# RISK AND RETURN ANALYSIS FOR OPTIMAL PORTFOLIO CREATION OF COMMON STOCK INVESTMENT

(With References to BOK, EBL, NABIL, NIC, SBI and SCBL)

## A Thesis

Submitted by: **PUSHPA RAJ PRADHANANGA** NEPAL COMMERCE CAMPUS Campus Roll No: 104/066/67 T.U. Regd. No: 7-2-408-230-2006 Exam Roll No.:250214

> Submitted to: Office of the Dean Faculty of Management Tribhuvan University

In partial fulfillment of the requirement for the Degree of Master of Business Studies (MBS)

> Kathmandu, Nepal December, 2013

### RECOMMENDATION

This is to certify that the thesis

#### Submitted by: Pushpa Raj Pradhananga

#### Entitled:

# **RISK & RETURN ANALYSIS FOR OPTIMAL PORTFOLIO CREATION OF COMMON STOCK INVESTMENT** (With References to BOK, EBL, NABIL, NIC, SBI and SCBL)

has been prepared as approved by this department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

.....

•••••••

Prof. Dr. Sushil Bhakta Mathema

(Head, Research Department)

Jyoti Pandey

(Campus Chief)

**Resham Raj Pathak** (Thesis Supervisor)

Date: .....

### **VIVA -VOCE SHEET**

We have conducted the viva-voce examination of the thesis

#### Submitted By: **Pushpa Raj Pradhananga**

Entitled:

**RISK & RETURN ANALYSIS FOR OPTIMAL PORTFOLIO CREATION OF COMMON STOCK INVESTMENT** (With References to BOK, EBL, NABIL, NIC, SBI and SCBL)

and found the thesis to be the original work of the student written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for **Master Degree of Business Studies (M.B.S.).** 

#### Viva-Voce Committee

Head, Research Department	
Member (Thesis Supervisor)	
Member (External Expert)	

Date: .....

#### DECLARATION

I hereby declare that the work reported in this thesis entitled "**Risk and Return Analysis** for Optimal Portfolio Creation of Common Stock Investment (With References to BOK, EBL, NABIL, NIC, SBI and SCBL)" submitted to the office of the Dean, Faculty of Management, Tribhuwan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Masters of Business Studies under the supervision of **Mr. Resham Raj Pathak** Lecturer of Nepal Commerce Campus, T.U. Minbhawan, Kathmandu,

> Pushpa Raj Pradhananga Nepal Commerce Campus Campus Roll No: 104 T.U. Regd. No.: 7-2-408-230-2006 Exam Roll No.: 250214 Date:.....

### ACKNOWLEDGEMENT

This report on "*Risk and Return Analysis for Optimal Portfolio Creation of Common Stock Investment (With References to BOK, EBL, NABIL, NIC, SBI and SCBL)*" has been prepared as per the course of Master of Business Studies, second year. This report has attempted to explore the risks and returns of some of the major commercial banks and try to compare them with the risk and return of the commercial banking sector and also with that of the Industry risk and return before reaching into some deciding conclusions.

In this effort of preparing the report, I am especially grateful to my teachers Prof. Dr. Sushil Bhakta Mathema and Resham Raj Pathak sir, who has given me fruitful suggestions and guidance to frame out this report. I am also thankful to the officers and staffs of NEPSE together with staffs of various commercial banks for making me available different resource materials and data. Similarly, I also want to remember the help that I have received from the library staffs of various campuses, especially staffs of Nepal Commerce Campus and Central Libraries, T.U.

To accomplish this study, I have done the optimum effort from my level to offer precious information in the related topics and hope it will act as reliable reference to upcoming students, respective institutions as well as seekers of related studies.

Pushpa Raj Pradhananga Nepal Commerce Campus Minbhawan, Kathmandu

# ABBREVIATIONS

%	:	Percent
&	:	And
ABBS	:	Any Branch Banking Service
AGM	:	Annual General Meeting
BI	:	Banking Index
BOK	:	Bank of Kathmandu Limited
CAPM	:	Capital Assets Pricing Model
CB	:	Commercial Bank
Co.	:	Company
CS	:	Common Stock
CV	:	Coefficient of Variance
DPS	:	Dividend per Share
EBL	:	Everest Bank Limited
EPS	:	Earning Per Share
F/Y	:	Fiscal Year
HPR	:	Holding Period Return
Jr.	:	Junior
Ltd.	:	Limited
MBS	:	Master of Business Studies
MPS	:	Market Price per Share
Mr.	:	Mister
NABIL	:	Nepal Arab Bank Limited
NEPSE	:	Nepal Stock Exchange.
NFR	:	Nominal-risk Free Rate
NI	:	Nepse Index
NIC	:	Nepal Industrial and Commerce Bank Limited.
NRB	:	Nepal Rastra Bank
OI	:	Others Sector Index

P/E Ratio	:	Price Earning Ratio
Pvt.	:	Private
R	:	Expected Return
Rf	:	Real-risk Free rate
r <sub>ij</sub>	:	Correlation of Coefficient
RRR	:	Realized Rate of Return
Rs.	:	Rupees
SBI	:	Nepal SBI Bank limited
SCBL	:	Standard Chartered Bank Limited
SD	:	Standard Deviation
SEBON	:	Security Exchange Board of Nepal
SML	:	Security Market Line
TU	:	Tribhuvan University

# **TABLE OF CONTENTS**

RECOMMENDATION

VIVA-VOCE SHEET

DECLARATION

ACKNOWLEDGEMENT

LIST OF TABLE

LIST OF FIGURE

ABBREVIATION

Page No.

CHAPTER – I

#### INTRODUCTION

1.1 Background of the Study	1
1.2 History of Banking Development	3
1.3 Profile of the Selected Bank	6
1.3.1 SBI Bank	6
1.3.2 Nabil Bank	7
1.3.3 BOK	7
1.3.4 NIC	8
1.3.5 EBL	8
1.3.6 SCBL	8
1.4 Statement of the Problems	9
1.5 Objectives of the Study	10
1.6 Focus of the Study	10
1.7 Significant of the Study	11
1.8 Limitation of the Study	11
1.9 Organization of the Study	12

#### CHAPTER – II

#### **REVIEW OF LITERATURE**

2.1 Introduction	14
2.2 Conceptual Review	15

2.2.1 Concept of Capital Market	15
2.2.2 Common Stock	18
2.2.3 Relation between Risk and Return	19
2.2.4 Meaning of Return	19
2.2.4.1 Single Period Rate of Return	21
2.2.4.2 Required Rate of Return	21
2.2.4.3 Expected Rate of Return	22
2.2.4.4 Expected Rate of Return Based on Historical Data	22
2.2.5 Risk	23
2.2.6 The Range	25
2.2.7 Measurement of Risk and Return	25
2.2.7.1 Standard Deviation	25
2.2.7.2 Coefficient of Variation	26
2.2.7.3 Beta coefficient	26
2.2.8 Sources of Risk	26
2.2.9 Portfolio Management	30
2.2.10 Capital Assets Pricing Model	35
2.3 Review of Journals and Articles	36
2.4 Review of Previous Related Study	43
2.5 Research Gap	52

### CHAPTER – III

#### **RESEARCH METHODOLOGY**

3.1 Introduction	
3.2 Research Design	54
3.3 Population and Sample	54
3.4 Sources of Data	55
3.5 Data Collection Techniques	55
3.6 Tools for Analysis	56
3.6.1 Financial Tools	56
3.6.1.1 Market Price of Stock	56

3.6.1.2 Dividend	56
3.6.1.3 Return on Common Stock Investment	57
3.6.1.4 Expected Return of Common Stock	58
3.6.1.5 Standard Deviation	58
3.6.1.6 Coefficient of Variance	59
3.6.1.7 Beta Coefficient	59
3.6.1.8 Correlation Coefficient	60
3.6.1.9 Portfolio Risk and Return	60
3.6.1.10 Minimum Variance Portfolio	61
3.7 Methods of Analysis and Presentation	62

#### CHAPTER – IV

#### PRESENTATION AND ANALYSIS OF DATA

4.1 Analysis of Market Movement	63
4.2 Movement of Industry Index	64
4.2.1 Standard deviation and Coefficient of variation of Return of Banking	
Industry	66
4.3 Risk and Return Analysis of Individual Bank	67
4.3.1 Year wise MPS, EPS and P/E Ratio of SBI Bank	67
4.3.2 Standard deviation and Coeficient of varition of Return of SBI Bank	69
4.3.3 Overall Risk result of SBI Bank	69
4.3.4 Year wise MPS, EPS and P/E Ratio of NABIL Bank	70
4.3.5 Standard deviation and Coeficient of varition of Return of NABIL Ban	k 72
4.3.6 Overall Risk result of NABIL Bank	73
4.3.7 Year wise MPS, EPS and P/E Ratio of BOK	74
4.3.8 Standard deviation and Coeficient of varition of Return of BOK	76
4.3.9 Overall Risk result of BOK	76
4.3.10 Year wise MPS, EPS and P/E Ratio of NIC Bank	77
4.3.11 Standard deviation and Coeficient of varition of Return of NIC Bank	79
4.3.12 Overall Risk result of NIC Bank	80
4.3.13 Year wise MPS, EPS and P/E Ratio of EBL	81

4.3.14 Standard deviation and Coeficient of varition of Return of EBL	83
4.3.15 Overall Risk result of EBL	84
4.3.16 Year wise MPS, EPS and P/E Ratio of SCBL	85
4.3.17 Standard deviation and Coeficient of varition of	
Return of SCBL	87
4.3.18 Overall Risk result of SCBL	88
4.4 Comparative Analysis of Sample Commercial Bank based on	
Risk and Return	
4.5 Market Sensitivity (Beta Coefficient Analysis)	89
4.6 Analysis of Systematic Risk and Unsystematic Risk of sampled	
Commercial Bank	90
4.7 Analysis of Common Stock's Price	92
4.8 Analysis about Creating Optimal Portfolio	93
4.8.1 Optimal Portfolio Risk and Return of NABIL and SCBL	95
4.9 Summary at a glance	96
4.10 Major Finding of the Study	97

#### CHAPTER – V

#### SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary	99
5.2 Conclusion	101
5.3 Recommendation	102

Bibliography

Annexure

# LIST OF TABLES

Table	e No. Title	Page No.
4.1	NEPSE Index Movement	64
4.2	Commercial Banking Index Movement	65
4.3	Tabulation of Results of Banking Sectors	66
4.4	Analysis of Total Dividend MPS, EPS, Total Dividend and P/E Ratio	67
4.5	Tabulation of Calculated Expected Return, Standard Deviation	
	and CV of SBI	69
4.6	Tabulation of all results of SBI	69
4.7	Analysis of Total Dividend MPS, EPS, Total Dividend and P/E Ratio	71
4.8	Tabulation of Calculated Expected Return, Standard Deviation	
	and CV of NABIL	73
4.9	Tabulation of all results of NABIL	73
4.10	Analysis of Total Dividend MPS, EPS, Total Dividend and P/E Ratio	74
4.11	Tabulation of Calculated Expected Return, Standard Deviation	
	and CV of BOK	76
4.12	Tabulation of Calculated Results of BOK	76
4.13	Analysis of Total Dividend MPS, EPS, Total Dividend and P/E Ratio	78
4.14	Tabulation of Calculated Expected Return, Standard Deviation and	
	CV of NIC	79
4.15	Tabulation of Calculated Results of NIC	80
4.16	Analysis of Total Dividend MPS, EPS, Total Dividend and P/E Ratio	81
4.17	Tabulation of Calculated Expected Return, Standard Deviation	
	and CV of EBL	83
4.18	Tabulation of Calculated Results of EBL	84
4.19	Analysis of Total Dividend MPS, EPS, Total Dividend and P/E Ratio	85
4.20	Tabulation of Calculated Expected Return, Standard Deviation	
	and CV of SCBL	87
4.21	Tabulation of Calculated Results of SCBL	87
4.22	Expected Return, Standard Deviation and Coefficient of Variation of	

the Sampled Banks

4.23	Beta Coefficient of Six Commercial Banks	90
4.24	Proportition of SR and USR in Total Risk	91
4.25	Analysis of Common Stock's Price Based on RRR and ERR	92
4.26	Tabulation of Portfolio Risk and Return Different Weight Invested in	
	Common Stock of SCBL and NABIL	94
4.27	Investment Proportion and Portfolio Risk and Return at Optimal Point	95
4.28	Tabulation of Major Findings	96

# LIST OF FIGURES

Figure	e No. Title	Page No
4.1	Movement of NEPSE Index	64
4.2	Movement of Commercial Banking Index	65
4.3	Annual Realized Rate at Return from Banking Index	66
4.4	Year and Price Movement of Common Stock of SBI	68
4.5	Realized Rate of Return per share of the SBI in the various years of Study	68
4.6	Presentation of Partition of SR and USR	70
4.7	Year and Price Movement of the Common Stock of NABIL	71
4.8	Realized Rate of Return Per Share of NABIL in the Various Years of Study	72
4.9	Presentation of Figure Partition of SR & USR	74
4.10	Year and Price Movement of the Common Stock of BOK	75
4.11	Realized Rate of Return Per Share of BOK in the Various Years of Study	75
4.12	Presentation of Figure Partition of SR & USR	77
4.13	Year and Price Movement of the Common Stock of NIC	78
4.14	Realized Rate of Return per share of the NIC in the various years of Study	79
4.15	Presentation of SR and USR in Figure	81
4.16	Year and price Movement of the Common Stock of EBL	82
4.17	Realized Rate of Return per share of the EBL in the various years of Study	83
4.18	Presentation in Figure the Partition of SR and USR	84
4.19	Year and Price Movement of the Common Stock of SCBL	86
4.20	Realized Rate of Return per share of the SCBL in the various years of Study	86
4.21	Presentation in Figure the Partition of SR and USR	88
4.22	Proportion of Systematic Risk and Unsystematic Risk in Total Risk	91