IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

MEASURING VOLATILITY IN BANKING STOCKS LISTED ON NATIONAL STOCK EXCHANGE – A STUDY

Shankaregouda
Asst. Professor, Department of Management Studies,Ballari Institute of Technology and Management,Ballari.

Abstract
Indian Banking has seen many changes after liberlisation such as entry of private banks and public sector banks are allowed to mobilise the funds from capital market through issue of shares. This attracted the investors to invest in banking stocks, both in public and private sector. Therefore, the study was structured to analyze volatility in banking stocks listed on National Stock Exchange during the period 2012 to 2015. A few banking stocks form both public and private sector were chosen based on judgmental sampling method. The price statistics were collected from National Stock Exchange website and analysed the data with mean, standard deviation, correlation coefficient. The study revealed that banking stocks were more volatile than the market during the study period.

Keywords: Volatility, Banking Stocks, Risk & Return, Public Sector Banks, Private Sector Banks.

INTRODUCTION

Banks are the important segment in Indian Financial System. A well-organized banking system helps the nation's socio-economic development. Various types of stakeholders of the Society use the banks for their diverse requirements. The Indian banking system consists of 27 Public Sector Banks (PSBs), 21 Private Sector Banks, 43 Foreign Banks, 56 Regional Rural Banks (RRBs), 1,589 Urban Cooperative Banks and 93,550 Rural Cooperative Banks, in addition to cooperative credit institutions. Public-sector banks control nearly 80 percent of the market, thereby leaving comparatively much smaller shares for its private peers. With the introduction of liberalization, privatization & globalization the role of banking sector changed radically.

Indian Banking has seen many changes after liberlisation like imposition of prudential standards, greater competition among banks, entry of new private banks etc. In addition, public sector banks are allowed to mobilise the required funds from the capital market through the public issue. This attracted the investors to invest in banking stocks, both in public & private sector.

NEED OF THE STUDY

Volatility tends to be more associated with the negative due to crowd psychology. So, investors are more likely to act quickly due to fear than to other motivators. All stocks are not equal with regard to volatility. Some can be very volatile, whereas others can be quite stable. Banks play an important role in supporting socio-economic development of the country. Since the banking industry is under the control of Reserve Bank of India (RBI), it is adversely used as the tool to control the external problems like inflation, interest rate, money supply and priority sector lending. Because of this, there is a high instability in the share price that reduces the real investor's interest. Therefore, this study is structured to analyze "Measuring Volatility in Banking Stocks Listed on National Stock Exchange" during the period 2012 to 2015.

OBJECTIVES OF THE STUDY

The main purpose of this research study is to measure the volatility of banking stocks during period 2012 to 2015. This study has several specific objectives listed below:

- To describe profile of the banks selected for the study.
- To determine risk & return of the banking stocks selected for the study.
- To compute risk & return of the market viz. CNX Nifty
- To examine the correlation of banking stocks with CNX Nifty
- To compare the risk & return profile of banking stocks with market.

RESEARCH METHODOLOGY

This study uses Descriptive Research, which includes surveys and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. The main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening (Kothari C.R.).

- Target Population: The listed banks in India.

- Sampling: There are 31 banks listed on NSE & BSE. Five banks listed on NSE are selected based on the Judgmental Sampling method - is a non-probability sampling technique where the researcher selects units to be sampled based on their knowledge and professional judgment. The process involves nothing but purposely handpicking individuals from the population based on the authorities or the researcher's knowledge and judgment.
- Data Collection Sources: The present study is mainly based on the secondary sources of information; the data relating historical prices of banking stocks & nifty for the period January 2012 to December 2015 are collected from the web sources, the various textbooks are also referred to gain the knowledge of the concepts of risk & return analysis.
- Data Analysis Tools: the risk & return of banking stocks & Nifty is measured in terms of mean & standard deviation based on the historical prices. Further correlation coefficient is determined to know the relation of banking stocks with the market.

DATA ANALYSIS AND INTERPRETATION

- **An Overview of Banks Selected for the Study**

1. State Bank of India: The origin of State Bank of India dates back to 1806 when the Bank of Calcutta (bank of Bengal) was established. In 1921, the Bank of Bengal and two other banks Viz Bank of Madras and Bank of Bombay were amalgamated to form the Imperial Bank of India. In the year 1955, the Reserve Bank of India acquired the controlling interests of the Imperial Bank of India and SBI was created by an act of Parliament to succeed the Imperial Bank of India. The SBI group consists of SBI and five associate banks. The group has an widespread network, with over 20,000 plus branches in India and another 190 foreign offices spread over 36 countries across the world.

2. Canara Bank: It was founded by Shri Ammembal Subba Rao Pai, in July 1906, at Mangalore, Karnataka. The Bank has gone through the various phases over hundred years of its existence. Growth of Canara Bank was extraordinary, particularly after nationalization in the year 1969, attaining the status of a national level player in terms of geographical reach and clientele segments. In June 2006, the Bank completed a century of business in the Indian banking industry. The exciting journey of the Bank has been characterized by several outstanding milestones. Today, Canara Bank occupies a leading position in the banking industry. As at September 2015, the Bank has further expanded its domestic presence, with 5727 branches spread across all geographical segments. Keeping customer convenience at the forefront, the Bank provides a wide array of alternative delivery channels that include 9132 ATMs, covering 4081 centres. Several IT initiatives were undertaken during the last one decade.

3. Bank of Baroda: The bank was founded by the Maratha, Maharaja of Baroda, H. H. Sir Sayajirao Gaekwad III on 20 July 1908 in the Princely State of Baroda, in Gujarat. The bank, along with 13 other major commercial banks of India, was nationalized on 19th July 1969, by the Government of India and has been designated as a profit-making public sector undertaking. It has a network of 5307 branches in India and abroad, and over 8000 ATMs. It is a pioneer in various customer centric initiatives in the Indian banking sector. The initiatives include setting up of specialized NRI Branches, Gen–next Branches and Retail Loan units, SME Loan units with an assembly line approach of processing loans for speedy disbursal of loans. Thus the Bank has firmly positioned itself as a technologically advanced customer–centric bank.

4. HDFC Bank: The Housing Development Finance Corporation Limited (HDFC) was amongst the first to receive an 'in principle' approval from the Reserve Bank of India (RBI) to set up a bank in the private sector, as part of RBI's liberalisation of the Indian Banking Industry in 1994. The bank was incorporated in August 1994 in the name of HDFC Bank Limited with its registered office in Mumbai, India. HDFC Bank commenced operations as a Scheduled Commercial Bank in January 1995. As of June 30, 2015 the Bank’s distribution network was at 4,101 branches. All branches are linked on an online real-time basis. Customers across India are also serviced through multiple delivery channels such as Phone Banking, Net Banking, Mobile Banking and SMS based banking. The Bank also has a network of 11,962 ATMs across India.

5. Axis Bank: It is one of the first new generation private sector banks to have begun operations in 1994. It is the third largest private sector bank in India. The Bank offers the entire spectrum of financial services to customer segments covering Large and Mid-Corporates, MSME, Agriculture and Retail Businesses. The Bank has a large footprint of 2589 domestic branches and 12,355 ATMs spread across the country as on 31st March 2015. The Bank has strengths in both retail and corporate banking and is committed to adopting the best industry practices

internationally in order to achieve excellence. In the year 2013, it was voted for Most Trusted Private Sector Bank in the country in the Most Trusted Brands survey 2013 by Brand Equity.

- **Monthly Returns (Mean) of Banking Stocks and Nifty**

Table No. 1: Showing monthly returns of banking stocks and Nifty in percentages.

Name of the Banks	2012	2013	2014	2015
SBI	2.84	-1.92	-0.22	-2.29
Bank of Baroda	2.29	-0.74	4.88	-1.93
Canara bank	3.10	1.22	4.80	-4.16
HDFC bank	3.85	-0.03	2.90	1.14
Axis bank	3.43	-0.08	6.02	- 0.58
CNX Nifty	1.84	0.56	2.86	-0.39

Interpretation: It is evident from the Table No.1 that banking stocks as well as Nifty returns were negative in the last year (2015). However, in the year 2012 it was a better return from banking stocks than the Nifty.

State Bank of India – average monthly return from SBI's stock was 2.84% in the year 2012 followed by -1.92%, -0.22% & -2.29% during the period 2013 to 2015 respectively.

Bank of Baroda – yielded a positive average monthly return of 2.29% in the year 2012 & 4.88% in 2014, whereas during the year 2013 and 2015 it was negative with 0.74% and 1.93% respectively.

Canara Bank – provided a positive return on its stocks during the study period 2012 to 2014 i.e. 3.10%, 1.22% & 4.80% respectively, except in the year 2015 i.e. a negative return of -4.16%.

HDFC Bank – its stocks also performed better during the study period with a positive average monthly return of 3.85% in 2012, 2.90% in 2014 & 1.14% in the year 2015 except for 2013 i.e.-0.03%.

Axis Bank – average monthly return from Axis stocks was 3.43%, in the year 2012 and 6.02% in the year 2014. However, it was negative -0.08% and -0.58% during years 2013 and 2015 respectively.

CNX Nifty- nifty returns were negative in the last year i.e. average monthly returns -0.39%. During the earlier three years period from 2012 to 2014 it was positive.

Banking stocks selected for the study provided better return during the year 2012. Whereas, during the remaining three years from 2013 to 2015 not performed well.

- **Monthly Standard Deviation (SD) of Banking Stocks and Nifty**

Table No. 2: Showing Standard Deviation of banking stocks and Nifty in percentages

Name of the Banks	2012	2013	2014	2015
State Bank of India	7.10	5.75	9.87	4.53
Bank of Baroda	4.72	9.76	10.57	8.73
Canara Bank	8.54	10.90	10.58	7.72
HDFC Bank	2.87	4.74	3.08	4.08
Axis Bank	7.40	8.74	8.05	29.99
CNX Nifty	2.37	3.34	3.09	5.22

Interpretation: It is clear from the Table No.2 that banking stocks are more volatile than nifty during the study period of 2012 to 2015.

The standard deviation of SBI returns are 7.10%, 5.75%, 9.87% & 4.53% during the period 2012 to2015 respectively. Whereas, Bank of Baroda stocks were recorded a standard deviation of 10.57% in 2014 followed by 9.76% in 2013, 8.73% in 2015 & 4.72% in the year 2012. In case of Canara Bank, stocks were more volatile among stocks selected for the study having standard deviations of 8.54%, 10.90%, 10.58% & 7.72% during the period 2012 to 2015 respectively.

HDFC Bank's stocks are less volatile compared to other stocks selected for the study, its standard deviations are 2.87%, 4.74%, 3.08% & 4.08% during the years 2012 to 2015 respectively. Axis Bank's stocks are more volatile in the year 2015 with a standard deviation of 29.99% and followed by 8.74% in 2013, 8.05% in 2014 & 7.40% in 2012.

Nifty has recorded a low standard deviation compared to banking stocks viz 2.37%, 3.34%, 3.09% & 5.22% during the period of study respectively. It indicates that banking stocks are more volatile than the market.

- **Correlation Coefficient of Banking Stocks with Nifty**

Table No. 3: Showing Correlation Coefficient of banking stocks with Nifty

Name of the Banks	2012	2013	2014	2015
State Bank of India	0.90	0.57	0.04	- 0.06
Bank of Baroda	0.58	0.43	0.33	- 0.05
Canara Bank	0.70	-0.18	0.43	-0.13
HDFC Bank	0.75	0.82	0.40	0.10
Axis Bank	0.92	0.75	0.23	0.02

Interpretation: It is observed from the Table No.3 that banking stocks selected for the study are having a low correlation with Nifty (may be positive or negative) in the last year. The stocks negatively correlated are State Bank of India -0.06, Bank of Baroda -0.05, Canara Bank -0.13 and positively correlated stocks are HDFC Bank 0.10, Axis Bank 0.02.

During the year 2012, all the banking stocks selected for the study were positively correlated with Nifty Viz State Bank of India 0.90, Bank of Baroda 0.58, Canara Bank 0.70, HDFC Bank 0.7& Axis Bank 0.92.

In the Year 2013, Canara Bank has a negative correlation of -0.18 and other stocks are positively correlated viz State Bank of India 0.57, Bank of Baroda 0.43, HDFC Bank 0.82 & Axis Bank 0.75.

The Correlation of banking stocks with Nifty in the year 2014, are positively correlated. However, the extent of correlation is decreased over the previous years, i.e. State Bank of India 0.04, Bank of Baroda 0.33, Canara Bank 0.43, HDFC Bank 0.40 & Axis Bank 0.23.

FINDINGS AND CONCLUSION

The banking stocks selected for the study gave better return in the year 2012. However, in the last three years performance of banking stocks has been declined and it was negative in the year 2015. Moreover, return from the Nifty was also negative in the year 2015. It was found that banking stocks selected for the study were more volatile than the market during period 2012 to 2015. In addition, study revealed that most of the banking stocks are positively correlated with Nifty. However, a few are negatively correlated in the last year. Banking stocks are more volatile and yielded less returns during the study period.

Global Rating Agency Moody's has upgraded its outlook for the Indian Banking System to stable from Negative based on its assessment of five drivers including improvement in operating environment and stable capital scenario. Indian Banking Industry is expected to witness better growth prospectus in the future due to Government's measures towards stimulating the industrial growth in the country.

REFERENCES

1. Punithavathy Pandian, "Security Analysis and Portfolio Management" 2/e, Vikas Publishing.
2. Gupta S.C. "Fundamentals of Statistics" 6/e, Himalaya Publishing House.
3. Kothari C.R. "Research Methodology" New Age International (P) Ltd., 2004.
4. http://www.nseindia.com .
5. http://www.sbi.co.in.
6. http://www.bankofbaroda.co.in.
7. http://www.canarabank.in .
8. http://www.hdfcbank.com .
9. http://www.axisbank.com .
10. http://www.ibef.org/industry/banking-india.aspx.