PROJECT REPORT ON

"A STUDY ON IMPACT OF OPTION STRATEGIES ON PORTFOLIO VOLATALITY IN NIFTY FIFTY"

SUBMITTED BY

ASHWITHA SHETTY

4AL22BA010

Submitted To



VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

In partial fulfillment of the requirements for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

Under the guidance of

DR. VISHNU PRASANNA K N

Professor,

PG Department of Busines Adminstration

Alva's Institute of Engineering and Technology, Mijar,



Department Of MBA

Alva's Institute of Engineering & Technology, Shobhavana Campus, Mijar, Moodbidri, D.K – 574225

MAY-2024

ACKNOWLEDGEMENT

I would like to take this opportunity to express my sincere gratitude to all those

who have helped me throughout this project. It gives me immense pleasure to

acknowledge all those who have rendered encouragement and support for the

successful completion of this work.

I express my deep sense of gratitude to my internal guide Dr Vishnu

Prasanna K. N Professor Dept. of the MBA., for his constant support and

encouragement to carry out my project successfully without much difficulty.

I would like to express my sincere thanks to Dr. Peter Fernandes, Principal

Alva's Institute of Engineering and Technology, Mijar, Moodabidiri.

I am grateful to Mrs. Priya Sequeira, HOD, MBA department, Alva's

Institute of Engineering and Technology, Mijar, Moodabidiri. whose timely

suggestions and encouragement support me to complete this project.

With regard,

Ashwitha Shetty



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(A Unit of Alva's Education Foundation ®, Moodbidri) Affiliated to Visvesvaraya Technological University, Belagavi Approved by AICTE, New Delhi & Recognised by Government of Karnataka Accredited by NBA (CSE & ECE)

Date: 10/09/2024

CERTIFICATE

This is to certify that Ashwitha Shetty bearing USN 4AL22BA010, is a bona-fide student of Master of Business Administration course of Alva's Institute of Engineering and Technology, Moodbidri for the batch 2022-2024, affiliated to Visvesvaraya Technological University, Belagavi. The Project report on "Impact of Option Strategies on Portfolio Volatility in Nifty Fifty" is prepared by her under the guidance of Dr. Vishnu Prasanna K N, Professor of Finance, in partial fulfilment of the requirements for the award of the degree of Master of Business Administration of Visvesvaraya Technological University, Belagavi Karnataka.

INTERNAL GUIDE

PG Dept. of Business Administration Alva's Institute of Engg. & Technology Mijar - 574225

Alva's Institute of Engg. & Technology, Mijur. MOODSIDRI - 574 225, D.K.

Viva - Voce Examination

Signature of Internal Examiner

Signature of External Examiner

(Name & Affiliation)

DECLARATION

I, Ms Ashwitha Shetty (USN: 4AL22BA010) hereby declare that the project report on "Impact of Option Strategies on Portfolio Volatility in Nifty 50" is prepared by me under the guidelines of Dr Vishnu Prasanna K N, Professor of Finance, PG Departments of Business Administration, Alva's Institute of Engineering and Technology, Mijar, Moodbidri.

I also declare that this project work is towards the partial fulfilment of the university regulations for degree of MASTER OF BUSINESS ADMINISTRATION by Visvesvaraya Technological University, Belgaum.

I have undergone a project for a period of 6 weeks. I further declare that this project is based on the original study undertaken by me and has not been submitted for the award of any degree/diploma from any other University/Institution

Date: 09/09/2024

Place: Moodbidri

AST

signature of the student

TABLE OF CONTENTS

NO 1 INTRODUCTION 1	3
	3
	3
1.1 Introduction to the study 2-3	
2 CONCEPTUAL BACKGROUND AND 4	
LITERATURE REVIEW	
2.1 The theoretical background of the study 5	
2.2 Literature review with a research gap 6-15	5
3 RESEARCH DESIGN 16	
3.1 Statement of The Problem 17	
3.2 Need of The Study 17	
3.3 Objectives 18	
3.4 Scope of The Study 18	
3.5 Research Methodology 18-1	9
3.6 Hypothesis of The Study 20	
3.7 Limitations 20	
3.8 Chapter Schemes 21	
4 ANALYSIS AND INTERPRETATION 22	
4.1 Descriptive Analysis 23-3	30
4.2 Regression Analysis 31-3	36
4.3 Correlation Analysis 36-4	10
4.4 Regression Analysis 40-4	11
4.5 Sharpe Ratio 41-4	13
Scenario Analysis	
5 FINDINGS, SUGGESTIONS, AND CONCLUSIONS 44	
5.1 Summary of Findings 45	
5.1 Summary of Findings 45-45-45-45-45-45-45-45-45-45-45-45-45-4	17
5.3 Conclusion 48	. /
BIBLIOGRAPHY 49-5	0

LIST OF TABLES

Table No	Title	Page No
4.1.1	Descriptive Analysis of Closing price and Returns of Nifty Fifty index.	23
4.1.2	Descriptive Analysis of Closing price and Returns of Bank Nifty index.	25
4.1.3	Descriptive Analysis of Call and Put option of Nifty Fifty index.	27
4.1.4	Descriptive Analysis of Call and Put Option of Bank Nifty index.	29
4.2.1	Regression Analysis of call option of Nifty Fifty	31
4.2.2	Regression Analysis of put option of Nifty 50	32
4.2.3	Regression Analysis of Call option of Bank nifty	33
4.2.4	Regression Analysis of put option of Bank nifty	35
4.3.1	Correlation Analysis of call option of Nifty Fifty	36
4.3.2	Correlation Analysis of put option of Nifty Fifty	37
4.3.3	Correlation Analysis of call option of Bank Nifty	38
4.3.4	Correlation Analysis of Put option of Bank Nifty	39
4.4	SHARPE RATIO of Nifty 50 and Bank Nifty	40

EXECUTIVE SUMMARY

This research delves into the profound influence of option strategies on portfolio volatility within the Nifty Fifty index, a benchmark for the Indian equity market. Options, as financial derivatives, offer unique opportunities for investors to manage risk and enhance returns. The study investigates various option strategies, including covered calls, protective puts, straddles, and strangles, analyzing their effects on portfolio volatility.

The volatility of a portfolio, a measure of its price fluctuations over time, is a critical factor for investors seeking stable returns amidst market uncertainties. Employing different option strategies can alter the risk profile of a portfolio, affecting its overall volatility. Through empirical analysis and statistical modeling, this research quantifies the impact of these strategies on portfolio volatility within the Nifty Fifty index.

The findings reveal that certain option strategies, such as covered calls and cash secured put, exhibit a dampening effect on portfolio volatility by providing downside protection and generating income from premiums. Furthermore, the study explores the relationship between option strategy selection, market conditions, and portfolio risk management objectives. It emphasizes the importance of aligning strategy choices with investor risk tolerance, market outlook, and investment goals.

Overall, the research underscores the significance of incorporating option strategies into portfolio management practices to mitigate volatility and optimize risk-adjusted returns in the Nifty Fifty index. By understanding the dynamics of option strategies and their impact on portfolio volatility, investors can make informed decisions to achieve their financial objectives while navigating the complexities of the equity market. Through this comprehensive analysis, investors gain valuable insights into the role of option strategies as powerful tools for volatility management within the Nifty Fifty index, paving the way for more effective risk management and enhanced portfolio performance.