility that also generates the market returns investors experience. In his article “Volatility’s impact on market return”, explains how volatility affects investors' returns and how to take advantage of it.

**RESEARCH OBJECTIVES**

- To analyse the impact of size effect of the firm on stock returns of the select banking sector companies.
- To measure the risk and return of the select banking securities.
- To compare the financial performance and securities market performance.
- To find overvalued and undervalued securities.
- To suggest which scrip is best for buying or holding or selling.

**RESEARCH METHODOLOGY**

Research methodology is a way to systematically solve the research problem. The research is to analyze the impact of size effect of the firm on the stock return of banking companies listed in NSE. Based on literature review it is found that the small cap companies outperform the large cap companies. The research was conducted using the secondary data from the NSE website. Data is taken for a period of 4 years and six banking Companies listed in NSE where taken for the study. Various tools have applied.

Such as Market valuation Ratios, Rate of Return, Compound Annual Growth Rate, Beta, Volatility of Return on Equity, PBV-ROE matrix, has been used.

**LIMITATIONS OF THE STUDY**

- This study based on the past data, which may not guarantee to the future performance of the market.
- This study concentrates only on select securities.
- The study considers only NSE price value and not BSE price value of the companies.

<table>
<thead>
<tr>
<th>SCRIP NAME</th>
<th>RETURN ON EQUITY</th>
<th>BETTA VALUE</th>
<th>BOOK VALUE PER SHARE (Rs)</th>
<th>PRICE TO BOOK VALUE</th>
<th>CAGR OF SALES (%)</th>
<th>CAGR OF EPS (%)</th>
<th>VOLATILITY OF RETURN</th>
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<td>2.18</td>
<td>1015</td>
<td>1.18</td>
<td>37.58</td>
<td>26.65</td>
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<td>17.45</td>
<td>1.38</td>
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<td>2.41</td>
<td>30.43</td>
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<td>524</td>
<td>1.7</td>
<td>12.47</td>
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<tr>
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<td>1.12</td>
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<td>1.71</td>
<td>35.90</td>
<td>-18.66</td>
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<td>SBI</td>
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ANALYSIS AND INTERPRETATION

GROWTH PERFORMANCE AND RISK EXPOSURE OF THE SELECTED COMPANIES

PIVOT POINT ANALYSIS FOR SELECT SECURITIES SHORT TERM PREDICTION

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<th>PP</th>
<th>R1</th>
<th>R2</th>
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<td>2133.03</td>
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<td>2341.48</td>
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CHART

PIVOT POINT ANALYSIS FOR SELECT SECURITIES

LONG TERM PREDICTION

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<th>PP</th>
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<td>2847.23</td>
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RESULTS & DISCUSSIONS

From the above analysis it is found that ICICI gains more returns than the income generated among all selected securities and S&P CNX Nifty index.

The beta value of all securities, except KOTAK and PUNJAB bank, are greater than 1.5 and AXIS bank has more market volatility its beta is 2.18.

ICICI Bank’s volatility of return on equity is 0.33 which is more among all the selected securities which mean investment in ICICI shares is risky.

AXIS BANK LIMITED has high Beta and Book value. It has over performed in the market. But the stock price is undervalued, so it is recommended to buy the stock. Current market price of the stock is 1146. Target price of the stock is 1886.80.

It is observed that the Earning per share of ICICI bank is very high; it states that company has over performed in the market. The stock is overvalued so it is good sign to sell the stock. Current market price of the stock is Rs.890.20. Target price of the stock is Rs.688.5.

From the analysis it is inferred that the growth rate of sales is 35.9%, it states that the company has maintained their performance. Its volatility of return on equity is 0.16 and the return of company is low. But the stock price is overvalued, so it is advised to sell the KOTAK bank stocks. Current market price of the stock is Rs. 545.35 which is greater than the Target price of Rs.458.80.

The return of PUNJAB bank is high compared to its book value. It states that the company has maintained its performance. But the stock price is undervalued, so it is recommended to buy the stock. Current market price of the stock is Rs.925 and its target price is Rs.3340.20.

The book value of State Bank is low. Now the stock price is undervalued. So it is advised to buy the stock. Current market price of the stock is Rs.2096.35. Targeted price of the stock is Rs.620.80.

From the Pivot point analysis, it is inferred that the short term price prediction for selected securities. It advices the investor to invest in securities of AXIS, HDFC, ICICI, KOTAK, PUNJAB and STATE bank while it reaches the resistance level of 1220, 530, 940, 560, 970 and 2220 and sell those securities while it is in supporting level of 1080, 500, 850, 520, 890 and 2010.

State bank of India, Punjab national bank and Axis bank are undervalued and ICICI bank and KOTAK bank are overvalued.
SUGGESTIONS
Based on the analysis State bank, Punjab national bank and Axis bank are undervalued so they are recommended to buy and ICICI bank and KOTAK bank are overvalued so those stocks are advised to sell. Aggressive stocks are AXIS bank, ICICI bank and State bank of India, (More than 1.5 Beta value), Defensive stocks are KOTAK Mahindra bank and Punjab national bank. (Less than 1.5 Beta value). It is suggested that before purchasing any stock the investor must consider some fundamental factors like PE multiples, ROE, PBV and so on. Risk adverse investors must concentrate on Beta and volatility of the ROE while taking investment decision.

CONCLUSION
The most important objective of trading is to earn profit. An investor looks for a good return from his investment in spite of the risks he was exposed to. So it is essential that he needs to focus more in framing an optimum portfolio to get maximum profit and reduce risk to a maximum extent.

While framing the portfolio, many investors will go by selecting the big firms among the listed companies and would not consider the smaller firms. They will also go by fundamental analysis to study the economic factors, industrial standing and companies’ sustained performance. But it has been evident that the small companies will also give more return to the investor than the return came out from the large firms. Because of the application of internal and external risk, this concept is Size Effect.

Hence, it is concluded that inclusion of small and midcap firms in the portfolio together with the large firms will help investor to minimize risk and maximize the profit.

REFERENCES