Impact of Dividend Announcements on Share Price of Indian Banking Sector Companies

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Abstract

This study assesses the reaction of the Indian stock market on corporate dividend announcements. The study focuses on the reaction of the stock markets specifically to dividend announcements by banks. Dividend announcements are considered to convey important information to market participants. Dividends are also considered to be major determinants of shareholders' wealth. A sample of ten banking companies having the highest market capitalization has been considered. Event study methodology with the OLS market model is used to calculate abnormal returns and t-test is employed to check the robustness of the abnormal returns. The result provides evidence that dividend announcements convey positive information. Overall, empirical results indicate that the stock prices of Indian banks are impacted by dividend announcements indicating inefficient market in semi-strong form.

Keywords: Banking Companies, Event Study, OLS Market Model, Market Efficiency, Dividend Announcements

JEL Classification: G35, G14, G21

Introduction

The stock market is a medium to allocate and channelize savings or idle funds to the most productive areas of the economy (Chakraborty, 2011). Any economy, to a great extent, depends on the efficiency of the stock market in allocating scarce resources into the most productive investments. To be efficient, the market should speedily and accurately absorb the available information, providing no room for abnormal returns (Hawaldar, 2018). Information efficiency is the major criterion for measuring the strength of the stock market (Gupta et al., 2018). The concept of an efficient market was first pioneered by Fama (1970), where the author had classified the market into three categories based on information. A market that fully reflects the past information is known as a weak-form efficient market, whereas a semi-strong market is one that fully reflects the past as well as all public information. A strong-form market is one where all past, publicly available and private information is fully reflected.

The level or form of efficiency of a market is impacted by various phenomena and events. Since 1991, the Indian economy and stock market have witnessed radical reforms and structural transformation with the establishment of SEBI, formation of NSCCL, NDSL, CDSL, and opening the market for FIIs, introducing online trading, etc. (Chakraborty, 2011). All these reforms have positively impacted the Indian stock market. This is evident from the substantial rise in market capitalization, increase in stock market indices, increase in the number of companies listed on NSE and BSE, market capitalization to GDP ratio and total numbers of demat accounts (SEBI, 2019, 1998). In addition to these reforms, SEBI has, from time-to-time, implemented various regulations to bring the Indian stock market at par with stock markets of developed countries. One such reform is the compulsory disclosure of various announcements by firms. Such reforms are based on the experience of regulatory bodies around the world (Mehndiratta & Gupta, 2010). Research studies from around the world have revealed that such announcements, also known as events, have a significant influence on the wealth of shareholders (Kane, et al., 1984; Bawa & Kaur, 2013; Rao, 1994). It can thus be inferred that events have significant importance in the stock markets. However, it must be noted that not all developments are considered as an event. Only those developments having a significant bearing on the stock market and the timing of which can be precisely identified, are considered events in the context of the stock market (Bowman, 1983).

Dividend announcement is considered an event conveying important information to market participants (Pettit, 1972; Hussin & Ahmed, 2010; Nadig, 2017). Any business entity's main aim is to maximize the wealth of shareholders. Dividend is one of the major determinants of the wealth of shareholders (Archana, 2018). Dividends are the portion of companies' earnings that are distributed to shareholders. It reflects strong financial strength and growth of a corporate (Nadig, 2017). According to the Dividend Signalling theory, higher dividend payout indicates positive future prospects, and vice versa. The dividend announcement conveys positive information regarding the growth, profitability and expansion of a business concern and accordingly, the stock price tends to rise. Sardana & Gupta (2018), Hussin & Ahmed (2010), Olweny (2012), empirically tested and confirmed the dividend signalling theory. However, Ramachandra (2013), Archana, (2018), Nadig, (2017), and Pettit (1972) concluded that dividend announcements do not have a significant impact on the share price as no significant abnormal return is evident during the event window of dividend announcement. The present study was initiated as a result of these opposing views; the focus is however, restricted to the impact of dividend announcements on share prices of banking companies.

Applicability

In the era of globalization, a sound financial system is critical for a nation's growth and development, and efficiency is the major indicator of soundness. The present study provides a road map for investing in the stock market especially with regard to all future dividend announcements. It also acts as an indicator of the soundness of the banking system. The study is applicable to the banking and other sectors of the Indian stock market and to stock markets of emerging nations like Bangladesh, Brazil, Taiwan, etc.

Review of Literature

Numerous studies have been conducted to analyse the impact of corporate events on the stock markets. While some studies confirm that dividend announcements impact stock markets, other studies have presented a contrary view. Some relevant studies, both Indian and foreign, are reviewed hereunder.

Studies in the context of Indian stock market are:

Rao (1994) evaluated the impact of corporate announcements, namely, dividend announcements, bonus issue announcements and rights issue announcements on a firm listed on BSE (Bombay Stock Exchange) for the period 1988-1989. The study observed that stock prices tend to rise prior to dividend announcements and continue to rise thereon. While stock prices immediately adjust on the announcement of a bonus issue, in case of a rights issue, the price adjusts a day after the announcement. A similar study by Mehndiratta & Gupta (2010) on NSE listed companies using event analysis observed that abnormality was captured in the post-announcement period due to the shifting of the security position by the investors, depending on the dividend announcement, which indicates the information content in the announcement. Saravanakumar (2011) revealed that dividend announcement did not impact the stock's behaviour. No investor can outperform the market as no abnormality in return was observed during the study period. However, Taneem & Yuce (2011), studying the share price movement of companies listed on BSE for the period from 2004 to 2007, observed that high dividend is accompanied by high abnormal returns, and share prices follow the direction of dividend announcement. In a similar study, Gupta et al. (2012) revealed that higher dividends do impact share prices in a positive way. The study also remarked that the Indian stock market is inefficient. On the same lines, Ramachandra (2013) studied the efficiency of Indian stock market with respect to information released on dividends, bonus, stock splits and mergers, and concluded that information released on the said events do not impact security returns. The study also concluded that the Indian stock market is efficient. Similarly, Maitra & Dey (2012), considering the companies that constitute the S&P 500 CNX Nifty, analysed the impact of dividend announcements and concluded that the market is slow in responding to these announcements and investors could use such announcements for abnormal gains. A similar study was conducted by Bawa & Kaur (2013) on the information technology sector during the period from 2006 to 2010 and disclosed that dividends convey positive information. They also revealed that dividend per share, retained earnings per share and lagged market value per share contribute towards shareholders' wealth. Kumar (2013), in the study of impact of dividend announcement, found that the share price drifts positively, but for a short period of time, and the information is absorbed in the long run. The study concluded that the Indian market is semi-strong efficient. A study using paired sample t-test and event analysis by Patel & Prajapti (2014) concluded that though abnormal returns were insignificant, CAARs (Cumulative Average Abnormal Returns) were statistically significant. They also observed significant differences in numbers of transactions during pre- and post-announcement. Sharma & Pandey (2014), while analysing the companies listed on both NSE and BSE, found that both financial results and dividend decisions do not have any bearing on share price movements. Anwar et al. (2015) analysed dividends and volatility in stock returns for companies forming part of the BSE 500 index from 2003 to 2013. They concluded that Indian investors prefer companies paying dividends, considering them as less risky compared with companies that did not pay dividends. From the perspective of dividends, the study concluded that share

prices tend to be less volatile in the long run as compared to the short run. Nadig (2017), while evaluating the influence of interim dividend announcement on the share prices of the top 40 IT companies listed on BSE, observed no pattern of abnormality in the share prices of the firms. The information was absorbed instantaneously after it was released thus confirming stock prices of IT companies to be efficient in a semi-strong form. A different study conducted by Azhagaiah (2008) found that dividend policy has a significant impact on organic chemical companies and inorganic chemical companies are not impacted by the same. Dahal & Das (2020) examined the impact of demonetization on Indian banking stocks using event study with 61 days event window and found a significant negative impact of the announcement on banking stocks. Similarly, Sinha, et al. (2019) examined the impact of demonetization on various sectors of the Indian stock market using event methodology. They concluded that demonetization caused a significant negative impact on FMCG, Materials, Telecom, Utilities, Consumer Discretionary, Realty and Consumer Durables sectors. However, Energy, Healthcare, Auto, Power, Oil and Gas, and Capital Goods sectors remained positive on the days following the event. Similarly, Kumar & Kuncolienkar (2020), using BHAR (Buy and Hold Abnormal Returns), analysed the impact of mergers and acquisitions on stocks of the Indian acquiring banks. The study pointed statistically insignificant positive at the end of three years by all the acquirer banks except for the M&A announcement of PNB and NBL. Bhattacharjee & Das (2020) analysed the responsiveness of the Indian stock market to domestic macroeconomic variables using Johansen cointegration test, VECM (Vector Error Correction Model), and Granger causality, and found that the stock market is predictable to a certain extent, which goes against the efficient market hypothesis.

Studies in the context of Foreign Stock Markets are:

Pettit (1972) measured the reaction to dividend announcements and market efficiency of the New York Stock Exchange (NYSE) considering both monthly data from 1964 to 1968, and daily data from 1967 to 1969. The study concluded that stock prices reflect the information within the event window period and clearly stated that the market is efficient in both monthly and daily basis. Asquith & Mullins (1983) analysed the impact of dividend considering 168 firms listed on the NYSE from 1954 to 1980 using event analysis. They observed that dividend announcements do convey information over and above other announcements, and the market reacts strongly and positively to such information. Kane et al. (1984), taking into consideration firms listed in both University of Chicago CRSP tapes and the Standard & Poor's quarterly COMPUSTAT tapes, analysed the abnormality in returns around earnings and dividend announcements during the period 1979 to 1981. The study observed that unexpected dividend and earnings announcements encourage abnormal returns. Hussin et al. (2010) also supported the dividend signalling theory and suggested that both dividend and earnings significantly affect the prospects of a firm. Further, the study concluded that the Malaysian Stock Exchange is semi-strong form efficient. Olweny (2012) tested the impact of dividend announcements on Nairobi Stock Exchange for the period from 1999 to 2003 and noted that certain information is conveyed through dividend announcements and firms' value is significantly influenced by dividend announcements. The study thus concluded that the Nairobi Stock Exchange does not follow semi-strong form efficiency. Suwanna (2012) analysed the movements of stocks of 60 Thai financial companies with respect to dividend announcements from 2005 to 2015. The study showed that AARs (Average Abnormal Returns) and CAARs (Cumulative Average Abnormal Returns) are statistically significant, validating dividend signalling theory. Farrukh et al. (2017), using multi-regression analysis, studied the impact of dividend policy on the wealth of shareholders of the top 51 firms from PSX (Pakistan Stock Exchange) from 2006 to 2015. Dividend policy was found positively linked with Earnings per share (EPS) and share price. Further, the study concluded that shareholders' wealth is significantly influenced by dividend announcement. Phan & Tran (2019) studied the influence of dividend policy and ownership structure on stock price volatility and found that firms providing higher dividend yields tend to be less risky in terms of price oscillation, whereas ownership structure has no significant influence on the dividend policy and stock price volatility. Budagaga (2020) examined the impact of dividends on banking stocks of Middle and North African (MENA) emerging nations. The study concluded that the dividend payout and dividend yield do not have a material impact on banking stocks.

From the literature review, it is observed that the impact of dividend announcement on share price or shareholders' wealth is studied extensively in both developed and developing nations like India. However, most studies have been conducted focusing on the companies forming part of various indices. There are a few studies that have taken into consideration companies in specific industries/ sectors. The present study is an attempt to analyse the impact of dividend announcements on one of the major sectors of the Indian economy, i.e., the banking sector. The study has covered dividend announcements of banks for the period from 1st January 2011 to 31st December 2019.

The paper further proceeds as follows: in part three, the details of the methodology are discussed; the result is elaborately explained in part four and finally, the conclusion is drawn.

Data and Methodology

Sample and Announcement Dates

Review of literature reveals that most studies are limited to companies forming part of various indices of stock exchanges. Only a few studies have been conducted on banking sector companies. The banking sector is the backbone of any economy. A robust financial system is of utmost importance for the growth and development of a nation. Also, in terms of market capitalization, the banking sector acquires the top position. The present study has considered the top ten banking sector companies based on market capitalization, as per moneycontrol.com and listed in both NSE and BSE.

The dividend announcement dates were gathered for the period from 1st January 2011 to 31st December 2019 using the data sources - Bombay Stock Exchange official website; moneycontrol.com; The Economic Times and Prowess. First, all the banking sector companies listed on both NSE and BSE were identified using the Prowess IQ database and the dates of the announcements were identified using The Economic Times and moneycontrol.com.

The final selection of banks is done on the basis of the following criteria:
i.   The bank should be listed on both the National Stock Exchange and the Bombay Stock Exchange.
ii. The bank must be listed prior to the study period.
iii. The announcement dates should not overlap with other announcements.
iv. There must be at least 130 days gap between two announcements dates.

After fulfilling the above criteria, the following numbers of announcements with respect to particular banks have been considered for further analysis (see Table I):

Table 1: Samples with numbers of events

Banks	Listed on	No. of Dividend Announcements
1. HDFC Bank	Both NSE and BSE	7
2. ICICI Bank	Both NSE and BSE	8
3. Kotak Mahindra Bank	Both NSE and BSE	7
4. SBI	Both NSE and BSE	7
5. Axis Bank	Both NSE and BSE	6
6. Induslnd Bank	Both NSE and BSE	9
7. Bank of Baroda	Both NSE and BSE	6
8. PNB	Both NSE and BSE	4
9. IDBI Bank	Both NSE and BSE	5
10. Union Bank	Both NSE and BSE	6
Total number of Dividend Announcements: - 65		

Source: The Economic Times, moneycontrol.com, Prowess IQ (compiled by Author)

Event Study Methodology

An event study is a statistical tool to analyse the impact of an event on the market value of the stock of a firm. It tests the reaction of the financial market to past events. The fundamental idea is to point out the abnormal returns attributable to the event under study by adjusting the normal returns generated from overall market fluctuations. This method is widely used and developed by Fama (1969). The methodology was further popularized and enhanced by Brown & Warner, (1980), Dennis & McConnell, (1986), Srinivasan (1993). The present study therefore also used the event study methodology for analysing the impact of dividend announcements on stock returns. The methodology has been split into two steps. In the first step, parameters like alpha and beta have been estimated. In the second step, estimated parameters are used to calculate expected returns and a comparison between actual and expected returns is done to generate abnormal returns around the event dates.

In order to calculate the parameters of Event Study, event day, event window and estimation window should be determined. The event day is the day on which the event had occurred. In this study, event day is the dividend announcement date, also defined as t=0. The event window is the time span taken to measure the influence of the said event. The event window

considered in the study is t= -10 to t= +10 (21 days) based on the study conducted by Peterson (1989), Ball & Kothari (1991). The estimation period taken here is t= -130 days to t= - 11 days (120 days prior to the event window) based on Mishra (2005), Peterson (1989).

Calculation of Daily Return: A log return is used to minimize the skewness effects and serial correlation, and to improve normality of data. The calculation is also based on researchers Dhar & Chhaochharia, (2008), Ryaly, et al., (2017), Archana, (2018).

$$R_{j,t} = \ln(P_{jt}/P_{j,t-1}) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 1$$

Here,

$R_{j,t}$ = Return on security " j " on time " t ".

P_{jt} = Price of security " j " on time " t ".

$P_{j,t-1}$ = Price of security " j " on time " t$_{-1}$ ".

Calculation of Abnormal Return

The difference between the firm's actual return and expected return is known as an abnormal return (Chandra, 2017). There are basically three methods to calculate abnormal return, namely, mean-adjusted model, market-adjusted model and OLS market model. The OLS market model was developed by Sharpe (1963). A linear relationship between security return and the market return is assumed under the model. The rationale behind the use of the model is that it is the best among the existing models (Brown & Warner, 1980) and it was used by Fama et al., (1969), MacKinlay, (1997).

$$\text{Abnormal Return} = R_{j,t} - (\alpha + \beta * R_{mt}) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 2$$

Here, $R_{j,t}$ = Actual return of Security calculated through equation in 1.

α , β are estimated through OLS in estimation period taking market return as independent variable and stock return as dependent variable.

R_{mt} = Market return, BSE Sensex is taken as a proxy to market.

Average Abnormal Returns (AARs)

To arrive at conclusive evidence, the calculated abnormal return (equation 2) is aggregated around the event window i.e. -10…………..0………..+10 days (21 days). The following formula is used to calculate the AARs:

$$\text{AARs} = \frac{\sum_{i=1}^{N} ARjt}{N}$$

$AR_{j,t}$ = Abnormal Return of Security 'j' around event window days 't'.

N= Total Numbers of Securities under study.

Cumulative Average Abnormal Returns (CAARs)

The CAARs is calculated by cumulating the AARs over the event window of 21 days. The CAARs is assumed to be close to zero if the market is efficient (Brown & Warner, 1980; Brown & Warner, 1985; Hawaldar & Mallikarjunappan, 2009, 2010). CAARs is calculated using the following equation:

$$\text{CAARs} = \sum_{t=-10}^{t} \text{AARs}$$

Here,

t = -10……..0……. +10 days

Significance Testing

To check the robustness of the result, different test statistics are applied. Initially parametric t-test is applied to examine the statistical significance of AARs and CAARs. The parametric t-test statistics for daily AARs during the event window is calculated as:

$$\text{T-test} = \frac{AAR}{\sigma(AAR)}$$

Here,

AAR = Average Abnormal Return

σ(AAR) = Standard Error of the AAR.

The Standard Error is calculated as:

$$SE = \frac{\sigma}{\sqrt{n}}$$

Here,

SE = Standard Error

σ = Standard Deviation

n = Number of Observations

The Parametric t-Test Statistics for CAAR during the event window is calculated as:

$$\text{T-test} = \frac{CAAR}{\sigma(CAAR)}$$

Here,

CAAR = Cumulative Average Abnormal Return

σ (CAAR) = Standard Error of the CAAR.

The Standard Error is calculated as:

$$SE = \frac{\sigma}{\sqrt{n}}$$

Here,

SE = Standard Error

σ = Standard Deviation

n = Number of Observations

Results and Discussion

The analysis of the data is done from two different perspectives. In the first phase, the reaction of an individual bank's share is observed. In the second phase, the combined reaction is observed.

The AARs and CAARs for Dividend Announcements during 21-day event window:

In Table II, the average abnormal returns (AARs) and cumulative abnormal returns (CAARs) of the entire sample of banks have been calculated and the significance is tested through the t-statistics test.

Table II: OLS Market Model with Log Returns

Days	AARs	T-Stat	CAARs	T-Stat
-10	-0.011228	-0.995738640	-0.011228	-0.229449500
-9	0.015689	1.391392758	0.004461	0.091171153
-8	0.007709	0.683729909	0.012171	0.248724028
-7	0.010127	0.898101288	0.022297	0.455674811
-6	0.009100	0.807016112	0.031397	0.641636705
-5	0.009523	0.844580603	0.040920	0.836254640
-4	0.005158	0.457486771	0.046079	0.941673980
-3	-0.011783	-1.044995237	0.034296	0.700874211
-2	-0.025039	-2.220603915*	0.009257	0.189177228
-1	-0.008348	-0.740352456	0.000909	0.018576737
0	0.031632	2.805341399*	0.032541	0.665015627
1	0.019649	1.742575753	0.052190	1.066559887
2	-0.004860	-0.430997260	0.047330	0.967244563
3	0.001844	0.163519016	0.049174	1.004924487
4	-0.007856	-0.696724210	0.041318	0.844377316
5	0.007584	0.672599122	0.048902	0.999365308
6	-0.003937	-0.349194869	0.044964	0.918899828
7	-0.000444	-0.039368065	0.044520	0.909828187
8	0.000548	0.048595800	0.045068	0.921026188
9	0.009150	0.811508342	0.054219	1.108023233
10	-0.003625	-0.321452240	0.050594	1.033950527

Source: Author's calculation

*Significant at 5% level (±1.96)

NB: AARs are the Average Abnormal Returns of ten banks.

   *CAAR is calculated from -10 days to +10 days*

   Day 0 is the dividend announcement day.

Table II presents the AARs and CAARs for announcements of dividends by the entire sample of banks. The OLS market model with log return is used for the entire event window. From the table, it can be observed that the AARs are positive on announcement day and the next day (+1 day), indicating positive information is conveyed through dividend announcement. It is further supported by positive CAARs during pre and post-event days. Overall, it can be said that positive information is conveyed through the dividend announcement.

Further, the t-statistics test at 5% significance level is used to test the robustness of the AARs and CAARs. From Table II, it is observed that on announcement days, the AARs are positively significant, which indicates that the dividend announcement has impacted the stock return significantly. However, in the case of CAARs, there is no single significant return during the period. Based on AARs and t-test, it can be concluded that the dividend information influences stock returns, providing an opportunity for any abnormal gain. Therefore, it is concluded that banking sector stocks are not efficient in processing dividend announcement information.

In Figure 1, it is visible that AARs are significantly different from zero on announcement day.

Figure 1: Graphical Representation of the AARs and CAARs during Event Window
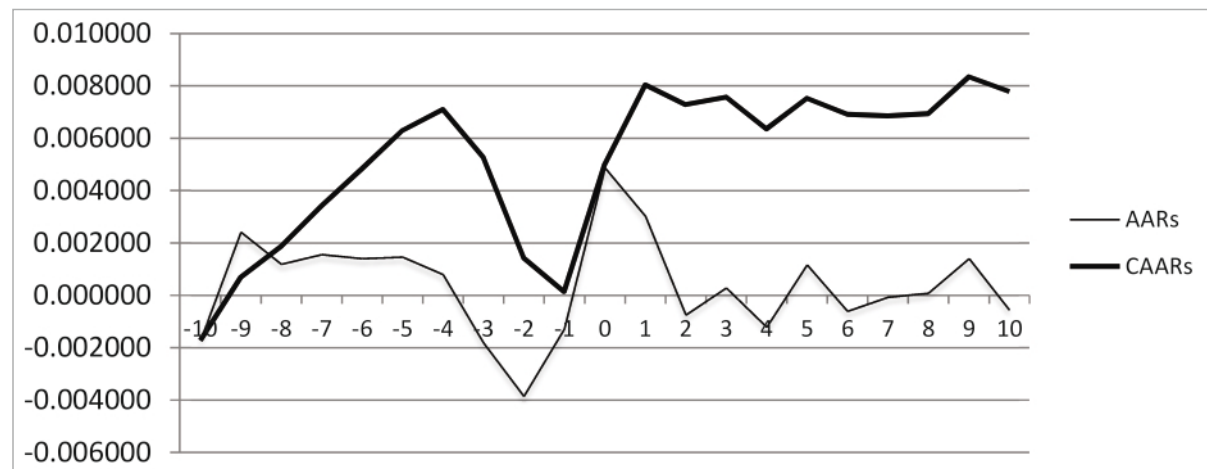
Source: Author's calculation

Abnormal Returns of Sample Banks: In Table III, the abnormal returns of each sample bank have been calculated separately and the significance is tested through t-statistics test. This is done to observe the reaction of the particular share around the event.

Table No. III: Abnormal Returns of Individual Banks and t-statistics

Table No. III: Abnormal Returns of Individual Banks and T-Statistics

-1	0	1	2	3	4	5	6	7	8	9	10
0.034	0.025	0.012	0.023	0.020	-0.065	0.045	-0.024	-0.034	0.048	-0.028	0.005
3.988*	2.922*	1.372	2.695*	2.365*	-7.707*	5.321*	-2.816*	-4.002*	5.693*	-3.27*	0.613
0.044	0.032	0.112	0.017	0.001	-0.036	0.016	0.036	-0.019	0.049	0.020	-0.021
0.814	0.586	2.073*	0.306	0.017	-0.670	0.305	0.660	-0.351	0.910	0.369	-0.384
-0.001	0.074	0.005	-0.062	0.021	-0.008	-0.014	0.077	-0.057	0.053	0.031	0.013
-0.083	6.281*	0.456	-5.278*	1.821	-0.688	-1.215	6.519*	-4.851*	4.522*	2.649*	1.080
0.051	-0.026	-0.050	0.091	0.048	0.051	-0.017	-0.010	0.043	-0.104	0.025	0.008
0.650	-0.330	-0.635	1.159	0.615	0.647	-0.223	-0.131	0.552	-1.324	0.320	0.108
0.013	0.056	0.019	0.000	-0.048	-0.041	0.077	-0.121	-0.004	-0.002	-0.021	-0.067
0.839	3.728*	1.236	0.011	-3.191*	-2.748*	5.150*	-8.055*	-0.240	-0.119	-1.413	-4.48*
-0.039	0.038	0.034	-0.064	0.013	-0.064	-0.054	0.006	0.021	-0.051	0.021	0.018
-2.527*	2.451*	2.231*	-4.131*	0.839	-4.132*	-3.485*	0.396	1.335	-3.285*	1.380	1.162
-0.139	0.099	-0.010	-0.040	-0.049	0.010	-0.001	-0.042	0.001	0.015	-0.047	-0.019
-2.199*	1.571	-0.161	-0.634	-0.778	0.166	-0.018	-0.661	0.011	0.237	-0.753	-0.308
-0.041	0.031	-0.018	-0.043	0.018	0.065	0.020	0.048	0.039	0.018	0.011	0.009
-0.546	0.412	-0.242	-0.574	0.237	0.876	0.264	0.640	0.527	0.234	0.144	0.116
-0.004	0.032	0.064	-0.036	-0.022	-0.031	-0.019	-0.064	-0.069	-0.054	0.051	0.003
-0.268	1.961*	3.979*	-2.198*	-1.339	-1.918	-1.195	-3.953*	-4.291*	-3.363*	3.159*	0.183
-0.001	-0.043	0.028	0.065	0.016	0.040	0.024	0.055	0.075	0.033	0.028	0.015
-0.043	-1.983*	1.282	2.992*	0.718	1.836	1.084	2.497*	3.406*	1.528	1.295	0.697

Source: Author's Calculation
Significant at 5% Significant Level

Table No. III: Abnormal Returns of Individual Banks and T-Statistics

Days	-10	-9	-8	-7	-6	-5	-4	-3	-2
AR_HDFC	0.025	0.009	-0.011	0.011	0.021	-0.007	0.010	0.019	-0.008
T-Test	2.982*	1.120	-1.271	1.344	2.480*	-0.843	1.185	2.227*	-1.007
AR_ICICI	0.019	0.049	0.002	-0.004	0.042	0.082	0.033	-0.023	-0.013
T-Test	0.356	0.899	0.044	-0.075	0.784	1.516	0.614	-0.423	-0.243
AR_Kotak	0.037	-0.034	0.071	0.005	-0.028	0.013	-0.004	-0.026	0.048
T-Test	3.110*	-2.880*	6.033*	0.418	-2.415*	1.127	-0.338	-2.207*	4.090*
AR_SBI	-0.024	0.081	-0.030	-0.006	0.059	0.047	0.033	-0.059	0.000
T-Test	-0.311	1.030	-0.377	-0.083	0.750	0.598	0.425	-0.754	0.004
AR_IndusInd	-0.087	0.022	0.030	-0.051	0.012	0.002	0.030	0.025	-0.031
T-Test	-5.794*	1.458	1.988*	-3.385*	0.770	0.122	2.027*	1.687	-2.0384*
AR_Axis	0.008	0.065	-0.035	0.006	-0.023	0.058	0.015	0.009	-0.015
T-Test	0.545	4.217*	-2.256*	0.359	-1.462	3.773*	0.976	0.600	-0.990
AR_BOB	-0.034	-0.007	0.055	-0.026	0.014	-0.020	-0.010	0.017	-0.094
T-Test	-0.545	-0.105	0.876	-0.408	0.218	-0.319	-0.159	0.265	-1.492
AR_PNB	-0.013	-0.051	-0.022	0.057	-0.016	0.006	0.038	-0.039	-0.097
T-Test	-0.174	-0.679	-0.299	0.758	-0.208	0.084	0.512	-0.520	-1.293
AR_IDBI	0.024	0.003	0.027	0.024	0.006	-0.013	-0.024	-0.016	0.036
T-Test	1.494	0.214	1.649	1.497	0.379	-0.802	-1.483	-1.000	2.207*
AR_UnionBnk	-0.067	0.019	-0.010	0.086	0.004	-0.073	-0.071	-0.025	-0.076
T-Test	-3.080*	0.861	-0.478	3.914*	0.184	-3.340*	-3.228*	-1.136	-3.494*

Source: Author's Calculation
Significant at 5% Significant Level

Table III represents the abnormal returns of each sample bank. First, the shares of HDFC Bank are analysed and abnormal returns are calculated and tested. The analysis showed that the abnormal return of HDFC Bank on announcement days is positive and continues to be positive for 3 days, indicating that the positive information is conveyed to the market. Further, by observing the t-value, it is seen that the abnormal returns are significant for 9 days including event day, which indicates that the announcement has a significant impact on the share price. There is a possibility of gaining abnormal returns around such events. Similarly, by analysing the abnormal returns of ICICI Bank, it is evident that the bank has positive abnormal returns on announcement day and continues for the next 3 days, thus showing that the announcement injected positive information in the market. This positive information did impact the market as there is a significant abnormal return on the next day of the event day. In the same way, Kotak Mahindra Bank has positive abnormal return on announcement day and +1 day, indicating positive information is conveyed through the announcements. The market is slow in absorbing this information as several significant abnormal returns are observed in post-announcement days. Thus, it can be said that the market is inefficient. Different behaviour is observed in abnormal returns of SBI. The returns on announcement days and +1 days are negative indicating negative information is conveyed by the announcement, but from t-values, it is evident that the information did not impact the market, as no single significant abnormal return is observed during the event window.

In case of Induslnd Bank, the returns are positive on announcement day and up to +2 days. This indicates the market expected positive information around the dividend announcement. This information impacted the market significantly, as the returns are significant on announcement days and several other significant abnormal returns are observed in post-announcement days. Similarly, from Table III, it is observed that the dividend announcements of Axis Bank conveyed positive information to the market, as positive returns are generated on the announcement day and +1 day. Further, from t-values, it is also confirmed that the market is slow in absorbing the information, as abnormal return is witnessed on announcement day and on several days in post-event days. However, a different pattern is evident from Bank of Baroda's abnormal returns; the bank has positive returns on announcement days, but the returns are negative from +1 day to +3 day. However, such return is not statistically significant. This indicates that information did not impact the market as there are no single abnormal returns during the event window. An identical pattern is seen in Punjab National Bank, where the bank has positive returns on announcement days, but the returns are negative from +1 day to +2 day. However, such information has no impact on the market as no single significant abnormal returns are observed during the event period. IDBI Bank exhibited a positive pattern in returns. The bank has positive abnormal returns on the announcement period and on +1 day. This pattern shows that the market expected positive information through dividend announcement. This information has impacted the market, as a continuous significant abnormal return from − 2 days to + 2 day is evident. This also points toward leakage of information. A different pattern is observed in the returns of Union Bank. The bank has negative returns on announcement days and positive returns in the rest of the days in post-announcement days. Since on the announcement day, the return is significantly negative, it can be said that the information has impacted the market, implying inefficiency of the market in processing the information.

Conclusion

The present study documented the market behaviour around dividend announcements by banking companies for the period from 1st January, 2011 to 31st December, 2019. In this study, the analysis is done from two different perspectives. First, the overall impact of dividend announcement is studied and in the second phase, the impact is studied from the viewpoint of individual banks.

In the first phase of analysis, the overall impact of the dividend announcement is analysed. From the behaviour of both AARs and CAARs around the announcement days, it is seen that positive information is conveyed through the dividend announcement. In spite of some negative returns as shown by AARs in the post-announcement period, the behaviour of CAARs clarified that in a longer time horizon, the market perceived the dividend announcement positively. From this, it would not be wrong to say that the dividend announcement conveyed positive information to the market. Further, the significance of the information is tested in terms of abnormal returns using t-statistics test at a 5% significance level and found that on announcement days, the AARs are positively significant, which indicates that the dividend announcement has impacted the stock returns significantly. However, in the case of CAARs, there is no single significant return during the period. Overall, the empirical results indicated that the stocks of Indian banks are not efficient in semi-strong form, as the information is not instantaneously absorbed by the market.

In the second phase, the researcher analysed the individual banks separately to observe the behaviour of shares around the dividend announcement. By analysing each individual bank, it is observed that the dividend announcement by HDFC Bank, ICICI Bank, Kotak Mahindra Bank, Induslnd Bank, Axis Bank, Bank of Baroda, IDBI Bank and PNB conveyed positive information to the market, while SBI and Union Bank conveyed negative information to the market. Among the banks conveying positive

information, only HDFC Bank, Kotak Mahindra Bank, Induslnd Bank, Axis Bank and IDBI Bank are impacted by the dividend announcement while ICICI Bank, Bank of Baroda and PNB are not impacted by dividend announcement information. Among the banks conveying negative information, only Union Bank is impacted by the dividend announcement; SBI is not impacted by the dividend announcements. From this, it can be concluded that public sector banks are not impacted significantly by dividend announcement; also, negative information is perceived on account of dividend announcements by investors in public sector banks. However, this conclusion is based on the sample banks under study.

Limitations

Further study with a larger sample and with longer time horizon can be conducted for better and conclusive evidence.

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