Banks in equity market - a risk analysis

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ABSTRACT

Equity market is often considered as the main engine driving the economy. In emerging countries, equity market plays a vital role in economic development. Many emerging markets, firms would need large quantum of fund to expand and be able to pursue the prevalent high growth rates. Equity market is the only liquid financial market in many emerging countries and hence its role in economic development cannot be overemphasized. In addition, all over the world, financial markets are getting less insular. The investors in developed countries are seeking investment opportunities beyond the confines of their domestic economy to enhance return and diversify risks. The investment in stock involves many risks. The investors have to carry analysis before investing in any stocks. Most of the investors are unaware about the analysis to be carried out before investing. This study involves analysis of earnings per share, price to earnings and analysis of risk through beta value, of the banks in equity market. Technical analysis helps the investor to know whether the stock is in over sold region or over bought region and to find any trend reversals. Based on these analysis investor can make buy or sell decision. The researcher concludes that the maximum return is based on the maximum risk in which the investor is going to face.

Key Words: Price Earnings Ratio, Earnings per Share, Risk, Equity Market

1. INTRODUCTION

Banking in India originated in the first decade of 18th century with The General Bank of India coming into existence in 1786. This was followed by Bank of Hindustan. Both these banks are now defunct. The oldest bank in existence in India is the State Bank of India being established as "The Bank of Bengal" in Calcutta in June 1806. A couple of decades later, foreign banks like Credit Lyonnais started their Calcutta operations in the 1850s. At that point of time, Calcutta was the most active trading port, mainly due to the trade of the British Empire, and due to which banking activity took roots there and prospered. The first fully Indian owned bank was the Allahabad Bank, which was established in 1865.

By the 1900s, the market expanded with the establishment of banks such as Punjab National Bank, in 1895 in Lahore and Bank of India, in 1906, in Mumbai - both of which were founded under private ownership. The Reserve Bank of India formally took on the responsibility of regulating the Indian banking sector from 1935. After India's independence in 1947, the Reserve Bank was nationalized and given broader powers.

Banks in India can be categorized into non-scheduled banks and scheduled banks. Scheduled banks constitute of commercial banks and co-operative banks. There are about 67,000 branches of Scheduled banks spread across India. During the first phase of financial reforms, there was a nationalization of 14 major banks in 1969. This crucial step led to a shift from Class banking to Mass banking. Since then the growth of the banking industry in India has been a continuous process.

As far as the present scenario is concerned the banking industry is in a transition phase. The Public Sector Banks
(PSBs), which are the foundation of the Indian Banking system account for more than 78 per cent of total banking industry assets. Unfortunately they are burdened with excessive Non Performing Assets (NPAs), massive manpower and lack of modern technology.

On the other hand the Private Sector Banks in India are witnessing immense progress. They are leaders in Internet banking, mobile banking, phone banking, ATMs. On the other hand the Public Sector Banks are still facing the problem of unhappy employees. There has been a decrease of 20 percent in the employee strength of the private sector in the wake of the Voluntary Retirement Schemes (VRS). As far as foreign banks are concerned they are likely to succeed in India.

Indusland Bank was the first private bank to be set up in India. IDBI, ING Vyasa Bank, SBI Commercial and International Bank Ltd, Dhanalakshmi Bank Ltd, Karur Vysya Bank Ltd, Bank of Rajasthan Ltd etc are some Private Sector Banks. Banks from the Public Sector include Punjab National bank, UCO Bank, Oriental Bank, Allahabad Bank, Andhra Bank etc.

With the Indian economy moving on to a high growth trajectory, consumption levels soaring and investment riding high, the Indian banking sector is at a watershed. Further, as Indian companies globalize and people of Indian origin increase their investment in India, several Indian banks are pursuing global strategies.

The industry has been growing faster than the real economy, resulting in the ratio of assets of commercial banks to GDP increasing to 92.5 per cent at end-March 2007. The Indian banks have also been doing exceptionally well in the financial sector with the price-to-book value being second only to china, according to a report by Boston Consultancy Group.

Consequently, the degree of leverage enjoyed by the banking system, as reflected in the equity multiplier (measured as total assets divided by total equity), has increased from 15.2 per cent at the end of March 2006 to 15.8 per cent at the end of March 2007.

1.1 Growth of Banking Sector in India

A burgeoning economy, financial sector reforms, rising foreign investment, favorable regulatory climate and demographic profile has led to India becoming one of the fastest growing banking markets in the world. The overall banking industry’s business grew at a CAGR of about 20 per cent from US$ 469.4 billion as of March 2002, to US$ 1171.29 billion by March 2007.

Aggregate bank deposits of banks increased by US$ 129.26 billion (22.1 per cent) at the end of March 2007 over the corresponding in 2006. In the current fiscal, aggregate bank deposits increased by 23.8 per cent, year-on-year, as of January 4, 2008 as against 21.5 per cent a year ago. While aggregate demand deposits increased by 15.6 per cent, aggregate time deposits increased by 25.3 per cent in the same period, indicating migration from small savings schemes of the Government.

Similarly, aggregate deposits of the scheduled commercial banks (SCB), after growing by 17.8 per cent and 24.6 per cent in 2005-06 and 2006-07, rose by 25.2 per cent, year-on-year, as on January 4, 2008. In fact, the absolute increase of US$ 96.34 billion (14.6 per cent) in the current fiscal year up to January 4 2008 was higher than the US$ 70.59 billion (13.2 per cent) increase in the same period last year.

Simultaneously, loans and advances of SCBs rose by over 30 per cent (i.e. 33.2 per cent in 2004-05, 31.8 per cent in 2005-06 and 30.6 per cent in 2006-07) in the last three financial years, underpinned by the robust macroeconomic performance. The growth has continued in the current fiscal with non-food credit by
SCBs increasing by 22.2 per cent, year-on-year, as on January 4, 2008.

Significantly, the asset quality of the banks has also improved over this period. The gross non-performing assets (NPA) as a per cent of total assets have declined from 4 per cent as of March 2002 to 1.46 per cent as of March 2006. Simultaneously, the capital adequacy ratio of all SCBs has improved from 11.1 per cent as of March 2002 to 12.3 per cent by March 2007.

1.2 Private Sector

Ever since the banking operations had been opened to the private sector in 1990s, the new private banks have been increasing its role in the Indian banking industry. Against the industry average growth of about 20 per cent in the past five years, the new private sector banks registered a growth of about 35 per cent per annum, growing from US$ 41.63 billion as of March 2002 to US$ 186.71 billion by March 2007. Consequently, new private banks market share has increased from about 9 per cent in 2001-02 to 16 per cent as of March 2006-07. Foreign banks, which totaled 29 in June 2007, have also been expanding at a rapid pace. For example, India was the fastest growing market for Global banking major HSBC in 2006-07, with a growth rate of 64 per cent.

The balance sheet of private banks and foreign banks in India expanded by 38.7 per cent and 39.5 per cent during 2006-07, taking their combined share (along with private banks) in total assets of the banking sector to grow from 22.3 per cent at the end of March 2006 to 24.9 per cent by March 2007.

1.3 Investment Banking

The flurry of mergers and acquisition deals by Indian corporate has boosted the investment banking revenues to a record high. According to Dialogic, an international firm that tracks global M &A transactions, investment banking revenues from India crossed the US$ 1 billion mark for the first time in 2007 to US$ 1.069 billion. This is significantly higher than the US$ 400 million investment banking revenues recorded in 2006. Also, this surge in revenues has propelled India to become the third largest market for investment banking in Asia-Pacific in 2007.

1.4 Potential

While this growth has been very impressive, the potential banking market waiting to be tapped in India is still fairly huge. Out of 203 million Indian households, three-fourths, or 147 million, are in rural areas and 89 million are farmer households. In this segment, 51.4 per cent has no access to formal or informal sources of credit, while 73 per cent have no access to formal sources of credit. In fact, according to a report by Boston Consultancy Group, India has the second largest financially excluded households of about 135 million, which is next only to china. Also, about 60 million new households are expected to be added to India's bankable pool between 2005 and 2009. With such a large untapped market, the Indian banking industry is estimated to grow rapidly, faster than even china in the long run.

1.5 Among the Best

Indian banks are one of the most technologically advanced with vast networks of branches empowered by strong banking systems, and their product
and channel distribution capabilities are on par with those of the leading banks in the world, says a survey by McKinsey. It also reveals that IT effectiveness at the top Indian banks is world class.

With the economy in overdrive and buoyancy in consumption and investment demand, nine Indian banks, led by HDFC Bank and ICICI bank, have made it to the top 50 Asian Banks list in Asian Bankers 300 report. Simultaneously, State Bank of India has become the top loan arranger in the Asia-Pacific region in 2007, according to UK based Project Finance International (PFI). Also, India emerged as the top provider of educational loans worth US$ 3.67 billion till September in 2007.

1.6 Road Ahead

Banks aspiring to become global must have a presence in India and other emerging markets, says a report of consultancy major Ernst & Young, as they are set to become a major source of financial sector revenue and profit growth. As the Indian banking industry continues its rapid growth along with rise in financial services penetration in the Indian economy, the industry's profit is likely to simultaneously surge ahead. According to a report by Boston Consultancy Group, the profit pool of the Indian banking industry is estimated to increase from US$ 4.8 billion in 2005 to US$ 20 billion in 2010 and further to US$ 40 billion by 2015. Simultaneously, driven by the expansion of the middle class population, increase in private banks and the burgeoning national economy, the domestic credit market of India is estimated to grow from US$ 0.4 trillion in 2004 to US$ 23 trillion by 2050. With such a favorable scenario, India is likely to emerge as the third largest banking hub in the world by 2040, says a price water house Coopers report.

2. REVIEW OF SELECT STUDIES

Instead of going into in details in each view/theory of stock market movement, only a few studies using at least spread or any of the two basic components of spread (i.e. E/P ratio and interest rate) are discussed here. Basu (1977) examined the performance of various portfolios on the basis of their P/E ratios for 1957-71 and found that return on company stocks with low P/E ratios was significantly higher that the return on companies with relatively high P/E ratios (Keith, 1998, Page 209). Pesaran and Timmermann (1995) also used both E/P ratio and interest rates along with several other influential variables for explaining stock market movements. Lander et al (1997) also documented strong evidence that both earnings yield and interest rates matter for short-run stock market performance. They used linear combination of E/P ratio and bond yields to predict returns on S & P 500 index in a regression framework.
outperform the buy-and-hold market index portfolio.

In another recent study, Qi and Madalla (1999) found empirical evidence of the influence of various economic and financial variables, viz., yields, interest rate, inflation rate, growth in industrial output, etc., on future excess return in both LR and NN frameworks.

Recently, in the Indian context, Mohanty (1997) examined the relationship of P/E ratio and earnings per share (EPS) with stock price. Using annual data he concluded that one could make excess return by forecasting the directions of movement of EPS based on publicly available information. In the Indian context, the importance of the P/E ratio in explaining and forecasting market movements was also highlighted by Gupta et al (1998). Use of spread variable in explaining Indian stock market return is available in Samanta and Rajpathak (2001). Though, they have not investigated detail relationship between spread and return, they constructed a composite indicator by combining partial information contents of spread in addition to E/P ratio, yields and a few other economic and financial variables, for forecasting/tracking future stock market returns. The results presented in the study are quite encouraging in a sense that the composite indicator beat random-walk model in predicting future stock market return

3. METHODOLOGY
3.1 Scope of the Study

- To find out the value of equities of banks in equity market.
- To analyze the risk involved in the equities of the banks in equity market.
- To analyze the volatility of the equity shares of banks in equity market.

3.2 Objectives of the Study

- To analyze the earnings per share of the bank equities.
- To analyze the price to earnings ratio of bank equities.
- To analyze the risk in equities of banks in equity market.

3.3 Period of the Study

The time period of the study was past four years from Jan 2008 – Dec 2011.

3.4 Tools Used for the Study

3.4.1 Beta

The Beta is a measure of the systematic risk of a security that cannot be avoided through diversification. Therefore, Beta measures non-diversifiable risk. The market itself has a beta value of 1; in other words, its movement is exactly equal to itself (a 1:1 ratio).

Formula

$$\text{Beta} = \frac{\sum xy - \left(\sum x \right) \left(\sum y \right)}{\sum x^2 - \left(\sum x \right)^2}$$

3.4.2 Earnings per share

The earnings per share are an indicator about the value of share in the future. In order to find the value of earnings per share the following formula is used. It is calculated as:

$$\text{Earnings per Share} = \frac{\text{Net Income} - \text{Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

3.4.3 Price Earnings Ratio

A valuation ratio of a company's current share price compared to its per-share earnings. In general, a high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E. It is calculated as:
4. DATA ANALYSIS AND INTERPRETATION

4.1 Earnings per Share (EPS)

Earnings per share are generally considered to be the single most important variable in determining a share's price. It is also a major component of the price-to-earnings valuation ratio.

An important aspect of earnings per share that's often ignored is the capital that is required to generate the earnings (net income) in the calculation. Two companies could generate the same earnings per share number, but one could do so with less equity (investment) - that company would be more efficient at using its capital to generate income and, all other things being equal would be a "better" company. Investors also need to be aware of earnings manipulation that will affect the quality of the earnings number. It is important not to rely on any one financial measure, but to use it in conjunction with statement analysis and other measures.

The comparative analysis of earnings per share of the banks in bank nifty is given in the table 1.

**Table No- 1**

<table>
<thead>
<tr>
<th>Year</th>
<th>AXIS</th>
<th>BOB</th>
<th>BOI</th>
<th>CNB</th>
<th>HDFC</th>
<th>ICICI</th>
<th>IDBI</th>
<th>KOTAK</th>
<th>OBC</th>
<th>PNB</th>
<th>SBI</th>
<th>UBI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>11.70</td>
<td>32.00</td>
<td>20.27</td>
<td>31.99</td>
<td>17.44</td>
<td>25.43</td>
<td>4.62</td>
<td>12.92</td>
<td>34.99</td>
<td>41.28</td>
<td>68.53</td>
<td>15.03</td>
</tr>
<tr>
<td>2009</td>
<td>11.81</td>
<td>22.29</td>
<td>6.70</td>
<td>26.31</td>
<td>20.84</td>
<td>25.99</td>
<td>8.30</td>
<td>6.71</td>
<td>37.29</td>
<td>43.98</td>
<td>80.01</td>
<td>15.17</td>
</tr>
<tr>
<td>2010</td>
<td>16.87</td>
<td>21.92</td>
<td>13.95</td>
<td>31.83</td>
<td>27.04</td>
<td>27.35</td>
<td>7.54</td>
<td>3.73</td>
<td>21.61</td>
<td>44.81</td>
<td>81.77</td>
<td>12.88</td>
</tr>
<tr>
<td>2011</td>
<td>22.62</td>
<td>27.15</td>
<td>22.47</td>
<td>33.46</td>
<td>34.55</td>
<td>32.88</td>
<td>8.45</td>
<td>4.22</td>
<td>22.44</td>
<td>47.26</td>
<td>83.91</td>
<td>16.19</td>
</tr>
</tbody>
</table>

Table 1 shows the comparative analysis of the earnings per share of the equity shares of banks from 2008 to 2011. From the above, it is clear that the earnings per share of State Bank of India, Punjab National Bank, Axis Bank, HDFC Bank and ICICI Bank are moving in an upward trend. Other banks like Bank of Baroda, Bank of India, Canara Bank, IDBI, Oriental Bank of Commerce, and Union Bank of India, the earnings per share of these banks are found to be fluctuating. The earnings per share of Kotak Mahindra Bank is found to be in declining trend throughout the years which have been taken into analysis. Out of these twelve banks, the State Bank of India has the highest earnings per share than other banks and the earnings per share of Kotak Mahindra Bank has the least earnings per share. The comparative analysis of the earnings per share of the banks is also explained with the help of a chart.

4.2 PRICE TO EARNINGS RATIO (P/E RATIO)

The P/E ratio (price-to-earnings ratio) of a stock is a measure of the price paid for a share relative to the annual income or profit earned by the firm per share. A higher P/E ratio means that investors are paying more for each unit of income. It is a valuation ratio included in other financial ratios. The reciprocal of the P/E ratio is known as the earnings yield.
For example, if stock A is trading at $24 and the earnings per share for the most recent 12 month period is $3, and then stock A has a P/E ratio of 24/3 or 8. Put another way, the purchaser of stock A is paying $8 for every dollar of earnings. Companies with losses or no profit have an undefined P/E ratio, sometimes; however, a negative P/E ratio may be shown.

By comparing price and earnings per share for a company, one can analyze the market's stock valuation of a company and its shares relative to the income the company is actually generating. Investors can use the P/E ratio to compare the value of stocks: if one stock has a P/E twice that of another stock, all things being equal, it is a less attractive investment.

4.2.1 Comparative Analysis of Price-To-Earnings Ratio

The comparative analysis of earnings per share of the banks is given in the table 2.

<table>
<thead>
<tr>
<th>Year</th>
<th>AXS</th>
<th>BOB</th>
<th>BOI</th>
<th>CNB</th>
<th>HDFC</th>
<th>ICICI</th>
<th>IDBI</th>
<th>KOTK</th>
<th>OBC</th>
<th>PNB</th>
<th>SBI</th>
<th>UBI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>22.14</td>
<td>10.9</td>
<td>11.6</td>
<td>8.06</td>
<td>32.62</td>
<td>23.86</td>
<td>11.48</td>
<td>86.91</td>
<td>7.57</td>
<td>10.0</td>
<td>11.6</td>
<td>8.63</td>
</tr>
<tr>
<td>2011</td>
<td>34.20</td>
<td>10.9</td>
<td>11.7</td>
<td>7.42</td>
<td>39.10</td>
<td>34.16</td>
<td>18.29</td>
<td>181.7</td>
<td>7.68</td>
<td>9.59</td>
<td>18.5</td>
<td>8.65</td>
</tr>
</tbody>
</table>

Table 2 shows the price to earnings ratio of the banks from 2008 to 2011. The price to earnings ratio of the banks such as Axis Bank, Bank of Baroda, HDFC Bank, ICICI Bank, State Bank of India, Union Bank of India, are moving in an upward trend. The price to earnings ratio of Kotak Mahindra Bank moves to a high extent, which is beyond expectation. Other banks such as Bank of India, Canara Bank, IDBI, Oriental Bank of Commerce, Punjab National Bank, the price to earnings ratio of these banks are fluctuating throughout the years taken under analysis. The comparative analysis of the price to earnings ratio of the banks is also explained with the help of a chart.

4.3 RISK ANALYSIS USING BETA VALUE

The investments in shares involve risks. A clear analysis is made to know about the risks involved in shares, to make our investments safe. Thus the risk must be analyzed before the investment is made. This can be done by analyzing the beta value of the shares. Beta measures a stock's volatility, the degree to which its price fluctuates in relation to the overall market. In other words, it gives a sense of the stock's market risk compared to the greater market. Beta is used also to compare a stock's market risk to that of other stocks. Investment analysts use the Greek letter 'B' to represent beta.

This measure is calculated using regression analysis. A beta of 1 indicates that the security's price tends to move with the market. A beta greater than 1 indicates that the security's price tends to be more volatile than the market, and a beta less than 1 means it tends to be less volatile than the market. Many utility stocks have a beta of less than 1.

Essentially, beta expresses the fundamental tradeoff between minimizing risk and maximizing return. Let's give an
illustration. Say a company has a beta of 2. This means it is two times as volatile as the overall market. Let's say we expect the market to provide a return of 10% on an investment. We would expect the company to return 20%. On the other hand, if the market were to decline and provide a return of -6%, investors in that company could expect a return of -12% (a loss of 12%). If a stock had a beta of 0.5, we would expect it to be half as volatile as the market: a market return of 10% would mean a 5% gain for the company. (For further reading, see Beta: Know the Risk.)

4.3.1 Comparative Analysis of Beta Values of Banks

<table>
<thead>
<tr>
<th>Banks Name</th>
<th>Beta value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of Baroda</td>
<td>0.82</td>
</tr>
<tr>
<td>Bank of India</td>
<td>0.49</td>
</tr>
<tr>
<td>Canara Bank</td>
<td>0.75</td>
</tr>
<tr>
<td>HDFC Bank</td>
<td>2.75</td>
</tr>
<tr>
<td>ICICI Bank</td>
<td>2.1</td>
</tr>
<tr>
<td>IDBI Bank</td>
<td>0.36</td>
</tr>
<tr>
<td>Kotak Bank</td>
<td>1.5</td>
</tr>
<tr>
<td>Oriental Bank of Commerce</td>
<td>0.84</td>
</tr>
<tr>
<td>Punjab National Bank</td>
<td>1.44</td>
</tr>
<tr>
<td>State Bank of India</td>
<td>3.39</td>
</tr>
<tr>
<td>Union Bank of India</td>
<td>0.37</td>
</tr>
</tbody>
</table>

Table No-3
Comparative Analysis of Beta Values of Banks

TABLE 3 shows the comparative analysis of the beta value of all the banks taken into analysis. The beta value shows the risk involved in the equity shares of the banks. It is a tool to measure the risk. By comparing the beta value of all the banks, it is found that the beta value of State Bank of India is 3.39, which is highest than all others banks taken into analysis. The beta value of IDBI bank is 0.36, which is lowest than all other banks taken into analysis. The comparative analysis of the beta value of the banks is shown clearly in the following chart.

5. FINDINGS

To summarize, there are several probable arguments why history may not repeat itself this time around and the P/E ratio may stay well above its historical average for the foreseeable future. If these arguments prove to be correct, the stock market may continue to grow both in the near term and in the coming decade. By analyzing the above banks in Nifty it is understood that if an investor’s investment should be profitable means, he should analyze the earnings per share, price to earnings ratio, the beta value to analyze the risk, share price movements of the scrip in which he is about to invest, by analyzing all the above, the investor will get a clear knowledge that in which state the scrip is now. So the investor’s investment will not be a loss to him. Surely the investor will get profitable returns. The maximum return is based on the maximum risk in which the investor is going to face.

6. CONCLUSION
Some analysts view the current high price earnings ratio of the stock market as a sign that the stock market may be headed for a downturn. This view receives some support from historical evidence that very high price-earnings ratios have usually been followed by poor stock market performance. When price-earnings ratios have been high, stock prices have usually grown slowly in the following decade. Moreover, at times such as the present when high price-earnings ratios have reduced the earnings yield on stocks relative to interest rates, stock prices have also tended to grow slowly in the short run. Forecasts based on such evidence are subject to much uncertainty, however, because history may not repeat itself. Specifically, the possibility cannot be ruled out that this time will be different due to fundamental changes in the economy that will allow high price-earnings ratios to persist and thus stock prices to continue growing both in the near term and in the coming decade.

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