

Demonetization and its Impact on Share Price of Select Companies In India Listed with BSE

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ABSTRACT

Demonetization is the process by which a series of currency will not be legal tender. This is usually done when there is a change of national currency, replacing the old notes with new one. The demonetization was done in an effort to stop the counterfeiting of the current banknotes alleged to be used for funding terrorism and for checking down on black money in the country. Such a step taken by Indian government is like a master stroke for the Indian Economy and it had affected various sectors like Agriculture, Automobiles, Banking, Telecom, Real-estate, Cement, Pharmaceutical etc., This sudden announcement and President Election in US affected the stock market, where market indices dropped to six months low in the week following the announcement of demonetization. BSE crashed around 1689 points and NIFTY over 541 points. The main aim of this study is to analyze the impact of demonetization on the share price of select sectoral companies and to predict the share price behavior in future. The study concluded that there is increase in share price of majority of the companies namely, Maruti Suzuki, Tata Motors, ACC, BhartiAirtel, Idea Cellular, MTNL, HDFC Bank, SBI, Kotak, Oberoi Realty, Prestige Estate and India Bull and all other companies share price were shown low. However there is no big difference, it is just a slight decrease. Though some sector companies recovered from the short term fall, in other hand some companies are suffer due to this initiative and it will result in subsequent quarter, it can recover from this short term affect in an upcoming period.

1. Introduction

In the economical aspect, saving is heritage behavior. From the ancient period, the people have tried to maximize their money with the help of savings. Particularly, the household sector is having the saving habit out of their earnings whatever it may be. Generally, the money saved from the earnings was invested in the gold and agricultural lands. The investment behavior now, has been developed into various avenues like real estate, bullion market, security market, bank and other deposits, etc.. In recent decades, participation in the security market is increased in the sub-continent. At 31.6 %, India's savings ratio is highest in the world after China but nearly 3.5%. It must be noted that the SENSEX is a good barometer of Indian Stock Market, which in turn is a good enough indicator of our economy. In an important move, the Government of India declared that the five hundred and one thousand rupee notes will no longer be legal tender from midnight, 8th November 2016. The RBI had issue Two thousand rupee notes and new notes of Five hundred rupees which was placed in circulation from 10th November 2016. Notes of one hundred, fifty, twenty, ten, five, two and one rupee remained legal tender and was unaffected by this decision. This measure has been an attempt to address the resolve against corruption, black money and counterfeit notes. This move is expected to cleanse the formal economic system and discard black money from the same¹.

On 28th October 2016, the total currency in circulation in India was Rs. 17.77 lakhcrore (US\$260 billion). In terms of value, the annual report of Reserve Bank of India of 31 March 2016 stated that total bank notes in circulation valued to Rs.16.42 lakh crore (US\$240 billion) of which nearly 86% (i.e. Rs. 14.18 lakh crore (US\$210 billion)) was 500 and 1000 rupee notes. In terms of volume, the report stated that 24% (i.e. 2,203 crore)of the total 9,026.6 crore banknotes were in circulation².

The sudden announcement of the currency ban by our prime minister resulted downfall in many sectors like automobile, cement, telecom, FMCG, etc. due to shortage of currency. This unexpected fall was expected in the stock market also. Being a strong indicator of our economy, the decision was affected the stock market very badly coupled with the US Presidential Election victory of Donald Trump. Many investors withdrawn their capital from the stock market in which they invested since the investors expect a big loss because of this move. India's Nifty (down 3.5%) was the second worst performing index in Asia after Philippines, and the fourth globally – after Mexico (down 5.9%), Brazil (4.3%) and Philippines (down 3.9%). The leading edge benchmark indices – S&P BSE Sensex and the Nifty50 – that vanished around 7.5% during the month, though have managed to regain some losses. The Nifty50 index, for instance, hit an intra-day low of 7,916 levels on November 21st has clawed back to 8,200 levels by December 08th.

¹CARE Ratings "Economic consequences of demonetization of 500 and 100 Rupees Notes

² Sambit,19 November 2016

2. History and Background

India is one of the oldest civilizations in the world with a kaleidoscopic variety and rich cultural inheritance. It has achieved all-round socioeconomic progress during the last 70 years of its independence. India has become self-sufficient in agricultural production and is now one of the top industrialized countries in the world and one of the few nations to have gone into outer space to conquer nature for the benefit of the people. However, regardless of such progress, India too wasn't spared from the scourge of demonetization. India experienced the scourge of demonetization not once, but rather twice.

The first wave of demonetization happened in the year 1946, on 12th January Rs.1000 and Rs.10,000 which were in circulation were demonetized primarily to stop unaccounted money. Through this drive the government collected Rs.134 crore of the total Rs.143 crore available in the market (according to RBI estimates), only Rs.9 crore was not exchanged therefore demonetized. It curved out to become more like a currency conversion drive as the government couldn't achieve much of profit in the cash-strapped economy at the time. The second wave of demonetization happened in the year 1978, during the reign of Moraji Desai, when the Wanchoo Committee appointed by the government decided to recall the reintroduced Rs.1,000, Rs.5,000 and Rs.10,000 entirely from the cash system as the country was going through a difficult time. In 1965, despite India wins the Indo-Pak war, the military expenditure pushed inflation close to 7%.

3. Statement of the Problem

The Indian Economy is a dollar to trillion worth one and considered as a growth engine of Asia. It is one of the economies that grew more than 7% in recent years. Industry as well as the service sector is growing in phenomenal ways in recent years. In spite of this achievement India has been marred by corruption, execution deficiency, lack of efficiency leaders and inefficient political system. Certain statistic pointed out that the black money deposited by Indians in the offshore tax havens exceeds dollar one trillion which is equivalent to 45% of GDP. The black money became as the election issue and during the election campaign, Mr.NarendraModi of BJP, owed not only to bring black money stashed in offshore market but also to abolish forfeited currency. In order to full fill the commitment, the Modi government has adopted the concept of demonetization. The government claimed that, the action would "curtail the shadow of the economy and crack down on the use of illicit and counterfeit cash to fund illegal activity and terrorism".

The sudden declaration of demonetization and the prolonged cash shortages in the weeks that followed created huge disruption throughout the economy, threatening economic yield. As a resultant, impact on the stock market was also well expected. Demonetization leads to a situation where the country would suddenly feel short of money that it needed to enable the transactions. This leads to decrease in prices of goods and services. Until money comes into circulation the purchasing power of the people would impact the prices in various sectors, it could be real estate, automobiles, steels, cement, banking, telecommunication, etc. which in turn affects the prices of stocks negatively. Due to currency being sucked

out of the market coupled with Trump's victory, the mood in the stock market was completely bearish.

Market indices dropped to six months low in the weeks following the announcement of demonetization. BSE crashed around 1689 points. A lot of investors had withdrawn their capital from stock. Some withdrawn due to lack of funds (since the currency they had at home no longer works) and other because they expected a crash, perhaps an opportunity to buy at a lower level. The stock market is a good indicator of how perceptions of investors have been grounded across sectors during this period. Stock price movements could be quick perceptions indicator, which admittedly would be affected by various other factors such as company-specific developments, industry related issues, etc., on a real time basis. This can nonetheless be used as an indicator of how sectors are expected to be impacted on account of demonetization. Hence there is a need to understand how much the demonetization has affected the stock prices and to analyze the stock price movement pre and post demonetization. Based on the above mentioned problems, the researcher has framed following research Questions:

What will be the behavior of share price in select companies during the prediction period?

Is there any impact of demonetization on share price of select companies during the post period of demonetization?

4. Objective:

- i. To analyze the stock price behavior and forecast the share price of select companies.
- ii. To analyze the impact of demonetization on share prices of selected companies from different sectors.

5. Research Methodology:

Sources of Data:

The study has used data from secondary sources which are collected mainly from the website Bombay Stock Exchange and the other required data were collected from various journals, articles, newspaper and Websites.

Study Period:

The study covers the period of four eighty one days from 17th November 2015 to 26 October 2017, which has been collected from BSE website. Prediction period covers twenty five days from 27th October 2017 to 30th November 2017.

Sampling Design:

Convenient sampling technique has been employed in this study. The sectors for the study selected based on the review given by the Economic Times on. Share price of select top five companies of each sector listed with BSE was selected on their market capitalization. Automobile Companies consist of Maruti Suzuki, Tata Motors, Bajaj Auto, Eicher Motors and Mahindra and Mahindra.

Cement Companies consist of Ultratech, Shree Cements, Ambuja Cements, ACC and Dalmia Bharat.

Telecommunication Companies consist of BhartiAirtel, Idea Cellular, Tata Communications, Reliance Communications, and MTNL. Banking Companies consist of HDFC, SBI, Kotak Mahindra, ICICI and Axis Bank. Real Estate Companies consist of DLF Ltd, Oberoi Realty, Godrej Prop, Prestige, and Indiabulls Real.

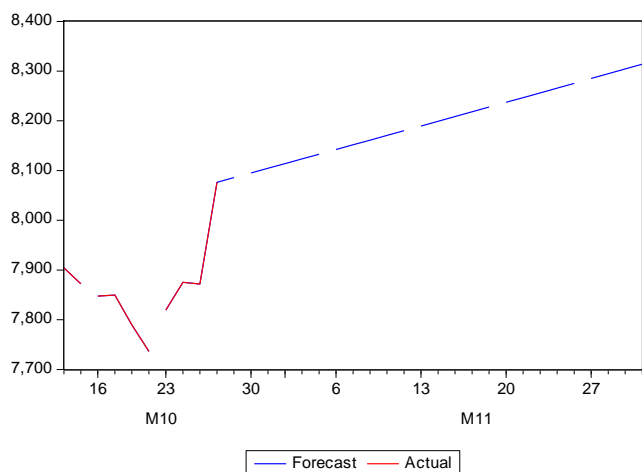
Tools for Analysis:

Auto Regressive Integrated Moving Average (ARIMA) Models used for the prediction of the share price and Ordinary Least Squares (OLS) method has been employed for to study the impact of demonetization.

6. Analysis and Interpretation

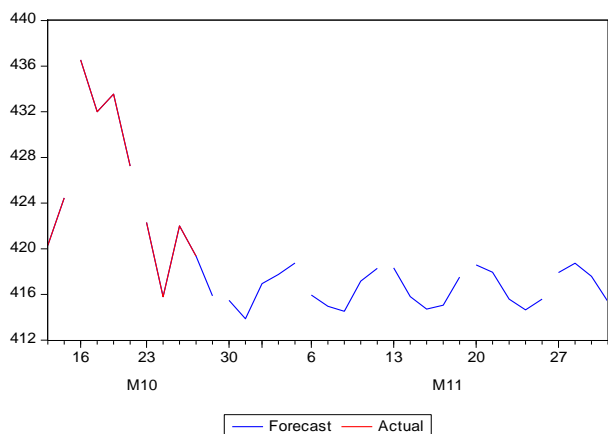
The following is the analysis of forecasting the share price behavior for selected sectors.

Figure - 1
Actual and Forecast for the Share Price of Maruti Suzuki



The Forecasting analysis for the security return of Maruti Suzuki has a upward trend in future and the model fixed by the ARIMA is (0,0)(0,0) with the AIC value of -5.509388.

Figure - 2
Actual and Forecast for the Share Price of Tata Motors

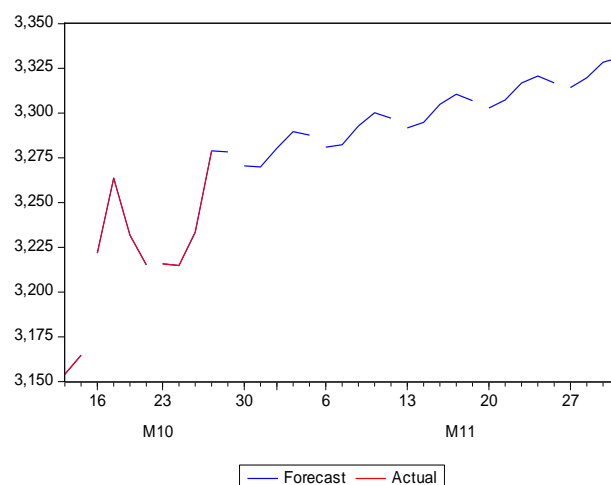


The Forecasting analysis for the security return of Tata Motors has a fluctuating trend in future and the model fixed by the ARIMA is (3,3)(0,0) with the AIC value of -4.767686.

Automobile Sector

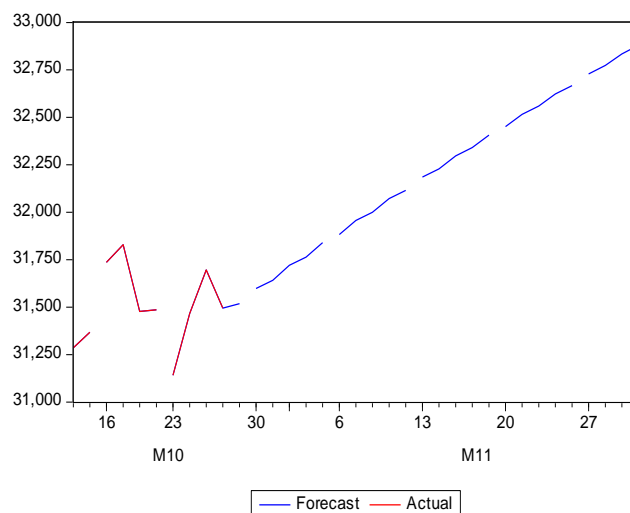
The following are the forecasting results for select automobile companies using ARIMA model.

Figure - 3
Actual and Forecast for the Share Price of Bajaj Auto



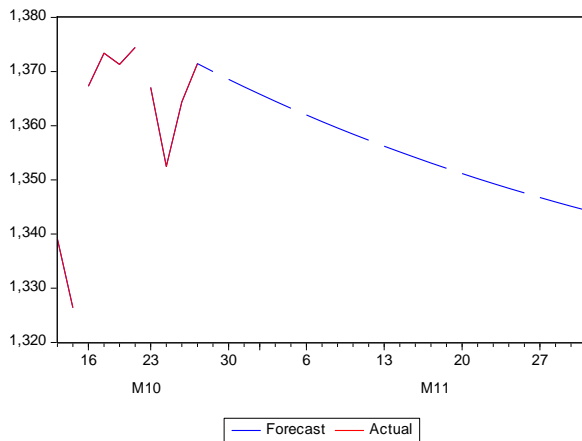
The Forecasting analysis for the security return of Bajaj Auto has a upward trend in future and the model fixed by the ARIMA is (2,2)(0,0) with the AIC value of -5.854809.

Figure - 4
Actual and Forecast for the Share Price of Eicher Motors



The Forecasting analysis for the security return of Eicher Motors has a upward trend in future and the model fixed by the ARIMA is (3,2)(0,0) with the AIC value of -5.248960.

Figure - 5
Actual and Forecast for the Share Price of Mahindra

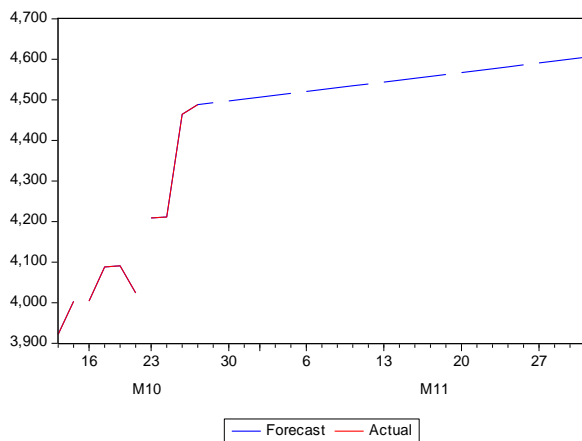


The Forecasting analysis for the security return of Mahindra has a decreasing trend in future and the model fixed by the ARIMA mode is $(1,0)(0,0)$ with the AIC value of -5.676254 .

Cement Sector

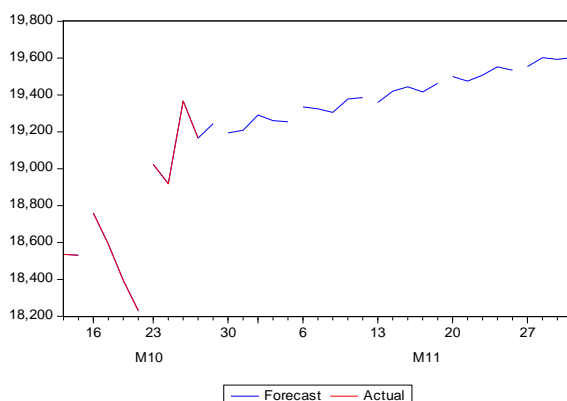
The following are the forecasting results for select cement companies using ARIMA model.

Figure - 6
Actual and Forecast for the Share Price of Ultratech Cement



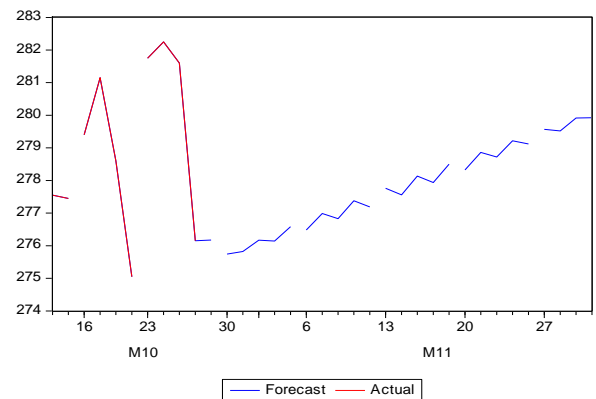
The Forecasting analysis for the security return of Ultratech Cement has a constant trend up to certain limit in future and the model fixed by the ARIMA is $(0,0)(0,0)$ with the AIC value of -5.548368 .

Figure - 7
Actual and Forecast for the Share Price of Shree Cements



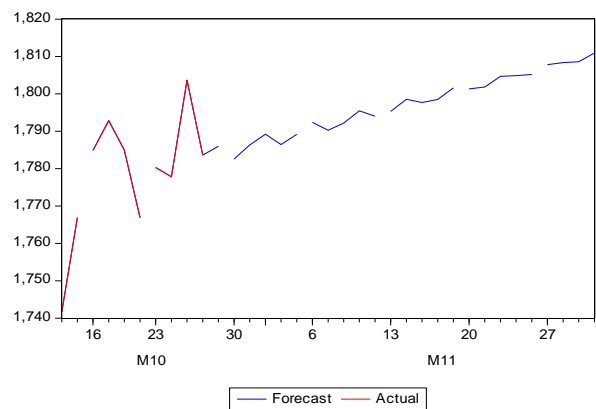
The Forecasting analysis for the security return of Shree Cement has a upward trend in future and the model fixed by the ARIMA is $(2,2)(0,0)$ with the AIC value of 14.055421 .

Figure - 8
Actual and Forecast for the Share Price of Ambuja Cements



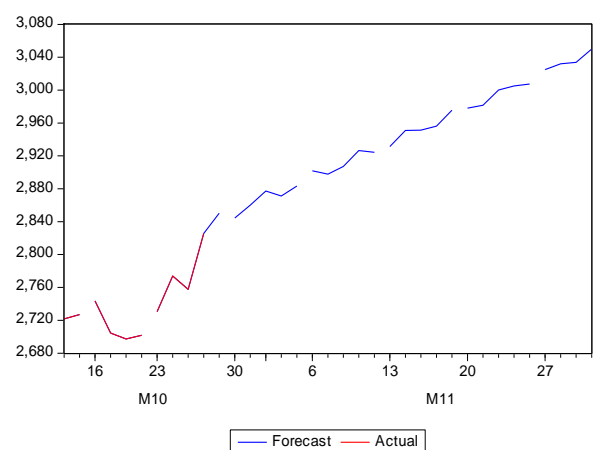
The Forecasting analysis for the security return of Ambuja Cements has a slow fluctuating trend in future and the model fixed by the ARIMA is $(2,4)(0,0)$ with the AIC value of -5.594145 .

Figure - 9
Actual and Forecast for the Share Price of ACC



The Forecasting analysis for the security return of ACC has a slow upward trend in future and the model fixed by the ARIMA is $(2,2)(0,0)$ with the AIC value of -5.677333 .

Figure - 10
Actual and Forecast for the Share Price of Dalmia Bharat



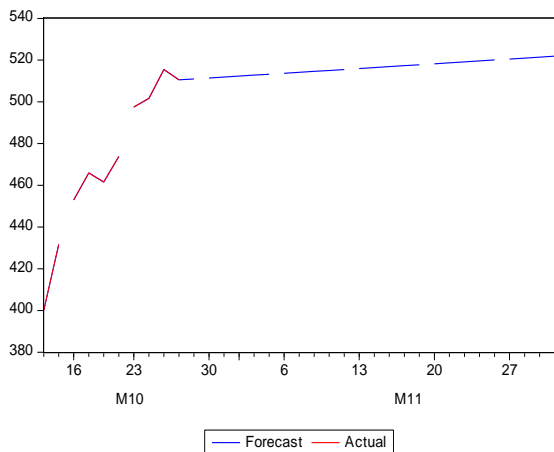
The Forecasting analysis for the security return of Dalmia Bharat has a upward trend in future and the model fixed by the ARIMA is $(3,2)(0,0)$ with the AIC value of -4.722344 .

Telecommunication Sector

The following are the forecasting results for select telecommunication companies using ARIMA model.

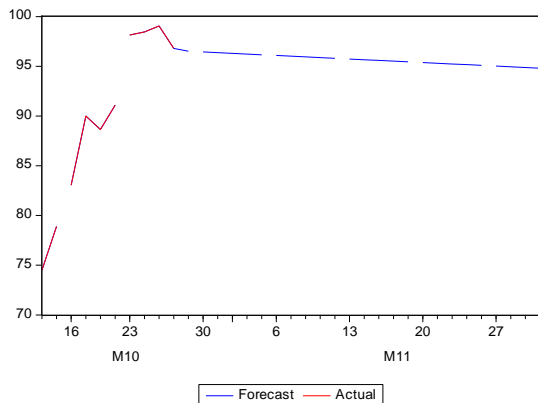
model fixed by the ARIMA is (0,1)(0,0) with the AIC value of 7.768569

Figure - 11
Actual and Forecast for the Share Price of Bharti Airtel



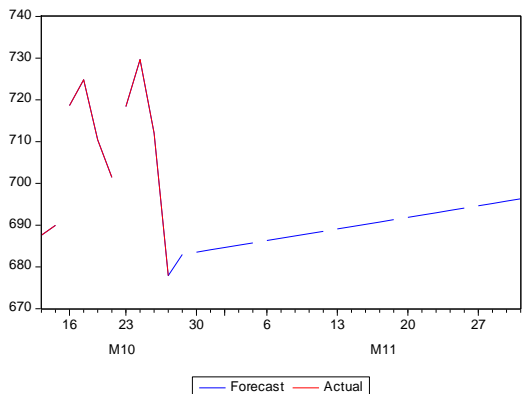
The Forecasting analysis shows that the security return of BhartiAirtel is constantly increasing in future and the model fixed by the ARIMA is (0,0)(0,0) with the AIC value of - 5.290007.

Figure - 12
Actual and Forecast for the Share Price of Idea Cellular



The Forecasting analysis for the security return of Idea Cellular has a downward trend in future and the model fixed by the ARIMA is (0,1)(0,0) with the AIC value of 4.806082.

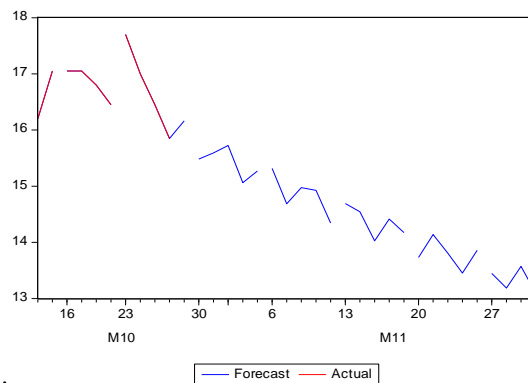
Figure - 13
Actual and Forecast for the Share Price of Tata Communication



The Forecasting analysis for the security return of Tata Communication has a gradual upward trend in future and the

Figure - 14

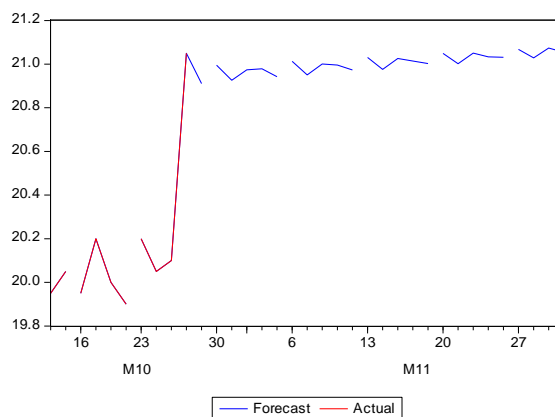
Actual and Forecast for the Share Price of Reliance Communication



The Forecasting analysis for the security return of Reliance Communication has a downward trend in future and the model fixed by the ARIMA is (3,4)(0,0) with the AIC value of 3.297594.

Figure - 15

Actual and Forecast for the Share Price of MTNL



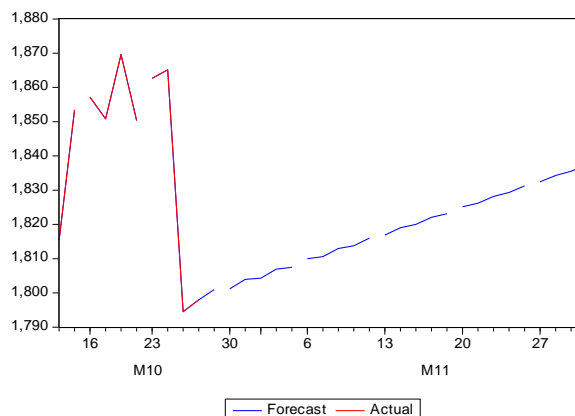
The Forecasting analysis for the security return of MTNL has a upward trend in a consistent way in future and the model fixed by the ARIMA is (2,3)(0,0) with the AIC value of -4.279437.

Banking Sector

The following are the forecasting results for select banking companies using ARIMA model.

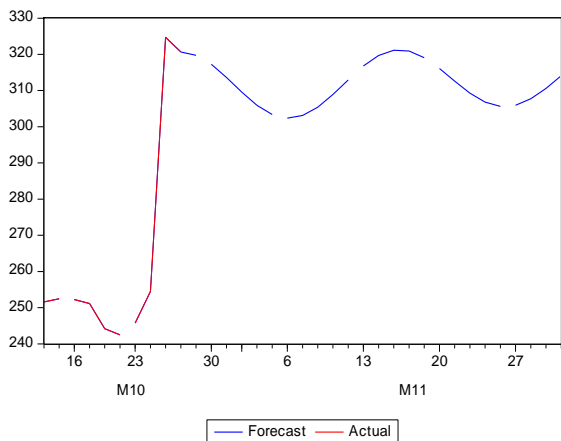
Figure - 16

Actual and Forecast for the Share Price of HDFC Bank



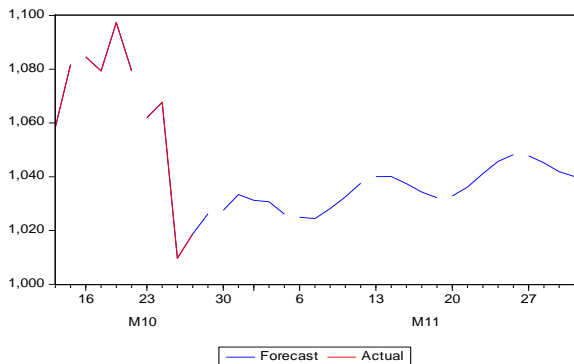
The Forecasting analysis for the security return of HDFC Bank has a gradual upward trend in future and the model fixed by the ARIMA is (1,1)(0,0) with the AIC value of -7.793972.

Figure - 17
Actual and Forecast for the Share Price of SBI



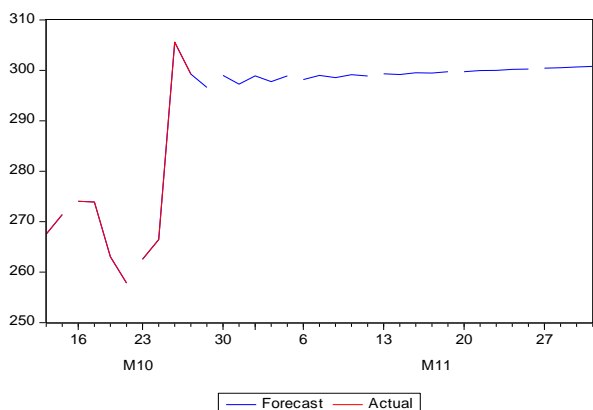
The Forecasting analysis for the security return of SBI has a fluctuating trend in future and the model fixed by the ARIMA is (3,2)(0,0) with the AIC value of -4.758038.

Figure - 18
Actual and Forecast for the Share Price of Kotak Mahindra Bank



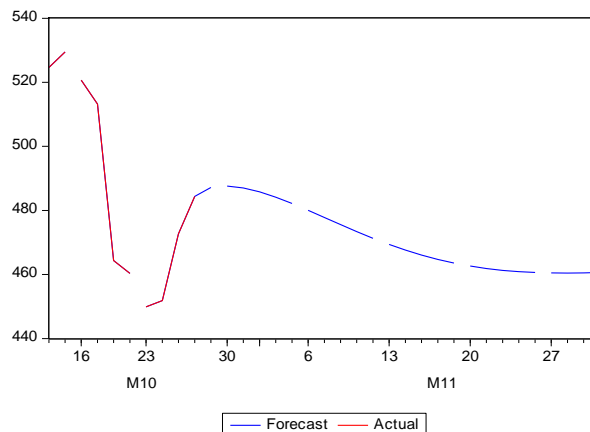
The Forecasting analysis for the security return of Kotak Mahindra Bank has a fluctuating trend in future and the model fixed by the ARIMA is (4,3)(0,0) with the AIC value of - 5.954717.

Figure - 19
Actual and Forecast for the Share Price of ICICI Bank



The Forecasting analysis for the security return of ICICI Bank has a constant upward trend in future and the model fixed by the ARIMA is (2,2)(0,0) with the AIC value of 6.179652.

Figure - 20
Actual and Forecast for the Share Price of Axis Bank

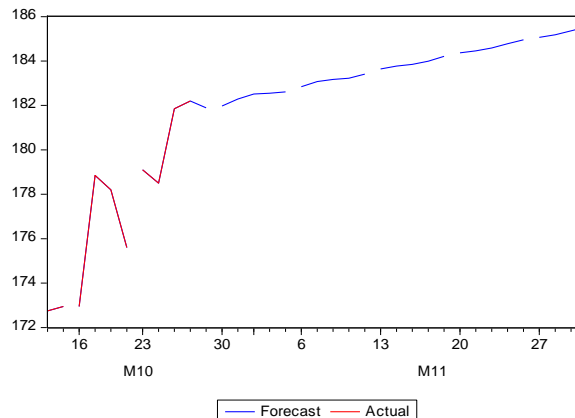


The Forecasting analysis for the security return of Axis Bank has a downward trend in future and the model fixed by the ARIMA is (3,2)(0,0) with the AIC value of -5.177881.

Real Estate Sector

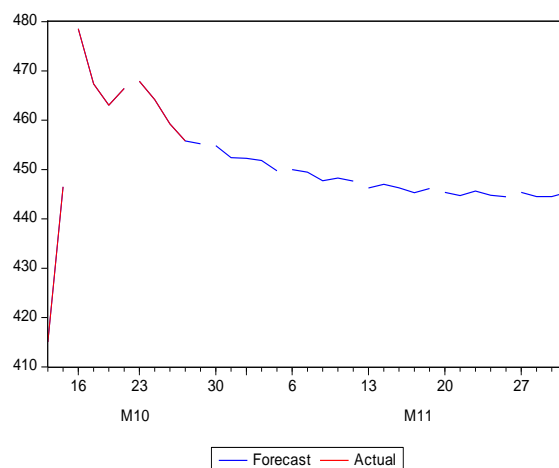
The following are the forecasting results for select real estate companies using ARIMA model.

Figure - 21
Actual and Forecast for the Share Price of DLF



The Forecasting analysis for the security return of DLF has a gradual upward trend in future and the model fixed by the ARIMA is (4,2)(0,0) with the AIC value of 5.680408.

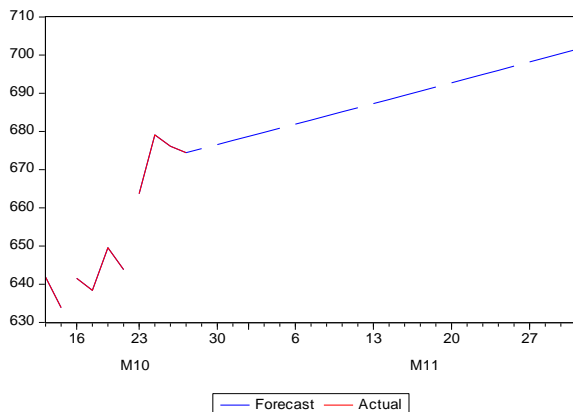
Figure - 22
Actual and Forecast for the Share Price of Oberoi Realty



The Forecasting analysis for the security return of Oberoi Realty has a downward trend in future and the model fixed by the ARIMA is (4,3)(0,0) with the AIC value of -4.650101.

The Forecasting analysis for the security return of Prestige Realty has a upward trend in future and the model fixed by the ARIMA is (0,0)(0,0) with the AIC value of -4.423522.

Figure - 23
Actual and Forecast for the Share Price of Godrej Prop



The Forecasting analysis for the security return of Godrej Prop has a upward trend in future and the model fixed by the ARIMA is (0,0)(0,0) with the AIC value of -5.060127.

Figure - 24
Actual and Forecast for the Share Price of Prestige Realty

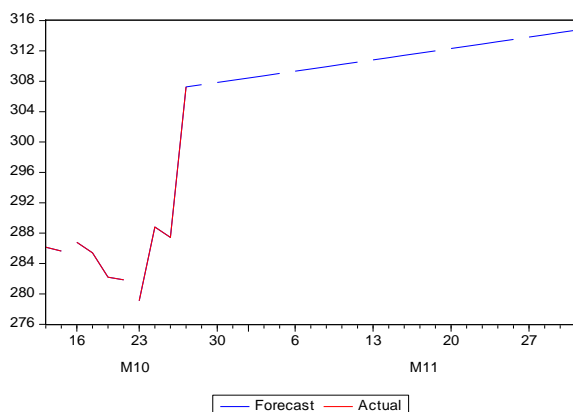
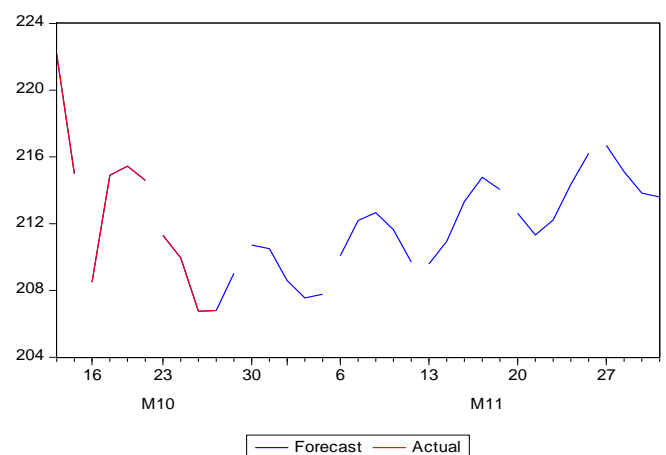


Figure 25
Actual and Forecast for the Share Price of Indiabulls Real



The Forecasting analysis for the security return of Indiabulls has a fluctuating trend in future and the model fixed by the ARIMA is (4,4)(0,0) with the AIC value of 5.889026.

7. Ordinary Least Square Analysis

To analyze the impact of demonetization on share price of select sectorial companies listed in BSE, a Dummy variable representing the pre and post period has been included as explanatory variable and the results has been presented in the following table.

Table – 1
Ordinary Least Square Analysis of Select Sectors Listed in BSE

Companies	Variable	Coefficient	Std Error	t-statistic	Prob.
AUTOMOBILE SECTOR					
Maruti Suzuki	C	0.0010	0.0010	0.998	0.319
	Demonetization	0.0006	0.0014	0.429	0.668
Tata Motors	C	-0.0023	0.0020	-1.155	0.249
	Demonetization	0.0015	0.0014	1.031	0.303
Bajaj Auto	C	0.0009	0.0008	1.0760	0.2824
	Demonetization	-0.0003	0.0012	-0.2259	0.8214
Eicher	C	0.0020	0.0011	1.7796	0.0758
	Demonetization	-0.0008	0.0016	-0.4821	0.63
Mahindra	C	0.00042	0.0009	0.4554	0.649
	Demonetization	-0.00037	0.0013	-0.2886	0.773
CEMENT SECTOR					
Ultratech Cement	C	0.0016	0.0010	1.6926	0.0912
	Demonetization	-0.0010	0.0014	-0.7243	0.4692
Shree Cements	C	0.0021	0.0012	1.7127	0.0874
	Demonetization	-0.0014	0.0017	-0.8226	0.4111

Ambuja Cements	C	0.0010	0.0009	1.0021	0.3168
	Demonetization	-0.0003	0.0013	-0.2423	0.8086
ACC	C	0.0006	0.0009	0.6739	0.5007
	Demonetization	0.0002	0.0013	0.1606	0.8724
Dalmia Bharat	C	0.0046	0.0015	3.0776	0.0022
	Demonetization	-0.0029	0.0021	-1.3923	0.1645
TELECOMMUNICATION SECTOR					
BhartiAirtel	C	-0.0002	0.0011	-0.2256	0.8216
	Demonetization	0.0025	0.0016	1.6365	0.1024
Idea Cellular	C	-0.0021	0.0018	-1.1825	0.2376
	Demonetization	0.0038	0.0026	1.4800	0.1395
Tata Communication	C	0.0018	0.0013	1.3758	0.1695
	Demonetization	-0.0012	0.0018	-0.6262	0.5315
Reliance Communication	C	-0.0012	0.0019	-0.6296	0.5293
	Demonetization	-0.0026	0.0027	-0.9444	0.3454
MTNL	C	0.0004	0.0019	0.2191	0.8267
	Demonetization	0.0005	0.0027	0.1897	0.8496
BANKING SECTOR					
HDFC	C	0.0007	0.0006	1.2602	0.2082
	Demonetization	0.0008	0.0008	0.9558	0.3396
SBI	C	0.0003	0.0015	0.2230	0.8236
	Demonetization	0.0009	0.0021	0.4323	0.6657
Kotak Mahindra	C	0.0008	0.0008	1.0306	0.3033
	Demonetization	0.0002	0.0011	0.1771	0.8595
ICICI	C	0.0005	0.0013	0.3627	0.7170
	Demonetization	-0.0001	0.0019	-0.0414	0.9670
Axis	C	0.0003	0.0012	0.2739	0.7843
	Demonetization	-0.0002	0.0017	-0.1399	0.8888
REAL ESTATE SECTOR					
DLF	C	0.0015	0.0019	0.7692	0.4422
	Demonetization	-0.00002	0.0027	-0.0059	0.9953
Oberoi Realty	C	0.0013	0.0015	0.8639	0.3881
	Demonetization	0.0002	0.0022	0.1004	0.9200
Godrej Properties	C	0.0006	0.0012	0.5113	0.6094
	Demonetization	0.0022	0.0018	1.2765	0.2024
Prestige Estate	C	0.00014	0.0017	0.0847	0.9325
	Demonetization	0.0023	0.0024	0.9659	0.3346
Indiabull Real	C	0.0017	0.0024	0.7085	0.4790
	Demonetization	0.0031	0.0035	0.8858	0.3762

Source: Compiled and computed from secondary data

The above table shows ordinary least squares regression method for estimating the impact of demonetization on share price of select sectoral companies. The analysis found from the automobile companies that the share price of Maruti Suzuki, Tata Motors were increased during post demonetization period and the share price of Bajaj Auto, Eicher and Mahindra were decreased.

The OLS result for cement companies revealed that the share price of Ultratech, Shree cements, Ambuja cements and Dalmia were decreased and share price of ACC has been increased during post demonetization period. The share price of telecommunication companies BhartiAirtel, Idea Cellular and MTNL were increased while share price of Tata Communication and Reliance Communication were decreased during post demonetization.

It is found from the OLS analysis that the share price of HDFC, SBI, Kotak Mahindra were increased while share price of ICICI and Axis Bank are decreased during post demonetization period. In case of Real Estate sector, the share price of Oberoi, Godrej, Prestige and Indiabulls were increased and share price of DLF is decreased during post demonetization period.

8. Suggestion

- The companies Mahindra, Idea Cellular, Reliance Communication, Axis Bank Oberoi Realty should increase their share price movement for their betterment. And the companies BhartiAirtel, Tata Communication may notify their share price movement for the efficient performance.

- By promoting cashless transactions for the payment of money, automobile companies can increase their sales. This may lead to more profit and increase in share price.
- For the betterment of sales and performance the banking companies should make the customers aware of online payment, card payment, and mobile wallet payment on delivery of goods and Real estate sector can improve its status by rate cuts and giving concessions on housing loans.

9. Conclusion

Demonetization is an important historical move in India. The study focused on impact of demonetization on the select twenty five companies from five sectors. It is observed from the analysis that, all the sectors which were taken for the study

were affected due to the sudden announcement of demonetization but majority of the companies from these sectors namely Maruti Suzuki, Tata Motors, ACC, BhartiAirtel, Idea Cellular, MTNL, HDFC Bank, SBI, Kotak, Oberoi Realty, Prestige Estate and India Bull were recovered from the short term fall and all other companies still projects negative return. Though there is a positive impact during the post period, few companies were also faced certain problem, but this wouldn't affect the companies for long time and the effect which was faced by the companies for a short term will be result in subsequent quarter. The companies can also recover from this short term affect in the forthcoming periods. Since it is for short term, the investors need not to worry about their investment and for their better opportunity they can buy stocks at lower prices and it would yield good in a future.

References

1. Narendra Nathan (November 14 2016),How demonetisation and Donald Trump's victory impact your investments, The Economic Times, Retrieved from http://economictimes.indiatimes.com/articleshow/55384579.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
2. Rajat Sharma (November 14 2016), Demonetization-Impact on Stock Markets, Retrieved from <http://www.blog.sanasecurities.com/demonetisation-impact-stock-markets/>
3. Ami Shah (December 19 2016), Demonetization Impact: PSU bank shares outperform private peers, live mint, Retrieved From <http://www.livemint.com/Money/gtYK2YkcLdYZ8ETWNaW0CI/Demonetisation-impact-PSU-bank-shares-outperform-private-pe.html>
4. Pros and Cons of Demonetization Rs 500, 1000, Retrieved from, <https://www.studydhaba.com/demonetization-pdf/>
5. www.yahoofinance.com