Impact of Interim Dividend Announcements on Banking Stock Prices in India

** Asha Nadig*

Abstract

This study examined the stock market reaction to interim dividend announcements by Indian public sector banks in the year 2014. The year 2014 was the Indian parliamentary election year; there were a lot of expectations about dividends by the investing community. Not disappointing the investors, 22 of the 28 public sector banks declared interim dividends. This study analyzed the semi-strong efficiency of the Indian stock market with respect to interim dividend announcements by the banking companies in the year 2014. The methodology used for the study was market model event study. The results indicated that there were significant positive abnormal returns in some banking stocks prior to such announcements, signifying the investors were expecting such news and ,therefore, there was upward movement of stock prices. On the actual day of interim dividend announcement, 10 banks reacted positively on the announcement day, and 12 banks reacted negatively to the news.

Key words : **efficient market hypothesis, event study, average abnormal returns, cumulative average abnormal returns, interim dividends**

JEL Classification : G02, G11, G14

Paper Submission Date : July 10, 2016 ; Paper sent back for Revision : March 10, 2017 ; Paper Acceptance Date : June 21, 2017

Dividend policy is one of the important focus areas of a firm's financial policy. Whether to distribute profits to shareholders or to preserve it as retained earnings is a common dilemma every firm faces. A number of factors like the firm's expansion and modernization plans play a decisive role in the dividend policy. A firm's dividend policy has practical inferences for the stakeholder and manager of an organization. Dividends are a source of income to investors and a tool to assess a firm's performance. Dividend payments indicate that the company is on a growth track, and therefore, is earning profits. Distribution of profits helps companies to build their market image. Dividend policies of companies affecting the stock prices are a widely researched topic.

Interim dividends are declared and distributed prior to the determination of final profit position for the financial year. Such dividends are paid any time between two successive annual general meetings. Firms with good business and growth opt to pay dividends twice - once before finalization of final accounts and the other after the audit of accounts. The relationship between interim dividend announcements and the volatility in a stock market is a subject of empirical discussion within the finance literature.

Market reaction is the general market response that happens after a major piece of economic data or some significant news is flashed. Market reaction can be bullish, bearish, or neutral, depending upon the content and significance of the information. Three types of reactions can be observed - positive reaction wherein the news is seen as good for the shareholders and the market participants get into buying mood, resulting in a strong upward trend ; negative reaction, where the news is seen as bad, and the market participants get into selling mood resulting in a strong downward trend ; and uncertain, when there is no market consensus on whether the news is good or bad,

** Associate Professor,* Symbiosis Institute of Business Management (Constituent of Symbiosis International University), # 95/1, 95/2, Electronics City, Phase I, Hosur Road, Bengaluru - 560 100. E-mail : asha.nadig@sibm.edu.in, asha_nadig@yahoo.com

there is a mixed reaction in the market with some participants selling and some others buying, causing volatility to the prices. The share price may increase or decrease in response to the information, thus affecting the wealth of shareholders.

Efficient Market Hypothesis

An efficient capital market is a market where security prices fully reflect all relevant information that is available about the fundamental value of the securities. The term 'market efficiency' explains the relationship between information and share prices' reaction in capital market literature (Mishra, 2007). A market is efficient with respect to an information set if it is impossible to make economic profits by trading on the basis of the information set. Economic profits are risk adjusted returns net of all costs. Fama (1970) defined an efficient market as a market in which prices always reflect the recent available information, at any given time, the prices in the market already reflect all known information, and also, change fast to reflect new information. He further stated that three different levels of efficiency exist based on 'available information' - the weak, semi-strong, and strong forms.

Weak form efficiency or the random walk theory states that prices of stocks can never be predicted because of the random nature of the stock price movements. This means at any given time, there is an equal chance of a stock's price rising or falling. A study by Vigg, Nathani, Kaur, and Holani (2008) investigated the weak form efficiency of the index stocks of Bombay Stock Exchange (BSE) and reported that BSE is a weak form efficient.

The semi - strong form efficiency states that all publicly available information about the company, like its product line, final accounts, future earnings, accounting practices, and management are considered besides information about its past prices. A study by Fama, Fisher, Jensen, and Roll (1969) provided the framework for semi-strong efficiency tests. Fama (1991) coined a new term for the semi strong model - event study.

Strong form efficiency model indicates that stock prices reflect all information relevant to a firm - past prices (weak model), company information (semi strong model), and also inside information about a company. Insiders are managers of the companies who have access to confidential information who possibly may use it to generate higher returns.

The EMH theory states that there should not be any significant price reaction to interim dividend announcements. However, contrary to the theoretical predictions, empirical studies have documented statistically significant market price reactions. Firms announcing interim dividends experience a rise in their stock prices on an average and support the semi strong form of EMH.

Declaration of interim dividends is a not so common phenomenon and reflects the extraordinary performance of a firm. There are many empirical studies associating final dividend announcements and abnormal stock price movements. But not many studies have been conducted to study the impact of interim dividend announcements on the share prices in India. This study will shed some light into this area and will track the stock price movements.

Literature Review

Extensive studies have been carried out to understand the behaviour of stock prices with respect to major events like the final dividend announcements by companies. Studies by Kalay and Loewenstein (1985) ; Aharony, Falk, and Swary (1988) ; Ghosh and Woolridge (1988) ; Capstaff, Klaeboe, and Marshall (2004) examined the impact of special and additional dividend announcements on stock prices.

Selvam, Babu, Indumathi, and Kogila (2010) studied the impact of dividend announcements on companies listed on the BSE-500 index. They found statistically significant abnormal returns around the announcement date and concluded their research by stating that dividend announcements served as positive signals about a firm's working. Examining the London Stock Exchange between 2007 and 2008, Bozos, Nikolopoulos, and Ramgandhi

(2011) found a significant positive relationship between dividend announcements and stock prices. Further, they concluded that though dividend announcements conveyed less information during a boom period in the economy, the information content was more during economic adversity.

Studying the impact of daily, monthly, quarterly, and annual performances of various companies during the financial year 2008-09, Bhatia (2010) found a positive significant dividend effect on stock prices. The author observed that dividend announcements affected stock prices considerably. Mahadevan and Saravanakumar (2011) studied dividend announcement on the prices of Indian companies listed on the NSE. They found that investors had not received the significant returns but earned good returns in post announcement, and investors were switching their investments after announcement. They covered the calendar year from January 2009 to December 2009 and considered 10 dividend paying companies of NSE by considering the event window from - 4 to +4. In general, they found only three companies that earned abnormal returns. Examining the impact of dividend announcements on stock volatility, Acker (1999) reported an increased unpredictability around final and interim dividend announcements. His study also conveyed that dividend payments to shareholders were an important source of conflict resolution between shareholders and firm managers.

A study by Balachandran (2003) investigated the impact of interim dividend reductions and final reductions on stock prices of UK firms. The firms chosen were those who had not reduced their dividends in the previous 3 years. He also conducted a sensitivity analysis and found that the magnitude of price reactions to dividend reductions was significantly related to the size of the dividend reduction, the post-announcement effect, the pre-announcement effect, the gearing ratio, and the dummy variable interim versus final dividend reduction. He concluded that interim dividend reductions conveyed a stronger signal to the market than the final dividend reductions did, resulting in a stronger negative reaction as opposed to the final dividend reductions. Ebrahimi and Chadegani (2011) studied about the relationship between earnings, dividends, and stock prices. The population included all the Iranian companies. They used cross- sectional, pooled, and panel data regression models for testing the effects caused by the selected variables. The results showed that in some years, the shareholders paid special attention to dividends and also price. Aamir and Shah (2011) studied about dividend announcements and the abnormal stock returns for the event firm and its rivals. They used the event study methodology to carry out their study. The population consisted of 26 announcements made by the cement, oil, and gas sectors in Pakistan. The event window consisted of 21 days before and 21 days after dividend announcement. They concluded that dividend announcement lead to a positive impact on stock returns of the companies at the time of announcement as well as immediately after the announcement.

Hashemijoo, Mandavi - Ardekani, and Younesi (2012) in their study on the impact of dividend policy on share price volatility in the Malaysian Stock Market employed the multiple regression models. The population included 84 companies from 42 consumer product companies. They also included control variables such as size, earning volatility, leverage, debt, and growth. They used the variables - dividend policy, dividend yield, and dividend payout. They used a period of 6 years from 2005 to 2010 for their study.

Mamun, Hoque, and Mamun (2013) studied stock price reaction to dividend announcement in the Bangladesh Capital Market. The population consisted of 74 listed companies of the Dhaka Stock Exchange in Bangladesh. They used the event study methodology to analyze the data. They concluded that dividend declaration did not bring any gain to investors, but instead, they lost due to substantial fall in share prices both in pre-dividend and post-dividend period.

Ray (2011) observed that the null hypothesis of zero abnormal returns was not rejected in the case of bonus shares. The study concluded that investors cannot gain with the stock dividends announcements. Another observation of this study was that the liquidity had enhanced after these announcements.

Applying parametric and non-parametric tests to check the weak form efficiency of the Asian stock markets between July 1997 and November 2013, Ryaly, Kumar, and Urlankula's (2008) study concluded that there was enough evidence to prove that Asian stock markets were efficient.

Objectives of the Study

The following are the objectives of the study :

(1) To assess the stock returns in terms of change in market value around interim dividend announcement days for banking companies listed on BSE.

(2) To examine the effect of interim dividend announcement on stock prices in terms of returns due to change in market value of the companies listed on the BSE Sensex.

Hypotheses

- **$H_0$1 :** There are no significant average abnormal returns *(AAR)* around the interim dividend announcement dates, that is, $(1/n)*\Sigma AR = 0$ where, n is the number of sample companies.
- **H_a1 :** If AAR_t and $CAAR_{t1,t2} > 0$ and statistically significant, it indicates that the stock prices on an average have reacted positively to interim dividend, increasing the wealth of shareholders.
- **$H_0$2 :** The Indian stock market is informationally not efficient to interim dividend announcements ; the stocks do not impound the information instantaneously.
- **H_a2 :** The Indian stock market is informationally efficient to interim dividend announcements ; the stocks impound the information instantaneously.

Sample

The present study is based on secondary data relating to share prices, interim dividend announcement dates, the details of which are given in the Table 1 and the value of index around these days. Daily closing prices of the stocks were considered. The secondary data were collected from annual reports, published research reports, and from websites like, www.bseindia.com, www.moneycontrol.com, www.rediff.com, www.sebi.gov.in, and www.yahoofinance.com. The study is based on daily prices of the public sector banking stocks listed on the BSE Sensex for the year 2014.

Data and Methodology

Interim dividends declared by banks in the year 2014 are considered for the study ; 22 banks out of 28 public sector banks declared interim dividends. Interim dividend announcement dates of the banks under study were collected from press reports and websites of NSE and The Economic Times. The announcement dates for interim dividend declarations were extracted from the website http://economictimes.indiatimes.com. Daily traded BSE prices were extracted from the website http://finance.yahoo.com

(1) Methodology : Standard event study methodology as per the market model is used for the study. The steps (which are given in the estimation procedure below) have been used for the research. The event date, event window, and estimation window are defined as below :

(i) The event date is the announcement date of interim dividend by the sample banks. This approach assumes that the information was first known to the market on the event date itself.

Table 1. Banks Announcing Interim Dividends in 2014

Sl No.	Bank Name	Int Div Announcement Dates
1	Allahabad Bank	13/01/2014
2	Andhra Bank	10/1/2014
3	Bank of Baroda	9/1/2014
4	Bank of India	13/01/2014
5	Bank of Maharashtra	23/01/2014
6	Canara Bank	10/1/2014
7	Corporation Bank	13/1/2014
8	Dena Bank	13/1/2014
9	Indian Overseas Bank	9/1/2014
10	Oriental Bank of Commerce	13/1/2014
11	Punjab and Sind Bank	16/1/2014
12	Punjab National Bank	31/01/2014
13	Syndicate Bank	9/1/2014
14	United Commercial bank	13/1/2014
15	United Bank of India	8/1/2014
16	Union Bank of India	8/1/2014
17	Vijaya Bank	17/1/2014
18	Industrial Development Bank of India	13/1/2014
19	State Bank of Mysore	1/4/2014
20	State Bank of India	4/3/2014
21	State Bank of Bikaner and Jaipur	19/03/2014
22	State Bank of Travancore	18/03/2014

Source: www.economictimes.indiatimes.com

(ii) The event window is taken as t = -5 to t = +5 relative to the event day t = 0. This window will help in studying the stock price behaviour pre and post the event.

(iii) The estimation window is t = - 60 to t = -5 relative to the event day t = 0.

(2) Estimation Procedure

(i) Returns on security j and returns of the index for period t is calculated as :

Current Daily Return = LN[##] (current day close price - previous day close price) / previous day close price.

Note: [##] Log normal *(LN)* prices are considered to create a continuous time measure of returns for both the estimation period and the event window.

(ii) Alpha and beta are calculated using the OLS regression equation.

(iii) The expected return for each firm as well as for the S&P 500 are calculated using:

$$Expected\ Return = [(alpha + beta) * S\&P\ actual\ return]$$

(iv) Excess return is obtained as follows: *actual return – expected return*.

(v) The average abnormal returns *(AARs)* are computed by averaging the abnormal returns of the sample companies for each day of the event period.

$$AARt = 1/N * \sum_{J=1}^{N} AR_{j,t}$$

(vi) The cumulative average abnormal returns *(CAARs)* are the sum of daily average abnormal returns *(AARs)* during the event window.

(vii) The average abnormal returns in all the trading days in the event window and cumulative average abnormal returns during the event window are analyzed by using the *'t'* test to identify whether they significantly differ from zero.

Data Analysis and Results

The Table 2 shows the alpha intercept, beta, co-efficient of determination (R^2), and standard error (ϵ,) calculated according to the market model. Alpha is a measure of the "excess return" or "abnormal rate of return" one receives over and above what is expected based on the volatility of the stock. It considers the volatility (price risk) of a security and compares its risk-adjusted performance to a benchmark index. The positive α thus represents a sort of bonus return and would be a highly desirable aspect of a portfolio or security, while a negative α represents a penalty to the investor. It is clear from the Table 2 that the stocks of Allahabad Bank, Andhra, BOB, BOI, OBC, P&S, PNB, Syndicate, and UCO Bank have positive α. The alpha intercept is the highest for PNB followed by OBC and Syn bank amongst the interim dividend declaring banks in 2014. Corp bank has the least alpha. Alpha is a measure of an investment's performance on a risk-adjusted basis. Beta is a measure of the stock's volatility, or systematic risk, of a security relative to the market as a whole. Beta measures the degree to which a stock's price fluctuates in relation to the overall market. It describes how the returns on a stock can be predicted by a benchmark. It is calculated as follows:

$$Bj = \text{Cov}\ (Kj, Km) / \text{Var}\ (Km)$$

where, *Bj* is the beta of security *j,*
Cov (Kj, Km) is the covariance of security *j* return and the market return,
Var (Km) is the variance of the market return.

The Table 2 reveals that stocks such as Alla, BOB, BOI, Canara, OBC, PNB, Syn, UCO, Union Bank have betas of more than 1. Oriental Bank of Commerce is the most aggressive stock with the highest beta at 1.53 followed by Bank of India with 1.41. Bank of Maharashtra is the most defensive stock with a beta of 0.27.

R^2 *or RSQ*, coefficient of determination, indicates the fraction of variance of the dependent variable (the stock return) that is explained by the movements in the independent variable (index return). It shows the regression of daily stock returns on the daily indices returns. All the stocks under study have a coefficient of determination in the range of 40% to 70% indicating average correlation between the portfolio's returns and the benchmark's returns. According to Table 2, stocks like Alla, BOB, Canara, OBC, PNB, Syn, UCO, Union, IDBI, and SBI have moderate

Table 2. Impact of Interim Dividend Announcements on Share Prices for 2014 (see Appendix 1 for Abbreviations of Bank Names)

Bank Name	Event Date	Alpha α	Beta β	Co-efficient of Determination R^2	Standard error (ϵ,)
Allahabad	13/01/2014	0.0016	1.1328	0.4900	0.0201
Andhra	10/1/2014	0.0009	0.8610	0.3168	0.0223
BOB	9/1/2014	0.0017	1.1132	0.4761	0.0203
BOI	13/01/2014	0.0026	1.4086	0.3796	0.0315
Maharashtra	23/01/2014	-0.0020	0.2673	0.1320	0.0112
Canara	10/1/2014	0.0001	1.3892	0.5560	0.0218
Corporation	13/1/2014	-2.5793	0.5667	0.2269	0.0183
Dena	13/1/2014	-0.0028	0.7986	0.2744	0.0229
IOB	29/1/2014	-0.0008	0.7326	0.3630	0.0162
OBC	13/1/2014	0.0031	1.5287	0.4651	0.0286
P&S	16/1/2014	0.0003	0.5978	0.2504	0.0207
PNB	31/01/2014	0.0033	1.2317	0.5933	0.0163
Syndicate	9/1/2014	0.0030	1.0529	0.4723	0.0203
UCO	13/1/2014	0.0019	1.2146	0.5306	0.0201
United Bank of India	8/1/2014	-0.0006	0.6678	0.1760	0.0258
Union	8/1/2014	-0.0007	1.3725	0.6043	0.0198
Vijaya	17/1/2014	-0.0002	0.6698	0.3764	0.0148
IDBI	13/1/2014	-0.0002	0.8461	0.5517	0.0134
SBM	1/4/2014	-0.0023	0.3840	0.1318	0.0144
SBI	4/3/2014	-0.0022	0.8012	0.6751	0.0083
SBBJ	19/03/2014	-0.0017	0.4048	0.2707	0.0101
SBT	18/03/2014	-0.0023	0.1108	0.0220	0.0111

R^2 values signifying that risk is an important determinant of company's return.

Standard error (∈,) is a statistical term that measures the accuracy with which a sample represents a population. It is an indicator of the sufficient representation of sample trades. The standard error is also inversely proportional to the sample size; the larger the sample size, the smaller the standard error because the statistic will approach the actual value. Of the representative data from Table 2, the standard error of SBI is minimum at 0.0083, indicating that this stock has appropriate representation of the sample trades. BOI has the maximum standard error values at 0.0195, suggesting that this stock did not have a suitable representation of the sample trades.

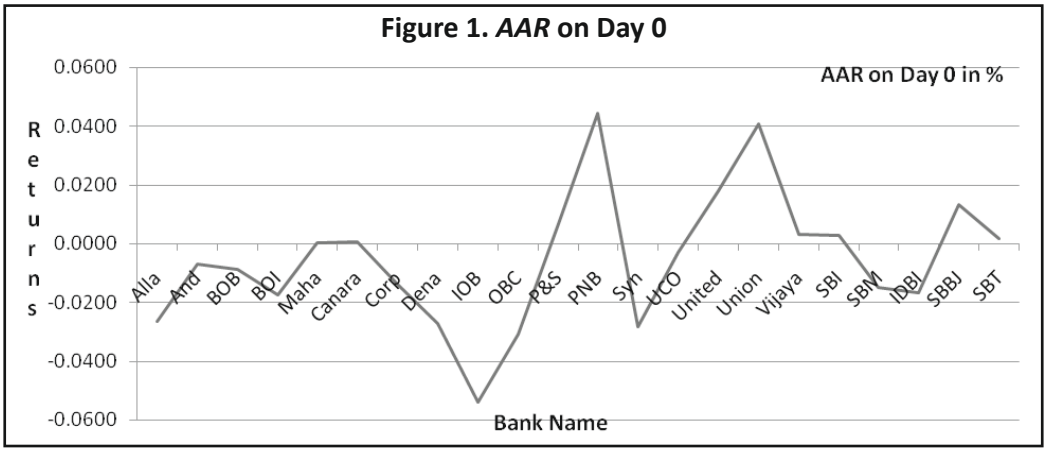
Findings

(1) *AAR* Analysis : The share prices from day -5 to -1 as shown in the Table 3 are indicators of the outlook of investors to the impending news. The expectations of the shareholders are displayed by the way of increased trading activities, which, in turn, lead to higher trading prices. From the data in Table 3, it can be seen that in the run-up days to the actual announcement day, of the 22 banks declaring interim dividend, nine banks were upbeat on day -5, eight banks reacted positively on day -4, prices of 12 bank stocks were up on day -3, nine banks had affirmative prices on day -2, and 12 banks' shares were positively trading on day -1.

Table 3. *AAR* Analysis

	Alla	Andhra	BOB	BOI	Maha	Canara	Corp	Dena	IOB	OBC	P&S
-5	-1.3%	0.7%	0.7%	-2.1%	-0.1%	2.4%	0.6%	2.2%	-1.0%	-0.6%	-0.3%
-4	-1.2%	-0.6%	-0.2%	-0.5%	0.6%	-1.1%	-1.2%	-1.7%	0.5%	-0.8%	0.4%
-3	6.5%	-1.0%	-0.8%	4.1%	0.2%	-1.0%	1.1%	1.0%	-1.2%	0.5%	-1.8%
-2	-2.8%	2.9%	-3.3%	-2.7%	0.0%	2.1%	0.6%	0.2%	-1.6%	-2.4%	1.1%
-1	0.9%	-1.2%	1.8%	0.5%	1.9%	-1.8%	-0.7%	1.4%	1.6%	0.0%	-0.4%
0	-2.7%	-0.7%	-0.9%	-1.7%	0.0%	0.1%	-1.4%	-2.7%	-5.4%	-3.1%	0.7%
1	0.7%	-1.0%	0.3%	0.1%	-1.2%	-2.3%	0.4%	0.4%	0.3%	-0.6%	0.8%
2	0.3%	1.0%	-1.5%	1.5%	0.6%	-1.6%	-0.2%	-0.8%	7.0%	-0.2%	1.1%
3	-2.3%	-0.6%	1.0%	-1.1%	0.7%	1.6%	0.7%	0.2%	-3.2%	-1.7%	1.2%
4	-0.4%	-1.3%	1.6%	-0.2%	-0.1%	0.5%	0.5%	-0.1%	2.5%	-0.5%	0.5%
5	-0.6%	-0.8%	-0.4%	0.0%	-0.1%	-1.4%	0.2%	-0.2%	-0.8%	0.6%	0.7%
	PNB	**Syn**	**UCO**	**United**	**Union**	**Vijaya**	**SBI**	**SBM**	**IDBI**	**SBBJ**	**SBT**
-5	-2.8%	-0.8%	-0.3%	1.4%	0.6%	-0.1%	-0.2%	-0.9%	0.2%	-0.2%	0.1%
-4	-1.4%	1.4%	0.0%	2.1%	-1.1%	-2.1%	0.0%	0.4%	-2.1%	0.0%	0.2%
-3	0.0%	-1.2%	1.5%	-0.1%	1.6%	0.6%	0.8%	3.9%	3.8%	-0.8%	0.0%
-2	-0.8%	-1.6%	-2.6%	-0.3%	-0.2%	-0.1%	0.7%	5.5%	-2.5%	0.3%	0.7%
-1	-1.2%	7.2%	0.5%	-0.4%	-1.4%	0.5%	0.0%	2.7%	0.4%	-0.1%	-1.0%
0	4.5%	-2.8%	-0.3%	1.8%	4.1%	0.3%	0.3%	-1.5%	-1.7%	1.3%	0.2%
1	1.4%	-1.8%	0.4%	-1.6%	-1.6%	-0.4%	0.6%	-0.1%	0.7%	3.4%	1.0%
2	1.5%	-2.0%	0.8%	0.8%	0.7%	-1.8%	-0.9%	0.0%	0.2%	3.0%	6.0%
3	-1.6%	0.9%	-1.2%	-2.2%	-2.5%	-0.2%	0.6%	0.8%	-0.5%	-0.1%	0.9%
4	-2.0%	0.8%	-0.7%	0.5%	-0.7%	-0.1%	1.3%	0.6%	-0.9%	0.8%	1.1%
5	0.0%	-1.0%	1.2%	-1.2%	0.3%	0.1%	9.0%	2.3%	-0.9%	3.2%	0.1%

Figure 1. *AAR* on Day 0



Share prices of Alla, BOB, BOI, Maha, Dena, IOB, Syn, UCO, Vijaya, SBM, and IDBI (refer to Appendix 1 for bank names) were positive prior to interim dividend announcement day. However, the trend did not continue to the next day and prices of Alla, BOB, BOI, Dena, IOB, Syn, UCO, SBM, IDBI reacted negatively to interim dividend

announcements, while prices of Canara, P&S, PNB, United, Union, Vijaya, SBI, SBBJ, and SBT reacted positively to the announcement.

Positive reaction or increased trading prices indicate that the investors' expectations and interim dividend announcements by firms matched, while negative reaction in the share market can be related to the actual dividends being lesser than what the investors looked forward to.

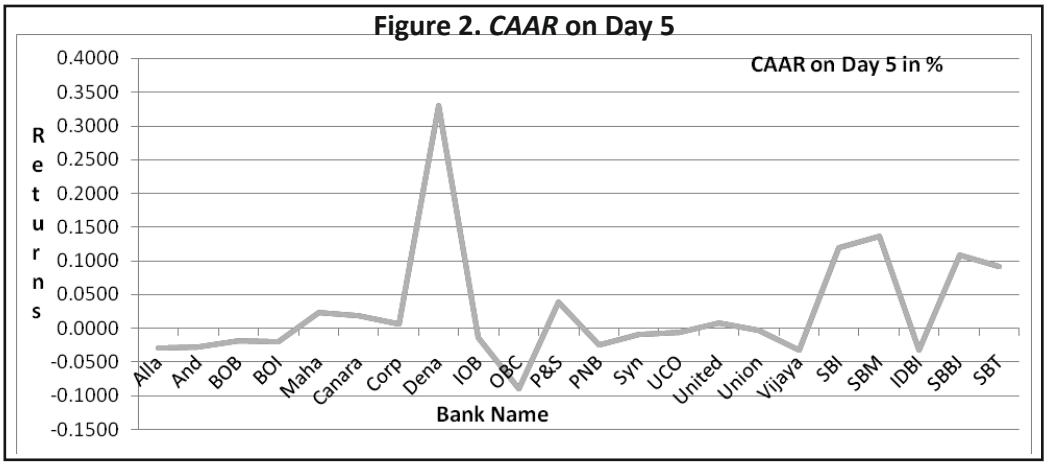
In the five days following the announcement, stock prices of some banks were up and some reacted negatively. Prices of 14 banks stocks were positive on day 1, 13 banks' stock prices were buoyant on day 2, 10 banks' prices were up on day 3, 11 banks had affirmative prices on day 4, and 10 banks' shares were positively trading on day 5. P&S Bank and SBT continued the positive trend on all the days following the announcement. SBM shares were on a positive streak from day 1 to 4, while those of SBBJ remained positive except on day 3. The *AAR* graph in Figure 1 clearly indicates that stocks of IOB, OBC, and Dena suffered the most and stocks of PNB and Union Bank gave the highest return on the announcement day.

(2) *CAAR* Analysis : It can be seen from the Table 4 that the *CAAR* is negative for initially most of the banks under study between -5 and -1 time window. On the day of interim dividend announcement, the returns showed a marginal increase for investors of BOB, Maha, Canara, CBI, P&S, PNB, Syn, UCO, United, Union, and Vijaya Banks.

Table 4. *CAAR* Analysis

	Alla	Andhra	BOB	BOI	Maha	Canara	Corp	Dena	IOB	OBC	P&S
-5	-1.3%	0.7%	0.7%	-2.1%	-0.1%	6.9%	0.6%	35.3%	-1.0%	-0.6%	-0.3%
-4	-2.5%	-0.6%	0.5%	-2.6%	0.5%	5.8%	-0.6%	33.6%	-0.5%	-1.4%	0.2%
-3	4.0%	-1.0%	-0.3%	1.5%	0.7%	4.8%	0.5%	34.6%	-1.7%	-0.9%	-1.7%
-2	1.2%	2.9%	-3.6%	-1.2%	0.7%	6.9%	1.1%	34.8%	-3.4%	-3.3%	-0.6%
-1	2.0%	-1.2%	-1.8%	-0.7%	2.6%	5.1%	0.5%	36.2%	-1.7%	-3.3%	-1.0%
0	-0.6%	-0.7%	-2.7%	-2.4%	2.6%	5.1%	-0.9%	33.5%	-7.2%	-6.4%	-0.3%
1	0.1%	-1.0%	-2.4%	-2.3%	1.4%	2.8%	-0.5%	33.9%	-6.8%	-7.0%	0.5%
2	0.5%	1.0%	-4.0%	-0.8%	1.9%	1.2%	-0.7%	33.1%	0.2%	-7.2%	1.6%
3	-1.8%	-0.6%	-2.9%	-1.9%	2.6%	2.9%	0.0%	33.2%	-3.1%	-8.9%	2.7%
4	-2.2%	-1.3%	-1.3%	-2.0%	2.5%	3.4%	0.4%	33.1%	-0.5%	-9.5%	3.2%
5	-2.8%	-0.8%	-1.7%	-2.0%	2.4%	2.0%	0.7%	33.0%	-1.3%	-8.9%	3.9%
	PNB	**Synd**	**UCO**	**United**	**Union**	**Vijaya**	**SBI**	**SBM**	**IDBI**	**SBBJ**	**SBT**
-5	-2.8%	-0.8%	-0.3%	1.4%	0.6%	-0.1%	-0.2%	-0.9%	0.2%	-0.2%	0.1%
-4	-4.1%	0.6%	-0.3%	3.5%	-0.5%	-2.2%	-0.2%	-0.6%	-1.9%	-0.2%	0.3%
-3	-4.2%	-0.6%	1.3%	3.4%	1.1%	-1.6%	0.6%	3.4%	1.9%	-1.0%	0.3%
-2	-4.9%	-2.2%	-1.3%	3.1%	0.9%	-1.7%	1.2%	8.9%	-0.6%	-0.7%	1.0%
-1	-6.2%	5.1%	-0.8%	2.7%	-0.5%	-1.2%	1.3%	11.6%	-0.2%	-0.7%	0.0%
0	-1.7%	2.2%	-1.1%	4.5%	3.6%	-0.9%	1.6%	10.1%	-1.8%	0.6%	0.2%
1	-0.3%	0.4%	-0.7%	2.9%	2.0%	-1.3%	2.1%	10.0%	-1.1%	4.0%	1.1%
2	1.1%	-1.6%	0.1%	3.7%	2.6%	-3.0%	1.2%	10.0%	-0.9%	7.0%	7.1%
3	-0.4%	-0.7%	-1.1%	1.5%	0.2%	-3.2%	1.7%	10.8%	-1.4%	6.9%	8.0%
4	-2.4%	0.1%	-1.7%	2.0%	-0.5%	-3.3%	3.0%	11.4%	-2.3%	7.7%	9.0%
5	-2.4%	-0.8%	-0.5%	0.8%	-0.2%	-3.1%	12.0%	13.7%	-3.2%	10.9%	9.1%

Figure 2. *CAAR* on Day 5



Graphically, these *CAAR* values appear as depicted in the Figure 2.

The cumulative abnormal returns of the dividend announcement for 5 days prior to and after the dividend announcement are analyzed in the Figure 2. The shareholders of banks like Bank of Maharashtra, Canara, Dena, P&S, United, SBI, SBM, SBBJ, and SBT gained on all the days in the post event window period of 5 days.

Table 5. *AAR t* - Test Values

	Alla	And	BOB	BOI	Maha	Canara	Corp	Dena	IOB	OBC	P&S
-5	-0.6468	0.3091	0.3558	-0.6660	-0.0775	1.0916	0.3406	0.9733	-0.6281	-0.2025	-0.1345
-4	-0.5900	-0.2480	-0.1053	-0.1596	0.5095	-0.5163	-0.6547	-0.7364	0.3222	-0.2897	0.2135
-3	3.2159	-0.4690	-0.3823	1.3140	0.2125	-0.4519	0.5897	0.4304	-0.7546	0.1816	-0.8768
-2	-1.3937	1.2908	-1.6399	-0.8658	-0.0096	0.9423	0.3486	0.0969	-1.0131	-0.8412	0.5147
-1	0.4313	-0.5317	0.8741	0.1529	1.6866	-0.8111	-0.3583	0.6258	0.9958	-0.0130	-0.1923
0	-1.3190	-0.3067	-0.4388	-0.5525	0.0089	0.0222	-0.7533	-1.1951	**-3.3419**	-1.0794	0.3219
1	0.3690	-0.4586	0.1502	0.0418	-1.1051	-1.0556	0.2177	0.1755	0.1933	-0.2044	0.3857
2	0.1662	0.4337	-0.7578	0.4830	0.4964	-0.7291	-0.1006	-0.3632	**4.3354**	-0.0647	0.5241
3	-1.1272	-0.2590	0.5096	-0.3351	0.6162	0.7497	0.3574	0.0853	**-2.0016**	-0.6060	0.5630
4	-0.2154	-0.5752	0.7847	-0.0586	-0.0856	0.2239	0.2475	-0.0578	1.5641	-0.1815	0.2234
5	-0.2885	-0.3722	-0.2079	0.0140	-0.1175	-0.6388	0.1315	-0.0709	-0.4928	0.1977	0.3148
	PNB	**Syn**	**UCO**	**United**	**Union**	**Vijaya**	**SBI**	**SBM**	**IDBI**	**SBBJ**	**SBT**
-5	-1.6955	-0.3897	-0.1241	0.5449	0.3024	-0.0654	-0.2626	-0.6428	0.1753	-0.2043	0.0447
-4	-0.8312	0.6761	-0.0113	0.7939	-0.5352	-1.4107	0.0297	0.2588	-1.5948	0.0394	0.2114
-3	-0.0254	-0.5771	0.7563	-0.0374	0.7828	0.3864	0.9180	**2.7028**	**2.8345**	-0.7854	-0.0112
-2	-0.4860	-0.7674	-1.2667	-0.0988	-0.1095	-0.0863	0.7981	**3.8093**	-1.8358	0.2686	0.6035
-1	-0.7566	3.5511	0.2468	-0.1685	-0.7010	0.3474	0.0424	1.8820	0.3100	-0.0502	-0.8691
0	**2.7331**	-1.3955	-0.1563	0.7012	**2.0514**	0.2264	0.3617	-1.0313	-1.2517	1.3303	0.1550
1	0.8601	-0.9057	0.2066	-0.6174	-0.7904	-0.2525	0.7008	-0.0737	0.5409	**3.4042**	0.8573
2	0.9030	-0.9795	0.4035	0.3055	0.3259	-1.1935	-1.1412	0.0159	0.1200	**2.9720**	5.3721
3	-0.9735	0.4553	-0.5797	-0.8625	-1.2363	-0.1016	0.6602	0.5648	-0.3697	-0.1172	0.7667
4	-1.1988	0.3954	-0.3372	0.1944	-0.3265	-0.0666	1.5176	0.4362	-0.6658	0.8250	0.9423
5	-0.0135	-0.4782	0.5937	-0.4469	0.1277	0.0937	**10.8331**	1.5845	-0.6340	**3.2023**	0.1224

Table 6. *CAAR t* - Test Results

	Alla	Andhra	BOB	BOI	Maha	Canara	Corp	Dena	IOB	OBC	P&S
-5	-0.6468	0.3091	0.3558	-0.6660	-0.0775	**3.1701**	0.3406	**15.4158**	-0.6281	-0.2025	-0.1345
-4	-1.2367	-0.2480	0.2505	-0.8255	0.4319	**2.6538**	-0.3141	**14.6794**	-0.3060	-0.4922	0.0790
-3	**1.9792**	-0.4690	-0.1318	0.4885	0.6444	**2.2019**	0.2756	**15.1098**	-1.0606	-0.3106	-0.7978
-2	0.5855	1.2908	-1.7717	-0.3773	0.6348	**3.1442**	0.6242	**15.2067**	**-2.0737**	-1.1518	-0.2830
-1	1.0168	-0.5317	-0.8976	-0.2244	**2.3215**	**2.3331**	0.2659	**15.8325**	-1.0778	-1.1648	-0.4753
0	-0.3022	-0.3067	-1.3363	-0.7769	**2.3304**	**2.3553**	-0.4874	**14.6375**	**-4.4197**	**-2.2442**	-0.1535
1	0.0668	-0.4586	-1.1862	-0.7351	1.2253	1.2997	-0.2697	**14.8130**	**-4.2263**	**-2.4486**	0.2322
2	0.2329	0.4337	-1.9440	-0.2520	1.7217	0.5706	-0.3703	**14.4498**	0.1091	**-2.5133**	0.7563
3	-0.8942	-0.2590	-1.4344	-0.5871	**2.3379**	1.3203	-0.0128	**14.5351**	-1.8925	**-3.1193**	1.3194
4	-1.1097	-0.5752	-0.6497	-0.6457	**2.2523**	1.5442	0.2346	**14.4773**	-0.3284	**-3.3008**	1.5428
5	-1.3982	-0.3722	-0.8576	-0.6316	**2.1349**	0.9054	0.3662	**14.4064**	-0.8212	**-3.1031**	1.8576
	PNB	**Synd**	**UCO**	**United**	**Union**	**Vijaya**	**SBI**	**SBM**	**IDBI**	**SBBJ**	**SBT**
-5	-1.6955	-0.3897	-0.1241	0.5449	0.3024	-0.0654	-0.2626	-0.6428	0.1753	-0.2043	0.0447
-4	**-2.5266**	0.2863	-0.1354	1.3388	-0.2327	-1.4761	-0.2329	-0.3839	-1.4194	-0.1649	0.2561
-3	**-2.5521**	-0.2908	0.6209	1.3014	0.5501	-1.0896	0.6851	**2.3188**	1.4150	-0.9502	0.2449
-2	**-3.0381**	-1.0581	-0.6458	1.2026	0.4406	-1.1760	1.4833	**6.1281**	-0.4208	-0.6817	0.8483
-1	**-3.7947**	**2.4930**	-0.3991	1.0341	-0.2605	-0.8286	1.5257	**8.0102**	-0.1107	-0.7318	-0.0208
0	-1.0615	1.0975	-0.5553	1.7353	1.7909	-0.6022	1.8873	**6.9789**	-1.3624	0.5985	0.1342
1	-0.2014	0.1918	-0.3487	1.1179	1.0005	-0.8548	**2.5881**	**6.9051**	-0.8215	**4.0026**	0.9915
2	0.7016	-0.7877	0.0547	1.4234	1.3264	**-2.0483**	1.4469	**6.9210**	-0.7016	**6.9746**	**6.3636**
3	-0.2719	-0.3323	-0.5250	0.5609	0.0901	**-2.1499**	**2.1071**	**7.4858**	-1.0713	**6.8574**	**7.1303**
4	-1.4707	0.0630	-0.8622	0.7553	-0.2364	**-2.2165**	**3.6247**	**7.9219**	-1.7371	**7.6824**	**8.0727**
5	-1.4841	-0.4152	-0.2686	0.3084	-0.1086	**-2.1228**	**14.4578**	**9.5065**	**-2.3712**	**10.8847**	**8.1950**

Table 7. Summary of Statistically Significant *CAAR t* - Stat Values

Day	Banks with Positive *AR*	Banks with Negative *AR*
-5	Canara, Dena	----------
-4	Canara, Dena	PNB
-3	Alla, Canara, Dena, SBM	PNB
-2	Canara, Dena	IOB, PNB,SBM
-1	Maha, Canara, Dena, Syn, SBM	PNB
0	Maha, Canara, Dena, SBM	IOB, OBC
1	Dena, SBI, SBM, SBBJ	IOB, OBC
2	Dena, SBM, SBBJ, SBT	OBC, Vijaya
3	Maha, Dena, SBI, SBM, SBBJ, SBT	OBC, Vijaya
4	Maha, Dena, SBI, SBM, SBBJ, SBT	OBC, Vijaya
5	Maha, Dena, SBI, SBM, SBBJ, SBT	OBC, Vijaya, IDBI

Cumulatively, shareholders of Dena Bank followed by SBM, SBI, SBBJ, and SBT gained the maximum by day 5. Shareholders of Allahabad, Andhra, BOB, BOI, IOB, OBC, PNB, Syn, UCO, Union, Vijaya, and IDBI lost at the end of the event window. The maximum loss was incurred by the shareholders of OBC followed by IDBI Bank and Vijaya Bank.

(3) *AAR t* - Test Analysis : The *AAR t* - test analysis as shown in the Table 5 shows that there is not much statistical evidence to accept the semi-strong form of market efficiency in the BSE Bankex stocks declaring interim dividends for 2014. On some days of the study period, stock holders of PNB, Union Bank, SBI, SBM, IDBI, and SBBJ experienced positive *AAR*, while negative *AAR* accrued to shareholders of IOB.

(4) *CAAR t* - Test Analysis : The results of the *CAAR* data are summarized in the Table 6 to see whether they are statistically significant. At 95% significance level, the acceptance region ranges between - 1.96 to +1.96. If the result value lies between -1.96 to +1.96, the result is not considered to be statistically significant. Alternatively, if the result values are beyond this range, the results are statistically significant.

The Table 7 is a summary of positive and negative CAAR *t* - test values (taken from Table 6) for the event period. Day wise *AR*, whether positive or negative, from day -5 to +5 are given in the table (statistically significant values at 5% level of significance are highlighted). Dena Bank's *AR* values are positive and higher than the table values at 5% significance level. Similarly, SBM *t*- stat values are higher than table values from day -3 to day 5 of the study period. Canara Bank's values are positive and above from day -5 to 0 ; SBBJ from day 1 to 5 ; SBT from day 2 to 5 ; SBI on days 1,3,4, and 5 ; Maha Bank on days -1, 0, 3, 4, and 5. It can ,therefore, be concluded that the stockholders of these banks' shares gained from interim dividend announcements. Analyzing the tables, it can be concluded that the shareholders of these banks gained substantially on the days mentioned in the table and did not gain on other days. All other *CAR* values are not statistically significant.

The *t* - test values of PNB, OBC, Vijaya, IOB are lower than the table values in the pre-event window. Interim dividend announcements were not greeted positively by the investors. There were negative abnormal gains, in other words, the shareholders' banks lost due to interim dividend announcement.

Findings and Conclusion

In a symmetrically informed market, all participants of the stock market such as managers, shareholders, brokers, and prospective investors have similar information about a firm - its current situation and future prospects. If any one group possesses some additional information about a firm, informational asymmetry exists. Understanding stock market behaviour around corporate events helps investors to beat the market and earn abnormal returns. Interim dividend announcements are reported regularly by the media. Share markets react to such information and security prices increase following dividend announcements.

This study investigated whether investors of BSE banking stocks gained significantly on account of interim dividend announcements made by banks in 2014. The results indicate that there were some significant positive abnormal returns prior to interim dividend announcements. On the announcement day, the average abnormal returns were positive for 10 banks of the 22 banks under study. There is no strong evidence in the study to prove that there were significant average abnormal returns around the interim dividend announcement dates. Hence, the findings of the study suggest that the null hypothesis, $H_0 1$ is accepted.

It can also be seen in the study that there is no consistent pattern of abnormal returns of companies declaring interim dividends for 5 days before the announcement date. This may be due to insider trade in the market ; so, the information gets adjusted with the stock prices before announcement and consequently, interim dividends announcement did not carry any new information to the market. Insider trading causes asymmetry of information

in the market. The *AAR* is positive on some days in the pre event window which may be due to information leak from the companies' board. The study also points out that the null hypothesis $H_0$2 is accepted. Hence, the results reveal that the Indian stock market is not informationally efficient to interim dividend announcements.

Research Implications

An effort is made through this research to understand the implications of interim dividend announcements on company's stock price movements in an election year. Dividends are meant to convey information about a company's performance to the market and predictions about the future earnings. In an election year, the investing community's expectations are large about dividend declarations. Not to disappoint them, 22 of the 28 public sector banks declared interim dividends. The study investigated if investors of BSE banking stocks gained significantly on account of interim dividend announcements by banks just before the general elections in 2014. On the announcement day, the average abnormal returns were positive only for 10 banks out of the 22 banks. The stock prices did not see much volatility around the event date, which is generally expected by the market analysts. This signifies that the investors' confidence in the forthcoming new government was not very large. It also means that the investors were very cautious in purchasing stocks in periods of political uncertainty.

Limitations of the Study and Possible Areas for Further Research

The limitations listed below are some factors which have imposed restrictions on the scope of the present study. They also include all the constraints faced by me during the course of thesis preparation due to extraneous factors :

(i) The study is restricted to only one corporate event - interim dividend announcements.

(ii) The study is confined to public sector banks' interim dividend announcements.

This study is restricted to 22 public sector banking stocks listed on BSE. The study can be extended to private banks as well to understand the complete impact of interim dividend announcements on the market sentiments. Another possible area of future research would be to categorize dividend announcements as good (when dividends are declared more than previous years), bad (when dividends are reduced compared to previous years), or no news (when dividends are constant). This distinction will have better clarity and can distinguish market reactions enabling it to distinguish and recognize the market responses to information conveyed by the announcements and the investors' expectations.

References

Aamir, M., & Shah, S. Z. A. (2011). Dividend announcements and the abnormal stock returns for the event firm and its rivals. *Journal of Business and Management Research, 1*(8), 72-76.

Acker, D. (1999). Stock return volatility and dividend announcements. *Review of Quantitative Finance and Accounting, 12*(3), 221 - 243.

Aharony, J., Falk, H., & Swary, I. (1988). Information content of dividend increases: The case of regulated utilities. *Journal of Business, Finance and Accounting, 15* (3), 401 - 414.

Balachandran, B. (2003). UK interim and final dividend reductions: A note on price reaction. *European Journal of Finance, 9* (4), 379 - 390.

Bhatia, P. L. (2010). A study of dividend announcements on stock returns of popularly traded companies in India. *APJRBM, 1* (3), 178 - 189.

Bozos, K., Nikolopoulos, K., & Ramgandhi, G. (2011). Dividend signaling under economic adversity: Evidence from London Stock Exchange. *International Review of Financial Analysis, 20*(5), 364 - 374.

Capstaff, J., Klaeboe, A., & Marshall, A. (2004). Share price reaction to dividend announcements: Empirical evidence on the signalling model from the Oslo Stock Exchange. *Multinational Finance Journal, 8* (1 - 2), 115 - 139.

Ebrahimi, M., & Chadegani, A. A. (2011). The relationship between earning, dividend, stock price and stock return: Evidence from Iranian companies. *International Conference on Humanities, Society and Culture (IPEDR)*, Vol. 20, 318 - 323.

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance, 25* (2), 383 - 417.

Fama, E. F. (1991). Efficient capital markets II. *The Journal of Finance, 46* (5), 1575 - 1617.

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustment of stock prices to new information. *International Economic Review, 10* (1), 1-21.

Ghosh, C., & Woolridge, J. R. (1988). An analysis of shareholder reaction to dividend cuts and omissions. *Journal of Financial Research, 11* (4), 281 - 294.

Hashemijoo, M., Mandavi - Ardekani, A., & Younesi, N. (2012). The impact of dividend policy on share price volatility in the Malaysian Stock Market. *Journal of Business Studies Quarterly , 4* (1), 111 - 129.

Kalay, A., & Loewenstein, U. (1985). Predictable events and excess returns : The case of dividend announcements. *Journal of Financial Economics, 14,* 423 - 449.

Mahadevan, A., & Saravanakumar, S. (2011). Dividend announcement impact on Indian bourses. *International Journal of Enterprise and Innovation Management Studies, 1*(3), 1-11.

Mamun, A., & Hoque, N., & Mamun, A. M. A. (2013). Stock price reaction to dividend announcement : The case of Bangladesh capital market. *Journal of Economics and Sustainable Development , 4* (8), 89 - 95.

Mishra, A. K. (2007). The market reaction to stock splits - Evidence from India. *International Journal of Theoretical and Applied Finance, 10* (2), 251 - 271.

Ray, K. K. (2011). Market reaction to bonus issues and stock splits in India: An empirical study. *IUP Journal of Applied Finance, 17* (1), 54 - 69.

Ryaly, V.R., Kumar, R.S.R.K., & Urlankula, B. (2008). A study on weak form of market efficiency in selected Asian stock markets. *Indian Journal of Finance, 8* (11), 34 - 43.

Selvam, M., Babu, M., Indumathi, G., & Kogila, N. (2010). Impact of dividend announcement on share price: An evaluation study. *Indian Journal of Finance, 4* (4), 3 - 16. DOI: 10.17010/ijf/2010/v4i4/72619

Vigg, S., Nathani, N., Kaur, S., & Holani, U. (2008). Efficient market hypothesis: A case study of Bombay Stock Exchange. *Indian Journal of Finance, 2* (7), 3 -11.

Appendix 1. List of Abbreviations of Bank Names

Bank Names	Abbreviation	Bank Names	Abbreviation
Allahabad Bank	ALLA	Punjab National Bank	PNB
Andhra Bank	AND	Syndicate Bank	SYN
Bank of Baroda	BOB	United Commercial Bank	UCO
Bank of India	BOI	United Bank of India	United
Bank of Maharashtra	MAHA	Union Bank of India	Union
Canara Bank	Canara	Vijaya Bank	Vijaya
Corporation Bank	CORP	State Bank of India	SBI
Dena Bank	DENA	State Bank of Mysore	SBM
Indian Overseas Bank	IOB	Industrial Development Bank of India	IDBI
Oriental Bank of Commerce	OBC	State Bank of Bikaner and Jaipur	SBBJ
Punjab & Sind Bank	P&S	State Bank of Travancore	SBT

About the Author

Dr. Asha Nadig is currently associated with Symbiosis Institute of Business Management, Bengaluru as an Associate Professor. With 22 years of experience in teaching and research in the field of Management Education, she has published many research papers in leading journals in varied areas of Finance.