



**A CASE STUDY ON THE INFLUENCE OF INTEREST
RATE ON THE STOCK PRICE OF STATE BANK OF
INDIA (SBI) & PUNJAB NATIONAL BANK (PNB)**

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INTROCUCTION

The banking system is a crucial component of the global economy. While money-changing and money-lending may be as old as money, banking dates back to 15th century medieval Italy, and played a major role in the rise of the Italian city-states as world economic powers. Ever since, the health of an economy and the health of its banks have been interrelated; the global credit crisis, precipitated by the collapse of the subprime-fueled U.S. housing bubble, is only the most recent example.

Banks are just one part of the world of financial institutions, standing alongside investment banks, insurance companies, finance companies, investment managers and other companies that profit from the creation and flow of money. As financial intermediaries, banks stand between depositors who supply capital and borrowers who demand capital. Given how much commerce and individual wealth rests on healthy banks, banks are also among the most heavily regulated businesses in the world.

The Indian banking can be broadly categorized into nationalized (government owned), private banks and specialized banking institutions. The Reserve Bank of India acts a centralized body monitoring any discrepancies and shortcoming in the system. Since the nationalization of banks in 1969, the public sector banks or the nationalized banks have acquired a place of prominence and has since then seen tremendous progress. The need to



COMMONWEALTH JOURNAL OF COMMERCE & MANAGEMENT RESEARCH

Vol.2, Issue 11 (November 2015) ISSN: 2393-851X Impact Factor: 0.612

become highly customer focused has forced the slow-moving public sector banks to adopt a fast track approach. The unleashing of products and services through the net has galvanized players at all levels of the banking and financial institutions market grid to look anew at their existing portfolio offering. Conservative banking practices allowed Indian banks to be insulated partially from the Asian currency crisis. Indian banks are now quoting a higher valuation when compared to banks in other Asian countries (viz. Hong Kong, Singapore, Philippines etc.) that have major problems linked to huge Non Performing Assets (NPAs) and payment defaults. Co-operative banks are nimble footed in approach and armed with efficient branch networks focus primarily on the 'high revenue' niche retail segments.

Private banks have been fast on the uptake and are reorienting their strategies using the internet as a medium. The Internet has emerged as the new and challenging frontier of marketing with the conventional physical world tenets being just as applicable like in any other marketing medium.

The Indian banking has come from a long way from being a sleepy business institution to a highly proactive and dynamic entity. This transformation has been largely brought about by the large dose of liberalization and economic reforms that allowed banks to explore new business opportunities rather than generating revenues from conventional streams (i.e. borrowing and lending). The banking in India is highly fragmented with 30 banking units contributing to almost 50% of deposits and 60% of advances. Indian nationalized banks (banks owned by the government) continue to be the major lenders in the economy due to their sheer size and penetrative networks which assures them high deposit mobilization. The Indian banking can be broadly categorized into nationalized, private banks and specialized banking institutions.

The Reserve Bank of India act as a centralized body monitoring any discrepancies and shortcoming in the system. It is the foremost monitoring body in the Indian financial sector. The nationalized banks (i.e. government-owned banks) continue to dominate the Indian banking arena. Industry estimates indicate that out of 274 commercial banks operating in India, 223 banks are in the public sector and 51 are in the private sector. The



private sector bank grid also includes 24 foreign banks that have started their operations here. Under the ambit of the nationalized banks come the specialized banking institutions. These co-operatives, rural banks focus on areas of agriculture, rural development etc.,

Unlike commercial banks these co-operative banks do not lend on the basis of a prime lending rate. They also have various tax sops because of their holding pattern and lending structure and hence have lower overheads. This enables them to give a marginally higher percentage on savings deposits. Many of these cooperative banks diversified into specialized areas (catering to the vast retail audience) like car finance, housing loans, truck finance etc. in order to keep pace with their public sector and private counterparts, the co-operative banks too have invested heavily in information technology to offer high-end computerized banking services to its clients.

OBJECTIVES OF THE STUDY:

- To know about effects of RBI rates on performance of State Bank of India and Punjab National Bank
- To Forecast the future value of SBI & PNB Share price.

LIMITATIONS:

- This study and analysis does not includes all the participates in the Indian public sector banks
- This source of study is limited to 5 years.
- The study of State Bank of India and Punjab National Bank does not reflects the whole performance of Indian public sector banking firms.



RESEARCH METHODOLOGY

1. Type of Research

The article has been developed by implementing descriptive type of research. Since the research work has focused on the existing problem.

2. Secondary Data

The article is developed based on secondary data

3. Statistical Tool

Correlation and forecasting tool is applied to analyze the data.

DATA ANALYSIS:

State Bank of India data analysis:

Table showing the Correlation between Repo rate and State Bank of India share price.

MONTHS	REPORATE	SHARE PRICE
19-Mar-10	5	2078.2
20-Apr-10	5.25	2300.7
2-Jul-10	5.5	2302
27-Jul-10	5.75	2502.9
16-Sep-10	6	2766.4
2-Nov-10	6.25	3150.6
25-Jan-11	6.5	2642.4
17-Mar-11	6.75	2765.3
3-May-11	7.25	2297.95
16-Jun-11	7.5	2404.65
26-Jul-11	8	2344.8
16-Sep-11	8.25	1911.05
25-Oct-11	8.5	1906.3
17-Apr-12	8	2138.1
29-Jan-13	7.75	2438
19-Mar-13	7.5	2072.75
3-May-13	7.25	2046.75
20-Sep-13	7.5	1614.9
29-Oct-13	7.75	1796.75
18-Dec-13	7.75	1766.5
28-Jan-14	8	1766.5
1-Apr-14	8	1523.85
3-Jun-14	8	2542.25
5-Aug-14	8	2439.25
30-Sep-14	8	2445.7



COMMONWEALTH JOURNAL OF COMMERCE & MANAGEMENT RESEARCH

Vol.2, Issue 11 (November 2015) ISSN: 2393-851X Impact Factor: 0.612

Hypothesis:

Ho: the share price of State Bank of India is not related to Repo rate

Ha1: the share price of State Bank of India is positively related to Repo rate

Ha2: the share price of State Bank of India is negatively related to Repo rate

Correlation is -0.41414

Here Ha2 is accepted because the share price of State Bank of India is negatively related to Repo rate

Interpretation:

There is moderate negative relationship between the RBI Repo rate and State Bank of India share value. This means, that whenever the Interest rate increases the share value decreases. The interest rate and the share value moves in opposite direction.

Table showing the Correlation between Bank Nifty and State Bank of India share price.

MONTHS	BANK NIFTY	SBI SHARE VALUE
19-Mar-10	9459.6	2078.2
20-Apr-10	9870.35	2300.7
2-Jul-10	9464.6	2302
27-Jul-10	10161	2502.9
16-Sep-10	12366.35	2766.4
2-Nov-10	11952.6	3150.6
25-Jan-11	10641.85	2642.4
17-Mar-11	11705.45	2765.3
3-May-11	11020.85	2297.95
16-Jun-11	11244.65	2404.65
26-Jul-11	10893.65	2344.8
16-Sep-11	9468.3	1911.05
25-Oct-11	9989.65	1906.3
17-Apr-12	10276.8	2138.1
29-Jan-13	12708.6	2438
19-Mar-13	11361.85	2072.75
3-May-13	12475.65	2046.75
20-Sep-13	9617.8	1614.9
29-Oct-13	11473.15	1796.75
18-Dec-13	11153.95	1766.5
28-Jan-14	10764.7	1766.5
1-Apr-14	12855.85	1523.85
3-Jun-14	15241.9	2542.25
5-Aug-14	15740.4	2439.25
30-Sep-14	15392.25	2445.7



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Hypothesis:

Ho: the Bank Nifty is not related to SBI share price.

Ha1: the Bank Nifty is positively related to SBI share price.

Ha2: the Bank Nifty is negatively related to SBI share price.

Correlation is 0.298727

Ha1 is accepted because the Bank Nifty is positively related to SBI share price.

Interpretation:

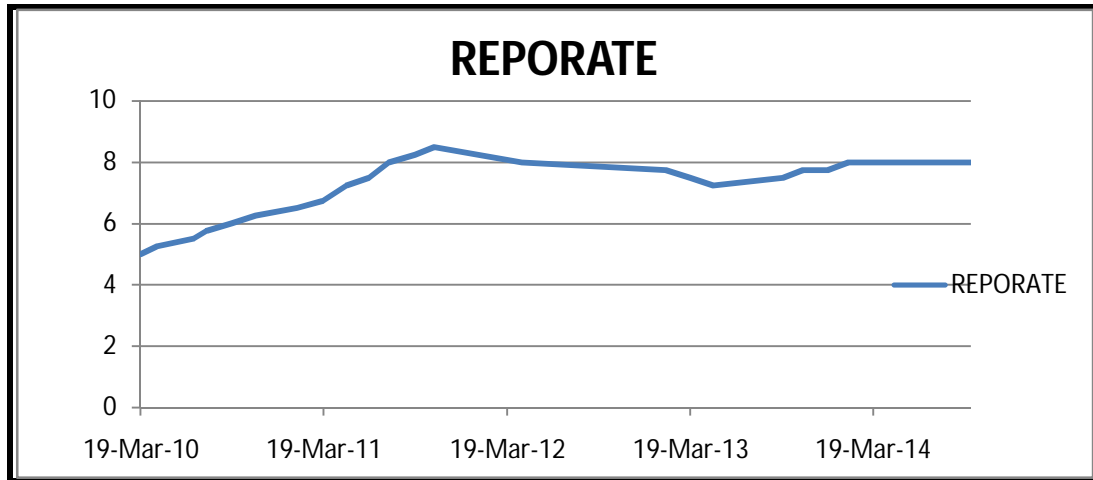
There is a weak positive relationship between the Bank Nifty rate and SBI share price. This means that whenever the Bank Nifty increases the SBI share price also increases. Both move in the same direction.

Table Showing the Repo Rate

MONTHS	REPORATE
19-Mar-10	5
20-Apr-10	5.25
2-Jul-10	5.5
27-Jul-10	5.75
16-Sep-10	6
2-Nov-10	6.25
25-Jan-11	6.5
17-Mar-11	6.75
3-May-11	7.25
16-Jun-11	7.5
26-Jul-11	8
16-Sep-11	8.25
25-Oct-11	8.5
17-Apr-12	8
29-Jan-13	7.75
19-Mar-13	7.5
3-May-13	7.25
20-Sep-13	7.5
29-Oct-13	7.75
18-Dec-13	7.75
28-Jan-14	8
1-Apr-14	8
3-Jun-14	8
5-Aug-14	8
30-Sep-14	8



Chart showing changes in Reserve Bank of India Repo rate



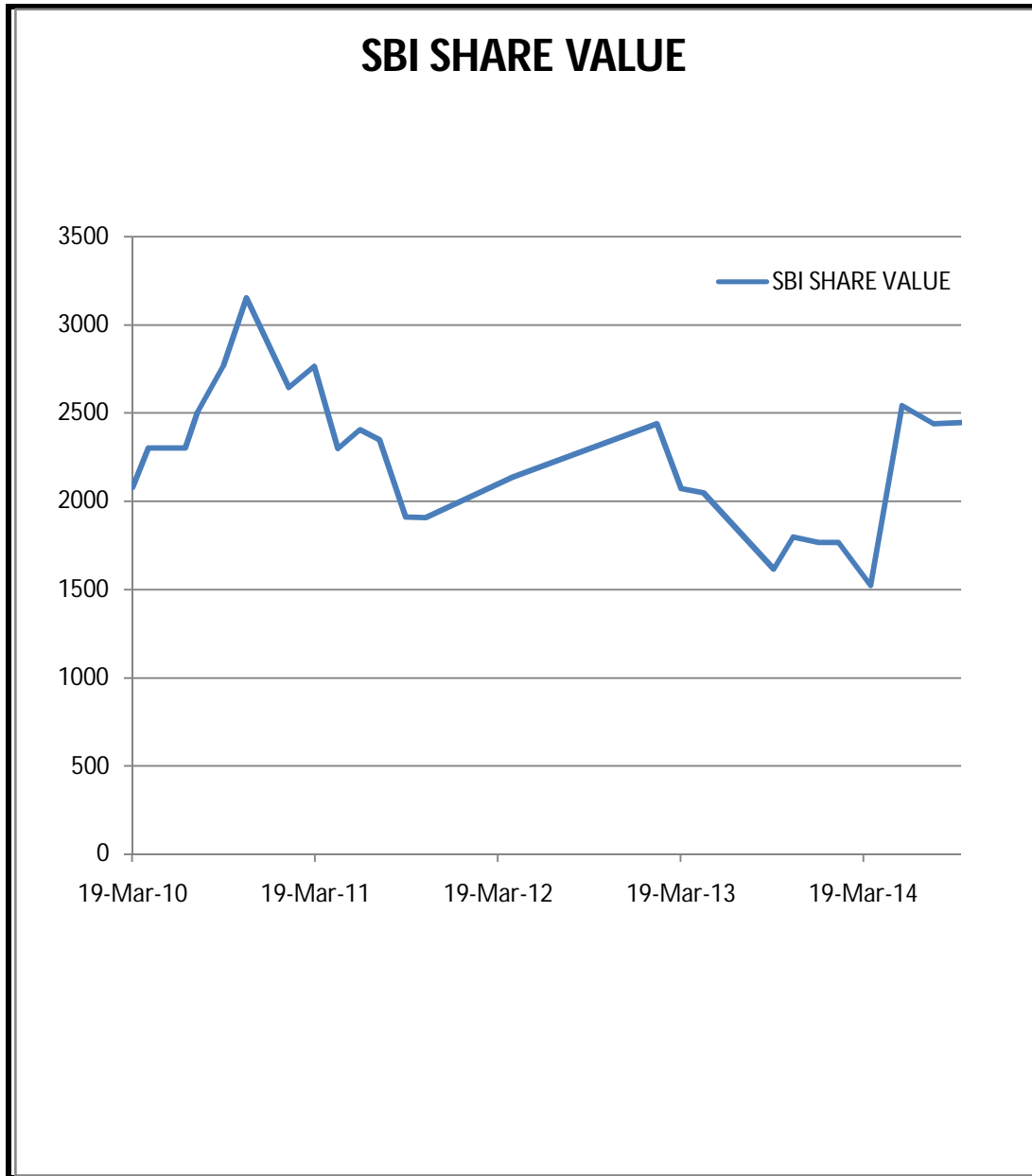
RBI Repo rate was kept unchanged (8%) from 28 Jan 2014- 02 Dec 2014.

Table showing the changes in State Bank of India Share price

MONTHS	SHARE PRICE
19-Mar-10	2078.2
20-Apr-10	2300.7
2-Jul-10	2302
27-Jul-10	2502.9
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1-Apr-14	1523.85
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5-Aug-14	2439.25
30-Sep-14	2445.7



Chart Showing the SBI Share Value



Interpretation: Share price of State Bank of India is showing mixed results it is increased at one stage and decreasing at another stage. The value of State Bank of India share price is depending up on the RBI Repo rate and Bank Nifty.

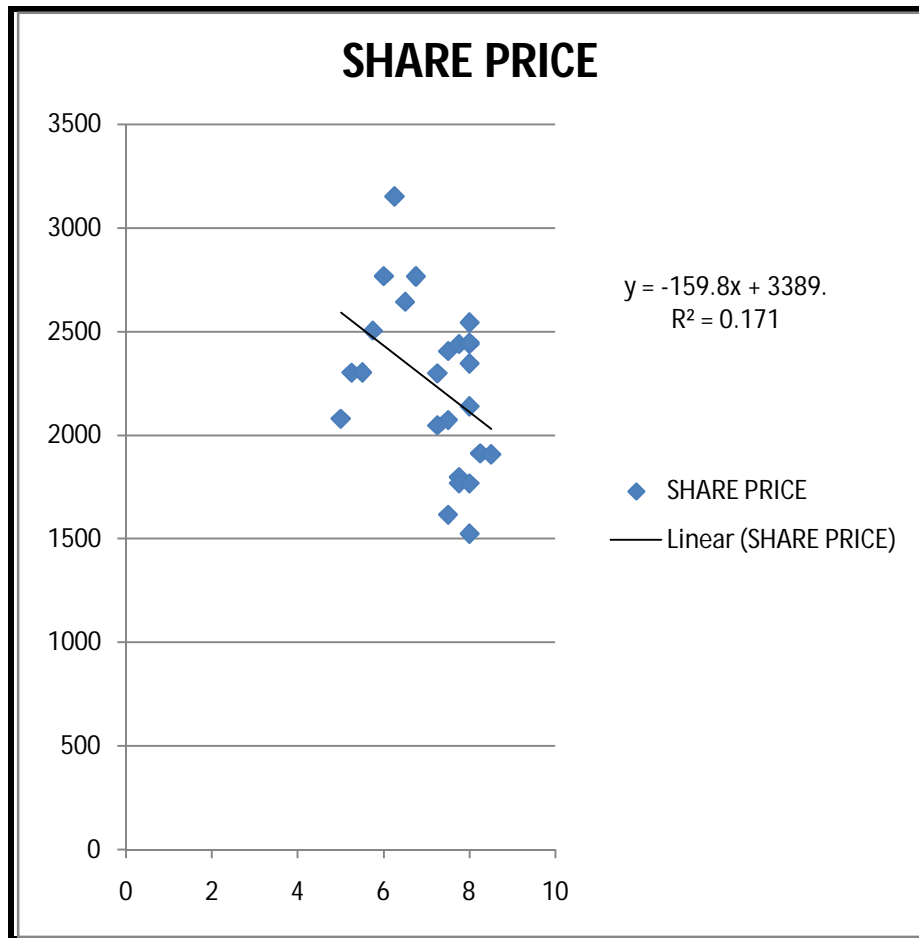


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Forecasting analysis:

MONTHS	REPORATE	SHARE PRICE
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27-Jul-10	5.75	2502.9
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5-Aug-14	8	2439.25
30-Sep-14	8	2445.7



- If Repo rate increase to 9 then share price will be as follows...
 Y (share price) $= -159.8 \times 9 + 3389$ which is equals to Rs. 1950.8.
- If Repo rate decrease to 7 then share price will be as follows..
 Y (share price) $= -159.8 \times 7 + 3389$ which is equals to Rs. 2270.4.

Interpretation:

From the calculation it is very clear that if the repo rate increases the share value decreases and vice-versa.



Punjab National Bank data analysis:

Table showing the Correlation between the Repo rate and Punjab National Bank share price.

MONTHS	REPORATE	PNB SHARE PRICE
19-Mar-10	5	1012.75
20-Apr-10	5.25	1039.5
2-Jul-10	5.5	1048.95
27-Jul-10	5.75	1070.45
16-Sep-10	6	1180.25
2-Nov-10	6.25	1290.8
25-Jan-11	6.5	1104.45
17-Mar-11	6.75	1212.7
3-May-11	7.25	1099.6
16-Jun-11	7.5	1089.25
26-Jul-11	8	1123.9
16-Sep-11	8.25	953
25-Oct-11	8.5	976.25
17-Apr-12	8	898.45
29-Jan-13	7.75	912.1
19-Mar-13	7.5	717.9
3-May-13	7.25	760.05
20-Sep-13	7.5	461.45
29-Oct-13	7.75	544.4
18-Dec-13	7.75	626.45
28-Jan-14	8	547.55
1-Apr-14	8	743.9
3-Jun-14	8	943.8
5-Aug-14	8	956.75
30-Sep-14	8	887.3

Ho: the share price of Punjab National Bank is not related to Repo rate

Ha1: the share price of Punjab National Bank is positively related to Repo rate

Ha2: the share price of Punjab National Bank is negatively related to Repo rate

Correlation of Repo rate and PUNJAB NATIONAL BANK share price is -0.45782

Ha2 is accepted because the share price of Punjab National Bank is negatively related to Repo rate



Interpretation:

There is moderate negative relationship between the RBI Repo rate and Punjab National Bank share value. When the share price increases, the repo rate decreases and vice-versa.

Table showing the Correlation between the BANK NIFTY and Punjab National Bank share price.

MONTHS	BANK NIFTY	PNB SHARE VALUE
19-Mar-10	9459.6	1012.75
20-Apr-10	9870.35	1039.5
2-Jul-10	9464.6	1048.95
27-Jul-10	10161	1070.45
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18-Dec-13	11153.95	626.45
28-Jan-14	10764.7	547.55
1-Apr-14	12855.85	743.9
3-Jun-14	15241.9	943.8
5-Aug-14	15740.4	956.75
30-Sep-14	15392.25	887.3

Hypothesis:

Ho: the Bank Nifty is not related to Punjab National Bank share price.

Ha1: the Bank Nifty is positively related to National Bank share price.

Ha2: the Bank Nifty is negatively related to National Bank share price.

Correlation of BANK NIFTY and PUNJAB NATIONAL BANK share price is 0.006263

Ha1 is accepted because the Bank Nifty is positively related to PNB Share Price.

Interpretation:

There is a moderate positive relationship between the Bank Nifty and Punjab National Bank share value.

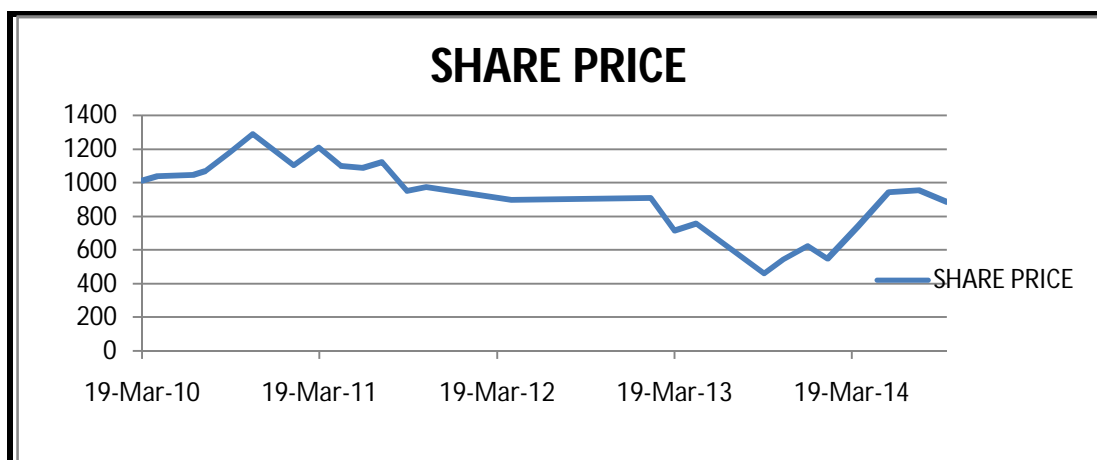


COMMONWEALTH JOURNAL OF COMMERCE & MANAGEMENT RESEARCH

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Table showing the Changes in share price of Punjab National Bank.

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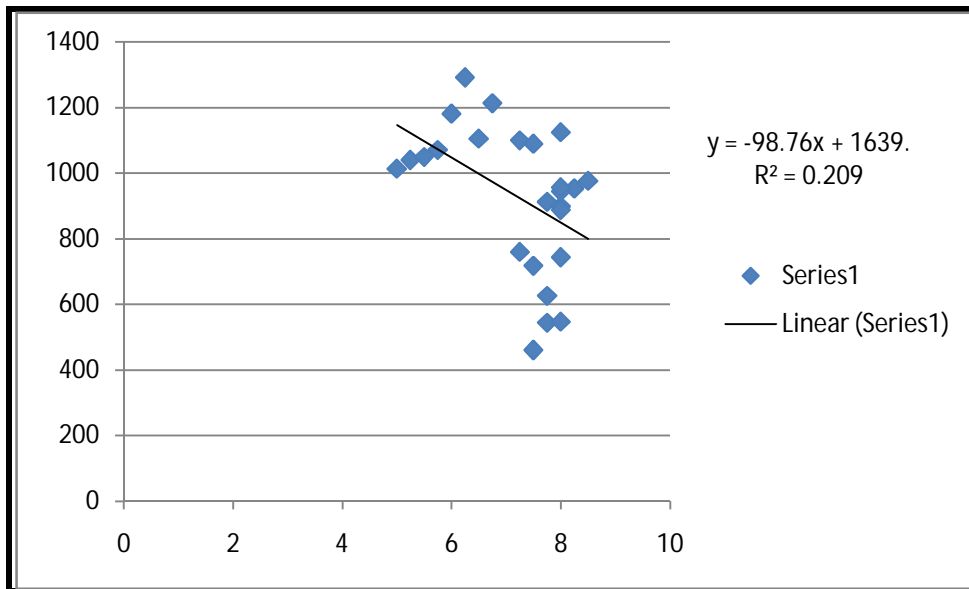
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Interpretation: Share price of punjab national bank is showing mixed results it is increased at one stage and decreasing at another stage. The value of punjab national bank share price is depending up on the RBI Repo rate and Bank Nifty.

Forecasting analysis

MONTHS	REPORATE	PNB SHARE PRICE
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3-Jun-14	8	943.8
5-Aug-14	8	956.75
30-Sep-14	8	887.3



- If Repo rate increase to 9 then share price will be as follows
 $= -98.76 * 9 + 1639$ which is Rs. 750.16
- If Repo rate decrease to 7 then share price will be as follows
 $= -98.76 * 7 + 1639$ which is Rs. 947.68

Interpretation:

From the calculation it is very clear that if the Repo rate increase the share price may fall and vice-versa.

FINDINGS

➤ State bank of India

- The correlation between the RBI Repo rate and SBI share price is -0.414 which indicates that There is moderate negative relationship between the RBI Repo rate and Punjab National Bank share value.
- The correlation between the Bank Nifty and SBI share price is 0.298 indicates that There is A weak positive relationship between the Bank Nifty rate and SBI share price.



- The future share price of SBI is valued at 1950.8 if there is increase in RBI Repo rate to 9%. Which is currently at 2445.7 (Repo rate 8%). If Repo rate decrease to 7 then share price will be as follows $Y(\text{share price}) = -159.8 * 7 + 3389$ which is equals to 2270.4

➤ **Punjab National Bank**

- The correlation between the RBI Repo rate and Punjab National Bank share price is -0.457 which indicates that there is moderate negative relationship between the RBI Repo rate and Punjab National Bank share value.
- The correlation between the Bank Nifty and Punjab National Bank share price is 0.006 indicates that there is A no relationship between the Bank Nifty rate and Punjab National Bank share price.
- The future share price of SBI is valued at 750.16 if there is increase in RBI Repo rate to 9%. Which is currently at 887.3 (Repo rate 8%). If Repo rate decrease to 7 then share price will be as follows $= -98.76 * 7 + 1639$ which is 947.68.

SUGGESTIONS:

➤ **State bank of India:**

- The Repo rate influence on the share price cannot be ignored because of a $r = -0.414$. the investors should observe the Repo rate before investing
- As there is positive correlation between the State Bank of India share price and Bank Nifty investors are advised to observe even the Bank Nifty before investing.
- As per the forecasting analysis the share price will gain up to 2270.4 if the interest rate is 7%. The investors are advised to invest more when interest comes down.
- The investors are advised to stay away from the stock if the interest rate increases, because as per the forecasting analysis the stock value will be below 2000 when the interest rate is 9%.



COMMONWEALTH JOURNAL OF COMMERCE & MANAGEMENT RESEARCH

Vol.2, Issue 11 (November 2015) ISSN: 2393-851X Impact Factor: 0.612

➤ Punjab National Bank:

- The Repo rate influence on the share price of the Punjab National Bank cannot be ignored because of a $r = 0.45782$. The investors should observe the Repo rate before investing in the Punjab National Bank stock.
- As there is positive correlation between the Punjab National Bank share price and Bank Nifty investors are advised to observe even the Bank Nifty before investing.
- As per the forecasting analysis the share price will gain up to 947.6 if the interest rate is 7%. The investors are advised to invest more when interest comes down.
- The investors are advised to stay away from the stock of Punjab National Bank if the interest rate increases, because as per the forecasting analysis the stock value will be below 750.16 when the interest rate is 9%.

CONCLUSION

There exists a strong relationship between the repo rate as well as SBI and PNB share price. This can even be applied to all the banks in public sector and private sector. So to conclude investors should observe the repo rate before investing in the bank stocks. Because the influence of repo rate is very high on bank stocks.