JOURNAL OF GENERAL MANAGEMENT RESEARCH

Impact of Announcement of Digital India Campaign on the Price Behaviour of Banking Stocks in India

A Study

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ISSN 2348-2869 Print © 2019 Symbiosis Centre for Management Studies, NOIDA Journal of General Management Research, Vol. 6, Issue 2, July 2019, pp. 28–38

Abstract

The banking system plays an important role in promoting economic growth not only by channelling savings into investments but also by improving allocative efficiency of resources. Nowadays banks are digitally and technologically empowered. The announcement of digital India campaign is boosted the banking industry. The digital India programme is a formalised initiative by the Government of India launched on 1st July 2015 with an objective of connecting rural areas with high-speed internet networks and improving digital literacy. The vision of program is to transform India into a digitally empowered society and knowledge economy. It is centred on three key areas- digital infrastructure as a utility to every citizen, governance and services on demand and digitally empowerment of citizens. A stock market is the aggregation of buyers and sellers of stock, which represent ownership claims on business. The current research, is an attempt to study the impact of digital India campaign on price behaviour of banking stocks which are the most affected industry from the Digital India initiative. Since the stock market



is highly sensitive, it will react immediately for the new piece of information. Hence, the current research is undertaken to find out the reaction of banking stocks for the announcement of Digital India announcement. It is concluded in the study that the event had no significant impact on the price behaviour of banking stocks in short run, midterm and long run.

Keywords: Abnormal Return, Banks, Digital India, Stock Market

INTRODUCTION

The banking sector is the lifeline of the I modern economy. The banks play an important role in mobilisation of deposits and disbursement of credit to various sectors of the economy. A bank is a financial institution whose purpose is to receive deposits and lend money to individuals and businesses, disburse payments, invest funds in securities for returns and safeguard money. The Indian banking sector broadly classified into scheduled and non-scheduled banks. The scheduled banks are those included under the second schedule of Reserve Banks of India Act, 1934. The scheduled banks comprise scheduled commercial banks includes public sector, private sector, foreign banks and regional rural banks. Scheduled co-operative banks consist of scheduled state co-operative banks and scheduled urban co-operative banks. Banking is an integral part of financial activity today and digital banking in India is highly advanced. Digitalisation is changing the face of the BFSI sector in India. Though banks were already using IT to streamline their process and make transactions hassle-free, they have undergone a massive transformation in the recent years. Government programs like 'digital India' and other innovative technology initiatives are the main drivers behind this change. Digital India campaign is launched by Government of India on 1st July 2015 to ensure the Government's services are made available to citizens electronically by improved online infrastructure and by increasing internet connectivity or by making the country digitally empowered in the field of technology. The initiative includes plans to connect rural areas with high-speed internet networks. Digital India consists of three core components - the development of secure and stable digital infrastructure, delivering government services digitally and universal digital literacy. Some of the facilities which will be provided through this initiative are Bharath net, digital locker, e-education, e-health, e-sign, e-shopping and national scholarship portal. Digital India programme has been structured into nine pillars, comprise early invest programmes; IT for all; electronics manufacturing; information to all; e-krantielectronic delivery of services; E-governance reforming; public internet access programme; universal access to mobile connectivity; broadband highways.

In the present study, an attempt is made by the researcher to investigate the price behaviour of banking stocks for the announcement of Digital India announcement.

OBJECTIVES OF THE STUDY

The main objective of the study is to find out the influence of digital India announcement on the price behaviour of Indian banking sector. In order to meet the main objective, the following specific objectives have been framed.

• To investigate the short-run, mid-term and long term impact of the announcement on the banking stock prices.

• To compare the impact on different types of banks like; new private sector banks, old-private sector banks and public sector banks.

HYPOTHESES

- H₁ = Digital India announcement had no significant impact on the price behaviour of banking stocks in short run
- H₂ = Digital India announcement had no significant impact on the price behaviour of banking stocks in midterm
- H₃ = Digital India announcement had no significant impact on the price behaviour of banking stocks in long run

SCOPE OF THE STUDY

The present study is an attempt to understand the reaction of banking stocks in stock market for the announcement of digital India campaign. It is an event study and the date of event is considered as the event date. The campaign was announced by 1st July 2015. Hence, this date is considered as event date. The details of event windows studied are presented in Table 1.

Since the research is aimed at studying the price behaviour of banking stocks for the announcement of Digital India campaign, the sample for the study is public sector banks, new private sector banks and old private sector banks listed n BSE.

RESEARCH METHODOLOGY

The entire study is based on the secondary data, extracted from various sources like books and websites. The stock prices are downloaded from money control website. The study period is covering short term, midterm and long term event windows and their respective estimation window.

The present study is an event study and the date of announcement of the campaign is being considered as the event date and it is denoted by 0. Days before the event date are denoted by -1, -2, -3, -4 and so on and the post-event days are denoted by +1, +2, +3 and so on. The various concepts used in the study are actual returns, abnormal returns, alpha, beta, expected return and cumulative abnormal return. The models used for the calculation of these concepts are presented below:

The daily specific actual stock return is calculated by applying the following model:

Here,
$$R_i = \log\left(\frac{P_1}{P_0}\right)$$

Here, R_i = Specific stock return

 P_1 = Closing price of the specific stock

 P_0 = Opening price of the specific stock

The daily Sensex return is calculated by applying the following model:

$$R_m = \log\left(\frac{M_1}{M_0}\right)$$

| Event Window | Duration (Days) | Working Days Covered | Duration (Days) Estimation Window | Working Days Covered |
|-----------------|--------------------|--------------------------|--------------------------------------|----------------------|
| Short Term | 31 | 10/06/2015 to 22/07/2015 | 250 | 02/07/14 to 09/06/15 |
| Mid Term | 121 | 06/04/2015 to 24/09/2015 | 250 | 24/03/14 to 01/04/15 |
| Long Term | 361 | 07/10/2014 to 22/03/2016 | 250 | 30/09/13 to 01/10/14 |

Table 1: Details of Event Windows Studied

Source: Author's Compilation.

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Here, R_m = Sensex return

 M_1 = Closing price of the Sensex

 M_0 = Opening price of the Sensex

Market model is used to find out the expected return of the specific stocks. Following is the market model:

$$ER_i = \alpha + \beta * R_m$$

 α and β are calculated as follows:

$$\beta = \frac{n\sum xy - \sum x \times \sum y}{n\sum x^2 - \sum (x^2)}$$

$$\alpha = \overline{x} - \beta \overline{x}$$

Abnormal return is calculated by applying the following model:

 AR_i = Actual Return – Expected Return

The cumulative average abnormal return provides information about the average price behaviour banking stocks during the event window. According to the efficient market theory, if the abnormal returns and cumulative abnormal returns are close to zero, the market is efficient. T test is used to assess significance of ARs. The 5% level of significance with appropriate degree of freedom was used to test the null hypothesis. The conclusions are based on the results of t value on ARs for the event window. The t statistics for ARs for each day during the event window is calculated as:

$$t = \frac{AR}{\sigma(AR)}$$

Where, AR = Abnormal Returns $\sigma AR = Standard error of abnormal returns$

The standard error is calculated by using the following formula

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

Comparison t test and One Way ANOVA test.

LITERATURE REVIEW

Raghavendra Nayak (2018) in his research article 'A conceptual study on digitalisation of banking issues and challenges in rural India' said that digitalisation is helpful in taking India towards corruption free country in the world and also help in anti-money laundering and proper collection of taxes.

Subramanyachary P. (2017) in his research article titled 'Digitalisation in India: A needed Gadget for business environment' says that digitalisation to be given priority for both quick and transparent transactions.

Amardeep Jadhav (2018) in his research article 'Impact of digitalisation on the Indian financial system' says that digitalisation brings innovation, ease of working, new job opportunities and growth in the economy.

Arya Kumar (2018) in his research article 'Digitalised India announcement volatile the Indian stock market with special reference to NIFTY 50 and BSE Sensex – A critical analysis' states that the overall output can be interpreted as the Nifty 50 and BSE Sensex has no leverage effect, but their exit leptokurtic and volatility clustering since after the announcement of digital India.

Karamvir Sheokandand Neha Gupta (2017) in their research article 'Digital India programme and impact of digitalisation on Indian economy' concludes that digitalisation improves effectiveness and efficiency of work being done. It enables transparency in all the systems and processes thereby improving quality of life.

RESEARCH GAP

SPSS software used for conducting Paired After the review of above available research

articles, we did not find a study on impact of announcement of digital India campaign on the price behaviour of banking stocks. This is found as the research gap and hence the current study has been undertaken.

LIMITATIONS OF THE STUDY

The following are the limitations of the study:

- The entire study is based on secondary data. Hence, the study might suffer from the limitations of secondary data.
- The study assumes that all other factors remaining constant.

According Table 1, there are 5 positive returns during the pre-announcement and 6 positive returns during the post-announcement period of the digital India campaign. None of the daily abnormal return is significant at 5 percent level of significance. As per the cumulative abnormal returns, right from -15 till +15, none of the CAR is positive, which indicates that the event had resulted in positive abnormal returns to the investors.

According Table 3, there are 6 positive returns during the pre-announcement and 8 positive returns during the post-announcement period of the digital India campaign. None of the daily abnormal return is significant at 5 percent level of significance. As per the cumulative abnormal returns, there are 10 negative CARs during the pre-announcement period and 0 negative CARs found during the post-announcement period. It indicates that new private sector banks have reacted positively for the announcement of the event.

According Table 4, there are 5 positive returns during the pre-announcement and 5 positive returns during the post-announcement period of the digital India campaign. None of the daily abnormal return is significant at 5 percent level of significance. As per the cumulative abnormal returns, there are 13

| Day | AR | T Value | P Value | CAR | Day | AR | T Value | P Value | CAR |
|-----|-------|---------|---------|-------|-----|-------|---------|---------|-------|
| -15 | -1.47 | -0.87 | 0.19 | -1.47 | 0 | 1.84 | 1.09 | 0.86 | -5.53 |
| -14 | 0.09 | 0.05 | 0.52 | -1.38 | 1 | 0.13 | 0.08 | 0.53 | -5.40 |
| -13 | -0.15 | -0.09 | 0.46 | -1.54 | 2 | -0.20 | -0.12 | 0.45 | -5.59 |
| -12 | -1.65 | -0.97 | 0.17 | -3.18 | 3 | 1.77 | 1.05 | 0.85 | -3.82 |
| -11 | 0.64 | 0.38 | 0.65 | -2.54 | 4 | 0.52 | 0.31 | 0.62 | -3.30 |
| -10 | -0.67 | -0.40 | 0.35 | -3.22 | 5 | 1.16 | 0.69 | 0.75 | -2.14 |
| -9 | -1.51 | -0.89 | 0.19 | -4.73 | 6 | 1.43 | 0.85 | 0.80 | -0.70 |
| -8 | -0.09 | -0.05 | 0.48 | -4.81 | 7 | 0.36 | 0.21 | 0.58 | -0.34 |
| -7 | 0.75 | 0.45 | 0.67 | -4.06 | 8 | -0.78 | -0.46 | 0.32 | -1.11 |
| -6 | 0.31 | 0.18 | 0.57 | -3.75 | 9 | -0.85 | -0.50 | 0.31 | -1.97 |
| -5 | -2.08 | -1.23 | 0.11 | -5.83 | 10 | -1.92 | -1.14 | 0.13 | -3.89 |
| -4 | -0.84 | -0.50 | 0.31 | -6.68 | 11 | -0.51 | -0.30 | 0.38 | -4.40 |
| -3 | -0.72 | -0.42 | 0.34 | -7.39 | 12 | -0.18 | -0.11 | 0.46 | -4.58 |
| -2 | -0.31 | -0.18 | 0.43 | -7.70 | 13 | -1.68 | -0.99 | 0.16 | -6.26 |
| -1 | 0.33 | 0.20 | 0.58 | -7.37 | 14 | -0.53 | -0.31 | 0.38 | -6.79 |
| 0 | 1.84 | 1.09 | 0.86 | -5.53 | 15 | -0.75 | -0.44 | 0.33 | -7.54 |

Table 2: Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), T-Values and P-Values during the Announcement of Digital India Campaign of the Stocks of Public Sector Banks

Source: Author's Compilation

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| | 0 | | 0 | | 1 0 | | | | |
|-----|-------|---------|---------|-------|-----|-------|---------|---------|------|
| Day | AR | T Value | P Value | CAR | Day | AR | T Value | P Value | CAR |
| -15 | -0.63 | -0.75 | 0.23 | -0.63 | 0 | 0.54 | 0.64 | 0.74 | 0.07 |
| -14 | -0.29 | -0.34 | 0.37 | -0.92 | 1 | 0.63 | 0.75 | 0.77 | 0.69 |
| -13 | 1.49 | 1.77 | 0.96 | 0.57 | 2 | 0.45 | 0.53 | 0.70 | 1.14 |
| -12 | -1.23 | -1.46 | 0.07 | -0.66 | 3 | -0.48 | -0.57 | 0.29 | 0.67 |
| -11 | 0.74 | 0.88 | 0.81 | 0.08 | 4 | 0.04 | 0.05 | 0.52 | 0.71 |
| -10 | -0.88 | -1.05 | 0.15 | -0.80 | 5 | 1.71 | 2.04 | 0.98 | 2.42 |
| -9 | -0.60 | -0.71 | 0.24 | -1.39 | 6 | 0.39 | 0.46 | 0.68 | 2.81 |
| -8 | 0.28 | 0.33 | 0.63 | -1.11 | 7 | 0.57 | 0.68 | 0.75 | 3.38 |
| -7 | 0.46 | 0.54 | 0.71 | -0.66 | 8 | -0.32 | -0.38 | 0.35 | 3.06 |
| -6 | -0.24 | -0.29 | 0.39 | -0.90 | 9 | -0.20 | -0.24 | 0.40 | 2.86 |
| -5 | 0.92 | 1.10 | 0.86 | 0.02 | 10 | -0.82 | -0.97 | 0.17 | 2.04 |
| -4 | 0.00 | 0.01 | 0.50 | 0.03 | 11 | 0.80 | 0.95 | 0.83 | 2.84 |
| -3 | -0.03 | -0.03 | 0.49 | 0.00 | 12 | -0.30 | -0.35 | 0.36 | 2.54 |
| -2 | -0.10 | -0.12 | 0.45 | -0.10 | 13 | 0.62 | 0.74 | 0.77 | 3.16 |
| -1 | -0.37 | -0.44 | 0.33 | -0.47 | 14 | -0.60 | -0.72 | 0.24 | 2.56 |
| 0 | 0.54 | 0.64 | 0.74 | 0.07 | 15 | -0.43 | -0.51 | 0.30 | 2.13 |

Table 3: Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), T-Values and P-Values during the Announcement of Digital India Campaign of the Stocks of New Private Sector Banks

Table 4: Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), T-Values and P-Values during the Announcement of Digital India Campaign of the Stocks of Old Private Sector Banks

| | C | | e | | U | | | | |
|-----|-------|---------|---------|-------|-----|-------|---------|---------|-------|
| Day | AR | T Value | P Value | CAR | Day | AR | T Value | P Value | CAR |
| -15 | -0.82 | -0.62 | 0.27 | -0.82 | 0 | -0.13 | -0.10 | 0.46 | -0.85 |
| -14 | -0.37 | -0.28 | 0.39 | -1.19 | 1 | 0.45 | 0.34 | 0.63 | -0.40 |
| -13 | 0.02 | 0.01 | 0.51 | -1.17 | 2 | -0.14 | -0.10 | 0.46 | -0.54 |
| -12 | -1.05 | -0.80 | 0.21 | -2.22 | 3 | 0.95 | 0.73 | 0.77 | 0.41 |
| -11 | 0.25 | 0.19 | 0.58 | -1.97 | 4 | -0.85 | -0.65 | 0.26 | -0.44 |
| -10 | 1.95 | 1.50 | 0.93 | -0.01 | 5 | 0.61 | 0.46 | 0.68 | 0.17 |
| -9 | -0.88 | -0.68 | 0.25 | -0.90 | 6 | 0.88 | 0.67 | 0.75 | 1.05 |
| -8 | -1.19 | -0.91 | 0.18 | -2.08 | 7 | -0.21 | -0.16 | 0.44 | 0.84 |
| -7 | 1.53 | 1.17 | 0.88 | -0.55 | 8 | 0.57 | 0.43 | 0.67 | 1.40 |
| -6 | -1.15 | -0.88 | 0.19 | -1.70 | 9 | -0.42 | -0.32 | 0.37 | 0.98 |
| -5 | -0.06 | -0.05 | 0.48 | -1.76 | 10 | -1.16 | -0.89 | 0.19 | -0.18 |
| -4 | 2.78 | 2.13 | 0.98 | 1.02 | 11 | -0.67 | -0.51 | 0.30 | -0.84 |
| -3 | -0.65 | -0.50 | 0.31 | 0.37 | 12 | -0.12 | -0.09 | 0.46 | -0.96 |
| -2 | -0.46 | -0.35 | 0.36 | -0.10 | 13 | -0.40 | -0.31 | 0.38 | -1.36 |
| -1 | -0.63 | -0.48 | 0.32 | -0.72 | 14 | -0.84 | -0.64 | 0.26 | -2.20 |
| 0 | -0.13 | -0.10 | 0.46 | -0.85 | 15 | -0.50 | -0.38 | 0.35 | -2.70 |

Source: Author's Compilation

negative CARs during the pre-announcement period and 9 negative CARs found during the post-announcement period.

As per Table 5, during midterm, public sector banks had 1 significant abnormal return on day -38, new private sector banks had 3 significant abnormal return on day -58, -52,-39, old private sector banks had 0 significant abnormal return. In long run, public sector banks had 15 significant abnormal return on day 166, 156, 152, 144, 135, 133, 63, -38, -80, -94, -99, -101, -103, -104, -131, new private sector banks had 10 significant abnormal return on day -113, -101, -92, -58, -52, -39, 63, 134, 143, 157, old private sector banks had 6 significant abnormal return on day -134, -113, -110, 77, 134, 1 44.

TESTING OF HYPOTHESES

In this part of the study, the research hypotheses are being tested by using One Way ANOVA and Paired Comparison T Test. H₁ Digital India announcement had no significant impact on the price behaviour of banking stocks in short run

The result of one-way ANOVA test conducted for pre and post event window abnormal returns for the short period is presented in Table 6. As the F statistic for public sector banks, new private sector banks and for old private sector banks is lesser than the critical value at 5 percent level of significance with 29 degree of freedom; the null hypothesis is accepted.

The hypothesis is also tested with the help of Paired Comparison T test. The result of the same ispresented in Table 7. According to the table it is clear that the calculated T values for public sector banks, new private sector banks and also for old private sector banks are lesser than the critical value at 5 percent level of significance with 14 degree of freedom, the null hypothesis is accepted.

Hence, it is concluded that in the short run, the event had no significant impact on the

| | | Significant abr | normal | returns | Cumulative | | |
|-----------------------|--|-----------------------------------|---|-------------------|------------|--|--|
| Event window | | Pre-event | | Post-event | Abnormal | | |
| | Qty | Days | Qty | Days | Return (%) | | |
| Public sector banks | | | | | | | |
| 121 day | 1 | -38 | 0 | N.A | 20.12 | | |
| 361 day | 1 day 8 -38, -80, -94, -99,-101, -103, -104, -131 | | 7 166, 156, 152, 144 135, 133, 63 | | -13.72 | | |
| New private sector b | anks | | | | | | |
| 121 day | 3 | -58, -52, -39 | 0 | N.A | 8.83 | | |
| 361 day | 6 | -58, -52, -39, -92, -101, -113 | 4 | 63, 134, 143, 157 | 20.17 | | |
| Old private sector ba | nks | | | | | | |
| 121 day | 0 | N.A | 0 | N.A | 10.72 | | |
| 361 day | 3 | -134, -113, -110 | 3 | 77, 134, 144 | -8.25 | | |

Table 5: Cumulative Abnormal Returns for the Midterm and Long Term Event Windows

Source: Author's Compilation

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| Source of Variation | SS | df | MS | F | P-value | F crit | | |
|--------------------------|----------|----|----------|----------|----------|----------|--|--|
| Public sector banks | | | | | | | | |
| Between Groups | 0.955583 | 1 | 0.955583 | 1.005923 | 0.324471 | 4.195972 | | |
| Within Groups | 26.59877 | 28 | 0.949956 | | | | | |
| Total | 27.55435 | 29 | | | | | | |
| New private sector banks | | | | | | | | |
| Between Groups | 0.214142 | 1 | 0.214142 | 0.439399 | 0.512833 | 4.195972 | | |
| Within Groups | 13.64587 | 28 | 0.487353 | | | | | |
| Total | 13.86002 | 29 | | | | | | |
| Old private sector banks | | | | | | | | |
| Between Groups | 0.042337 | 1 | 0.042337 | 0.044625 | 0.834225 | 4.195972 | | |
| Within Groups | 26.56435 | 28 | 0.948727 | | | | | |
| Total | 26.60669 | 29 | | | | | | |

Table 6: One Way ANNOVA for Short Term Window (31 days)

 Table 7: Paired Comparison T-Test

| | | | - | | Sig. (2-tailed) | | | | | |
|-------------|--------------------------|------------|----------------------|--|--------------------|----|------|--|--|--|
| Mean | Std. | Std. Error | 95% Confide the D | 95% Confidence Interval of the Difference | | | | | | |
| | Deviation | Iviean | Lower | Upper | | | | | | |
| Public sect | Public sector banks | | | | | | | | | |
| 35600 | 1.47264 | .38024 | -1.17152 | -1.17152 .45952 | | 14 | .365 | | | |
| New priva | te sector bank | KS | | | | | | | | |
| 16933 | .96489 | .24913 | 70367 | .36500 | 680 | 14 | .508 | | | |
| Old privat | Old private sector banks | | | | | | | | | |
| 16933 | .96489 | .24913 | 70367 | .36500 | 680 | 14 | .508 | | | |

Source: Author's Compilation

price behaviour of stocks of public sector banks, new private sector banks and old private sector banks.

H₂ Digital India announcement had no significant impact on the price behaviour of banking stocks in midterm

The result of one-way ANOVA test conducted for pre and post event window abnormal returns for the midterm period is presented in Table 8. As the F statistic for public sector banks, new private sector banks and for old private sector banks is lesser than the critical value at 5 percent level of significance with 199 degree of freedom; the null hypothesis is accepted.

The hypothesis is also tested with the help of Paired Comparison T test. The result of the same is resented in Table 9. According to the table it is clear that the calculated T values for public sector banks, new private sector banks and also for old private sector banks are

| Source of Variation | SS | df | MS | F | P-value | F crit | | | |
|--------------------------|----------|-----|----------|----------|----------|----------|--|--|--|
| Public sector banks | | | | | | | | | |
| Between Groups | 5.006706 | 1 | 5.006706 | 1.694605 | 0.195531 | 3.921478 | | | |
| Within Groups | 348.6307 | 118 | 2.954497 | | | | | | |
| Total | 353.6374 | 119 | | | | | | | |
| New private sector banks | | | | | | | | | |
| Between Groups | 0.713676 | 1 | 0.713676 | 1.218796 | 0.271843 | 3.921478 | | | |
| Within Groups | 69.09588 | 118 | 0.585558 | | | | | | |
| Total | 69.80956 | 119 | | | | | | | |
| Old private sector banks | | | | | | · | | | |
| Between Groups | 0.585614 | 1 | 0.585614 | 0.59689 | 0.441312 | 3.921478 | | | |
| Within Groups | 115.7709 | 118 | 0.981109 | | | | | | |
| Total | 116.3565 | 119 | | | | | | | |

Table 8: One Way ANNOVA for Midterm Window (121 days)

Table 9: Paired Comparison T-Test

| Mean | Std. Deviation | Std. Error | 95% Confi the 1 | dence Interval of Difference | t | df | Sig. (2-tailed) | | |
|---------------------|--------------------------|------------|--------------------|---------------------------------|--------|----|--------------------|--|--|
| | | Iviean | Lower | Upper | | | | | |
| Public sector banks | | | | | | | | | |
| 40817 | 2.64769 | .34182 | -1.09214 | .27580 | -1.194 | 59 | .237 | | |
| New priva | te sector banks | | | · | | | | | |
| 15433 | 1.21584 | .15696 | 46842 | .15975 | 983 | 59 | .330 | | |
| Old privat | Old private sector banks | | | | | | | | |
| 06407 | 1.33594 | .17392 | 41222 | .28408 | 368 | 59 | .714 | | |

Source: Author's Compilation

lesser than the critical value at 5 percent level of significance with 59 degree of freedom, the null hypothesis is accepted.

Hence, it is concluded that the event had no significant impact in the midterm period on the price behaviour of stocks of public sector banks, new private sector banks and old private sector banks.

H₃ Digital India announcement had no

significant impact on the price behaviour of banking stocks in long run

The result of one-way ANOVA test conducted for pre and post event window abnormal returns for the long run is presented in Table 10. As the F statistic for public sector banks, new private sector banks and for old private sector banks is lesser than the critical value at 5 percent level of significance with 359 degree of freedom; the null hypothesis is accepted.

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| Source of Variation | SS | df | MS | F | P-value | F crit | | |
|--------------------------|----------|-----|----------|----------|----------|----------|--|--|
| SPublic sector banks | - | | • | • | | | | |
| Between Groups | 1.046629 | 1 | 1.046629 | 0.378219 | 0.538949 | 3.867565 | | |
| Within Groups | 990.6779 | 358 | 2.767257 | | | | | |
| Total | 991.7245 | 359 | | | | | | |
| New private sector banks | | | | | | | | |
| Between Groups | 0.131835 | 1 | 0.131835 | 0.221496 | 0.638189 | 3.867565 | | |
| Within Groups | 213.0828 | 358 | 0.595203 | | | | | |
| Total | 213.2147 | 359 | | | | | | |
| Old private sector banks | 5 | | | | | | | |
| Between Groups | 0.004813 | 1 | 0.004813 | 0.004992 | 0.94371 | 3.867565 | | |
| Within Groups | 345.1127 | 358 | 0.964002 | | | | | |
| Total | 345.1175 | 359 | | | | | | |

Table 10: One Way ANNOVA for Long Term Window (361 days)

 Table 11: Paired Comparison T-Test

| Mean | Std. | Std. Error | 95% Confide the Di | t | df | Sig. (2-tailed) | | | |
|---------------------|--------------------------|------------|-----------------------|--------|------|--------------------|------|--|--|
| | Deviation | Iviean | Lower | Upper | | | | | |
| Public sector banks | | | | | | | | | |
| 10767 | 2.44164 | .18199 | 46679 | .25145 | 592 | 179 | .555 | | |
| New priva | te sector bank | KS | | | | | | | |
| .03828 | 1.13417 | .08454 | 12854 | .20509 | .453 | 179 | .651 | | |
| Old privat | Old private sector banks | | | | | | | | |
| .00733 | 1.32330 | .09863 | 18730 | .20197 | .074 | 179 | .941 | | |

Source: Author's Compilation

The hypothesis is also tested with the help of Paired Comparison T test. The result of the same is resented in Table 11. According to the table it is clear that the calculated T values for public sector banks, new private sector banks and also for old private sector banks are lesser than the critical value at 5 percent level of significance with 179 degree of freedom, the null hypothesis is accepted.

Hence, it is concluded that the event had no significant impact in the long run on the price behaviour of stocks of public sector banks, new private sector banks and old private sector banks.

FINDINGS

It is found in the study that in short run, under public sector banks, majority of the daily abnormal returns during both pre and post event window period, are negative and cumulative abnormal returns found to be negative during the event window, none of the daily abnormal returns are significant.

- Among the new private sector banks, it is clear from the study that even though majority of the daily abnormal returns are found to be negative, cumulative abnormal returns during the post event window is positive. It indicates that the event had resulted in positive abnormal returns during the post event window but none of the daily abnormal returns are significant.
- It is clear from the study in the short run that, among the old private sector banks majority of the daily abnormal returns and cumulative abnormal returns are negative, none of the daily abnormal returns are significant.
- Daily abnormal returns for the midterm window and long term window reveals the fact that more than ninety percent of the them are insignificant for public sector banks, new private sector banks and old private sector banks.
- The results of the Paired Comparison T test and One Way ANOVA test shows the fact that the announcement of Digital India had no significant impact on the price behaviour of stocks of public sector banks, new private sector banks and old private sector banks during the short run, mod term and long run.

CONCLUSION

The current study is aimed to find out the impact of announcement of Digital India campaign on price behaviour of banking stocks. The cumulative abnormal returns calculated for the event window shows an impact from the event; for public sector and old private sector banks, negative impact and for new private sector banks, it is positive but as per the paired comparison T test and One Way ANOVA test, it was proved that the event had no significant impact on the price behaviour of banks under study. Hence, it is concluded that the announcement of Digital India campaign had no significant impact on the price behaviour of stocks of public sector banks, new private sector banks and old private sector banks in short run, midterm as well as in the long run.

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