



RISK AND RETURN ANALYSIS OF BANKING INDUSTRY IN CAPITAL MARKETS

Aravind Kopparapu¹, Vineela Kakarlapudi², Urmila Kalluri³

^{1,2,3}Student of Finance, MBA Department

MVGR College of Engineering.

ABSTRACT

The capital market is the market for securities, where companies and the government can raise long-term funds. The capital market includes the stock market and the bond market. The need for investment arises when there is income over expenditure of an individual. Savings will enable an investor to think twice. Stock Market is one such alternative available for a retail investor to yield fruitful returns with some extent of risk. The aim of investors is getting investment opportunities with minimum risk and maximum returns. Risk and returns are important variables that investors are looking for, at the time of investment decision making. In this regard, the study tries to establish the possible risk-return relation in Indian capital market by analyzing the influence of risk variables on security return.

KEYWORDS: SENSEX, BANKEX, Correlation, Average return, β value.

I. INTRODUCTION

The Risk and return analysis is important to the investors in the share market. The risk and return analysis is main function of this project. The meaning of risk and return are as follows:

Risk is the deviation of actual return from the expected return is called risk, Risk means the possibility of losing something. Low risk leads to low returns whereas high-risk results in high returns.

Risk/Return tradeoff is the balance between the lowest possible risk and highest possible returns.

Investment risk are classified into:

1. Systematic Risk
2. Unsystematic Risk

Systematic risk or “market risk” are the risk which cannot be diversifiable; The systematic risk is the day to day fluctuations in the stock market. Interest rates, recession, and wars all represents the sources of the systematic risk.

Unsystematic risk: It is also known as “Diversifiable risk or Residual risk



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Returns are the gains or losses from a security in a particular period and are usually quoted as percentage. The returns of an investment consist of two components as under: -

- 1) Current return
- 2) Capital return.

$$\text{Return} = \text{Dividend} + \text{Capital gain}$$

In this project risk and return calculated using various techniques. The return is calculate using net asset value, rate return, dividend, geographical mean and risk is calculate using co-variance, geometric mean, beta, standard deviation, correlation (using statistical methods). The rate of equity shares has not fixed. The rate of equity shares of company or bank is change at every time. The equity share holder either can earn profit or can take risk. This situation is not fixed and hence, here is need for risk and return analysis.

II.OBJECTIVES

1. To determine which sector highly contributing with Sensex
2. To determine which banks with in that sector are showing high impact on that particular index.
3. To determine risk return tradeoff for selected banks.

III.METHODOLOGY

To fulfill the study on the topic, relevant data has to be collected. The theoretical concepts of the study are extracted from the reference text books and the websites which are available to access.

The methodology we have adopted to collect the secondary data required to study the share price movement is through prowesiq database and BSE website.

To evaluate the future trend of the market, excel is used. The statistical tools used are average returns, β value, regression, correlation.

IV.LIMITATIONS

Some of the limitations of this study are as follows

1. The activities in the stock exchange are vast and to understand all the activities is difficult, as there are only a few persons who can provide information.
2. As there are many factors which influence stock exchange, it is difficult to understand in the specific period.

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ANALYSIS:

Table 4. 1 Comparison of Nifty index with other industry indices

PARTICULARS	SENSEX	BANKEX	AUTO	TELECOM	OIL&GAS	IT
SENSEX	1					
BANKEX	0.926012	1				
AUTO	0.866381	0.849511	1			
TELECOM	0.538539	0.47566	0.46759	1		
OIL&GAS	0.725041	0.701063	0.672	0.524165	1	
IT	0.564686	0.417152	0.35285	0.130576	0.187917	1

Table 4.2 Comparison of Nifty Bank index with selected bank scrips

PARTICULARS	SENSEX	BANKEX	SBI	PNB	CANARA BANK	BOB	UNION BANK	HDFC	ICICI	AXIS BANK	KOTAK BANK	KARUR VYSYA BANK
SENSEX	1											
BANKEX	0.9260123	1										
SBI	0.7793095	0.8424014	1									
PNB	0.5313751	0.6018494	0.763994	1								
CANARA BANK	0.5723548	0.6762116	0.756141	0.862396	1							
BOB	0.2687307	0.4217956	0.621257	0.724147	0.663643436	1						
UNION BANK	0.5175739	0.5818108	0.732015	0.800469	0.735981161	0.747137	1					
HDFC	0.8580199	0.8618642	0.548978	0.305753	0.419304773	0.174057	0.386770605	1				
ICICI	0.7808617	0.8271913	0.711533	0.509316	0.617413505	0.259419	0.416731656	0.611201	1			
AXIS BANK	0.7469287	0.814412	0.640288	0.380404	0.473372054	0.376697	0.395786402	0.724313	0.547266	1		
KOTAK BANK	0.351713	0.3402496	0.242017	0.106301	0.217630957	-0.253	-0.040546698	0.269889	0.325925	0.227691136	1	
KARUR VYSYA BANK	0.3433216	0.3044839	0.039723	0.07985	0.019269756	-0.08229	-0.004911928	0.386079	0.10843	0.251102211	0.208387281	1

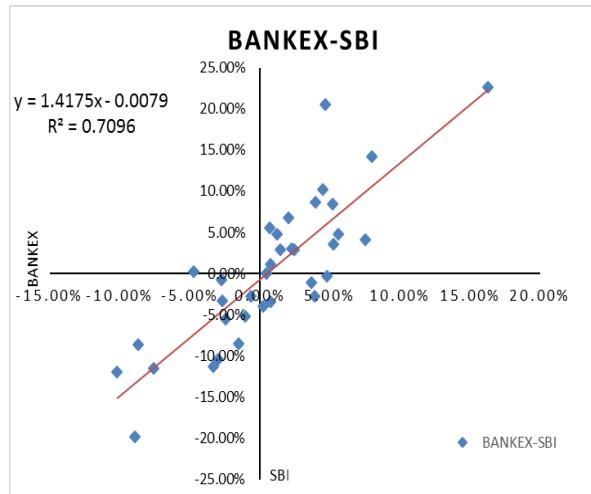


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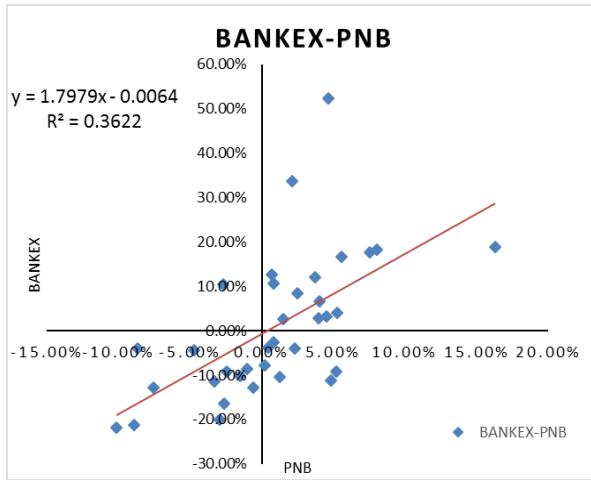
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Comparison of BANKEX with SBI



Comparison of BANKEX with PNB



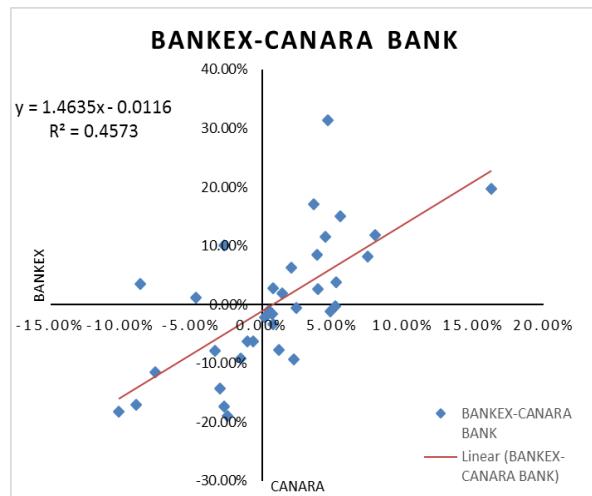
Comparison of BANKEX with canara bank



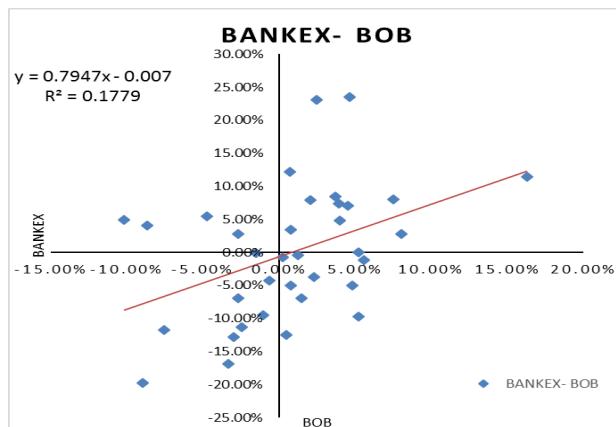
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Comparison of BANKEX with BOB



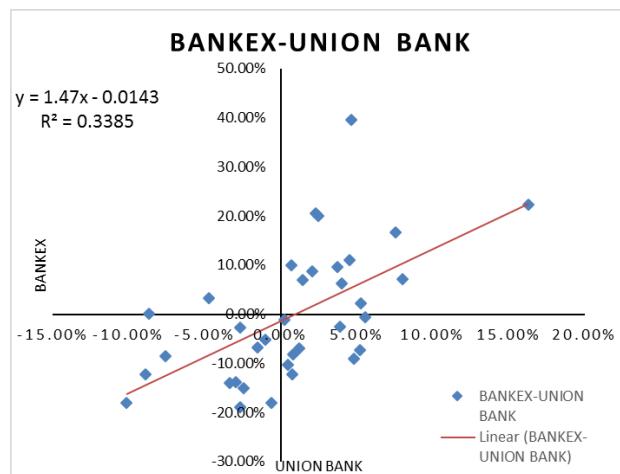
Comparison of BANKEX with Union Bank



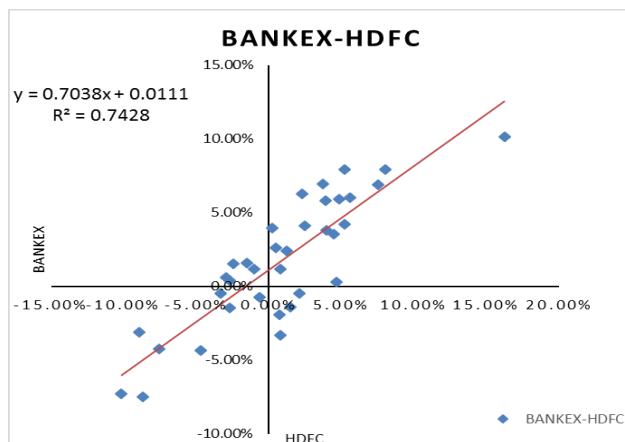
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Comparison of BANKEX with HDFC



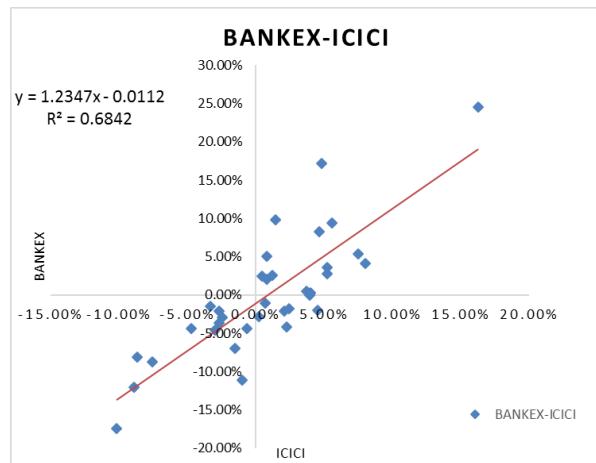
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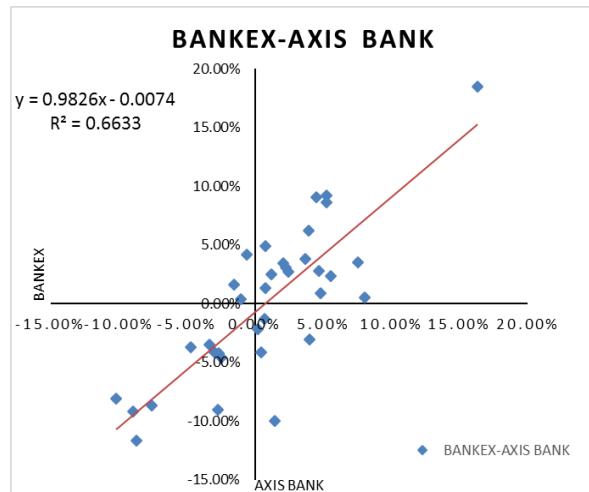
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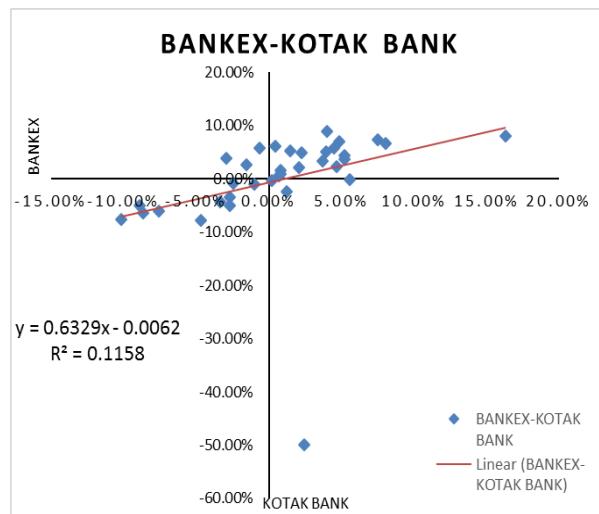
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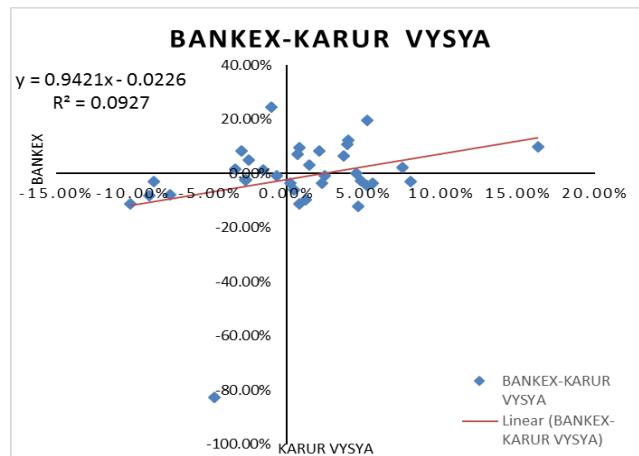
Comparison of BANKEX with Axis Bank



Comparison of BANKEX with Kotak Mahindra Bank



Comparison of BANKEX with Karur Vysya Bank



V. INTERPRETATION

Correlation describes the relationship between two or more variables. Variables can be positive or negative depending on whether they move in the same or opposite direction. The value of the coefficient of correlation ranges between +1 and -1. The relationship is positive when the two variables move in the same direction (both up or both down) and is negative when they move in opposite direction (one up, other down). Anything between 0 and +1 indicates that two securities move in the same direction and anything between 0 and -1 indicates that two securities move in opposite directions.



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From the Table 4.1; we can observe that all the industry indices are positively correlated with Sensex i.e. the selected industry indices and Sensex move in the same direction. We can also observe that among all the selected industry indices, BANKEX (0.92) is strongly correlated to SENSEX i.e. changes in BANKEX may have higher impact on SENSEX whereas Telecom (0.53) and IT (0.56) are less correlated when compared to BANKEX i.e. changes in Telecom and IT may not have much impact on SENSEX.

In this analysis share prices of each selected bank is compared with BANKEX. A statistical measure, Correlation is applied in order to correlate the relationship between these two variables. Table 4.2 shows the correlation between BANKEX and selected bank scrips.

From the table we can observe that all the selected bank scrips are positively correlated to bankex i.e. they move in a same direction either upward or downward. We can also observe that HDFC (0.85) and ICICI (0.78) are strongly correlated to BANKEX i.e., movement in HDFC and SBI may have higher impact on BANKEX whereas Bank of Baroda (0.26) and Karur Vysya Bank (0.34) are less correlated and have less impact on BANKEX when compared to HDFC and ICICI.

From the chart, we can get a regression line which tells us how different banks returns varies along Y- axis with a variation in BANKEX along X-axis.

1. Since the Regression line is sloping upwards that means if BANKEX moves upward along X-axis then SBI also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line that there is no much variation between BANKEX returns and SBI returns.

From the equation, we can say for every 1% increase of BANKEX returns(X), there will be 1.41% increase in SBI returns(Y). If BANKEX returns (X-axis) is zero i.e. the returns of BANKEX are completely flat for any 2 months, then SBI(Y-axis) returns decline by 0.007% About 70.96% of variations in SBI stock are explained by BANKEX.

2. The Regression line is sloping upwards that means if BANKEX moves upward along X-axis then SBI also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line that there is no much variation between BANKEX returns and SBI returns.

From the equation, we can say for every 1% increase of BANKEX returns(X), there will be 1.41% increase in SBI returns(Y). If BANKEX returns (X-axis) is zero i.e. the returns of BANKEX are completely flat for any 2 months, then SBI(Y-axis) returns decline by 0.007% About 70.96% of variations in SBI stock are explained by BANKEX.



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3. The Regression line is sloping upwards that means if BANKEK moves upward along X-axis then PNB also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line which says that there is no much variation between BANKEK returns and PNB returns and some are away from regression line.

From the equation, we can say for every 1% increase of BANKEK returns(X), there will be 1.79% increase in PNB returns(Y). If BANKEK returns (X-axis) is zero i.e. the returns of BANKEK are completely flat for any 2 months, then PNB(Y-axis) returns decline by 0.006%. About 36.22% of variations in PNB stock are explained by BANKEK.

4. The Regression line is sloping upwards that means if BANKEK moves upward along X-axis then Canara Bank also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line which says that there is no much variation between BANKEK returns and Canara Bank returns and some are away from regression line.

From the equation, we can say for every 1% increase of BANKEK returns(X), there will be 1.46% increase in Canara Bank returns(Y). If BANKEK returns (X-axis) is zero i.e. the returns of BANKEK are completely flat for any 2 months, then Canara Bank(Y-axis) returns decline by 0.011%. About 45.73% of variations in Canara Bank stock are explained by BANKEK.

5. The Regression line is sloping upwards that means if BANKEK moves upward along X-axis then BOB also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line which says that there is no much variation between BANKEK returns and BOB returns and some are away from regression line.

From the equation, we can say for every 1% change of BANKEK returns(X), there will be 0.79% change in BOB returns(Y). If BANKEK returns (X-axis) is zero i.e. the returns of BANKEK are completely flat for any 2 months, then BOB(Y-axis) returns decline by 0.007%. About 17.79% of variations in BOB stock are explained by BANKEK.

6. Since the Regression line is sloping upwards that means if BANKEK moves upward along X-axis then Union Bank also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line which says that there is no much variation between BANKEK returns and Union Bank returns and some are away from regression line.



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From the equation, we can say for every 1% increase of BANKEX returns(X), there will be 1.47% increase in Union Bank returns(Y). If BANKEX returns (X-axis) is zero i.e. the returns of BANKEX are completely flat for any 2 months, then Union Bank (Y-axis) returns decline by 0.014%. About 33.85% of variations in Union Bank stock are explained by BANKEX.

7. The Regression line is sloping upwards that means if BANKEX moves upward along X-axis then HDFC also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line which says that there is no much variation between BANKEX returns and HDFC returns.

From the equation, we can say for every 1% increase of BANKEX returns(X), there will be 0.7038% increase in HDFC returns(Y). If BANKEX returns (X-axis) is zero i.e. the returns of BANKEX are completely flat for any 2 months, then HDFC(Y-axis) returns increase by 0.011%. About 74.28% of variations in HDFC stock are explained by BANKEX.

8. The Regression line is sloping upwards that means if BANKEX moves upward along X-axis then Axis Bank also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line which says that there is no much variation between BANKEX returns and Axis Bank returns and some are away from regression line.

From the equation, we can say for every 1% increase of BANKEX returns(X), there will be 0.98% increase in Axis Bank returns(Y). If BANKEX returns (X-axis) is zero i.e. the returns of BANKEX are completely flat for any 2 months, then Axis Bank(Y-axis) returns decline by 0.007%. About 66.33% of variations in Axis Bank stock are explained by BANKEX.

9. The Regression line is sloping upwards that means if BANKEX moves upward along X-axis then Kotak Bank also moves upward along Y-axis. Here we can observe almost all the points are closer to regression line which says that there is no much variation between BANKEX returns and Kotak Bank returns and some are away from regression line.

From the equation, we can say for every 1% increase of BANKEX returns(X), there will be 0.63% increase in Kotak Bank returns(Y). If BANKEX returns (X-axis) is zero i.e. the returns of BANKEX are completely flat for any 2 months, then Kotak Bank(Y-axis) returns decline by 0.006%. About 63.29% of variations in Kotak Bank stock are explained by BANKEX.

10. The Regression line is sloping upwards that means if BANKEX moves upward along X-axis then Karur Vysya Bank also moves upward along Y-axis. Here we can observe almost all the points are closer to regression



line which says that there is no much variation between BANKEX returns and Karur Vysya Bank returns and some are away from regression line.

From the equation, we can say for every 1% increase of BANKEX returns(X), there will be 0.94% increase in Karur Vysya Bank returns(Y). If BANKEX returns (X-axis) is zero i.e. the returns of BANKEX are completely flat for any 2 months, then Karur Vysya Bank (Y-axis) returns decline by 0.022%. About 9.27% of variations in Karur Vysya Bank stock are explained by BANKEX.

VI.CONCLUSION

Table 4.3: Table showing ranking based on Risk and Return

BANK NAME	RISK	RANKING	AVG. RETURN(%)	RANKING
SBI	1.4175	7	0.38	3
PNB	1.7979	10	0.83	2
CANARA BANK	1.4635	8	0.05	5
BOB	0.7947	3	-0.05	6
UNION BANK	1.47	9	-0.22	9
HDFC	0.7038	2	1.69	1
ICICI	1.2347	6	-0.10	7
AXIS	0.9826	5	0.07	4
KOTAK MAHINDRA	0.6329	1	-0.10	7
KARUR VYSYA	0.9421	4	-1.47	10

- ✓ We came to know the banking sector is highly correlated with Sensex. So it is contributing more with the Sensex.
- ✓ Within the banking sector HDFC and ICICI are highly correlated to BANKEX. So any changes in those banks will show more impact on BANKEX movement when compared to other banks.
- ✓ From the above analysis we can conclude that the PNB has high risk when compare to other banks. HDFC provides the investors with high returns. Hence it is allocated with rank 1.
- ✓ On considering with the above ranks, this analysis shows the HDFC bank yields better returns with low risk component.