

# **INVESTMENT MANAGEMENT** Theory & Practice

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Dr. R.P. Rustagi

# **Sultan Chand & Sons**

# Investment Management

# THEORY AND PRACTICE

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who bestowed on me the inspiration and strength to take up this work and to share my experience with the readers

# **Investment Management**

# THEORY AND PRACTICE

For B.Com. (H.), IV-Semester (UGCF 2022) University of Delhi and other Courses in Finance

## Dr. R.P. RUSTAGI

M.Com., M.Phil., F.C.S., Ph.D. Formerly, Associate Professor Shri Ram College of Commerce University of Delhi

Twelfth Edition



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# Preface

#### To the Twelfth Edition

The motivation for the Twelveth Edition of 'Investment Management' has been provided by the enthusiastic response of the readers and reviewers to the earlier editions which, together with reprints, were sold out within a few months of the Publication. The book has been presented as an introductory level text on the theory and practice of investment. It has been accepted by the students of finance preparing for a paper on investment management, particularly the B.Com. (H.) VI<sup>th</sup> Semester (CBCS) University of Delhi. The present Edition also confirms with the syllabus of B.Com. (H.), IV<sup>th</sup> Semester, UGCF-2022 based on National Education Policy (NEP) 2020.

The highlight of the Twelfth Edition is the presentation of 'Concept Checks' in the form of 'Test-Yourself' at various places in different chapters. This will give an opportunity to the students to apply the concepts which they have read so far. Additional working notes and explanations have been provided at various places through out the book. Comments and suggestions received from students as well as teachers have been duly incorporated. In an attempt to keep intact the basic structure of the book, the chapter plan has not been changed. Nevertheless, sufficient material has been added in Chapter 6, 'Fundamental and Technical Analysis' with a view to provide more insight into technical analysis. Several numerical illustrations have been added in different Chapters at appropriate places.

In view of the requirements of syllabus, investment decision making through EXCEL has been introduced in the Appendix-I. I am indebted to Sh. H.N. Tiwari, Asstt. Professor, Shri Ram College of Commerce for immensely helping in preparation of Appendix I "Investment Decision Making with Excel".

I am thankful to the students and faculty for the well acceptance of the book. Comments and suggestions about this new edition would be gratefully acknowledged. In am also thankful to the publishers for their cooperation in bringing this Twelfth Edition in time.

Dr. R.P. RUSTAGI

#### **To the First Edition**

Investment Management and Environment is becoming more and more complex over the years. Types of instruments and financial products, types and number of financial intermediaries and the overall investment process, all have seen a revolution. Financial engineering, Investors' Protection and Transparency have been the buzz words. On-line trading systems in the financial markets, holding and transfer of securities in the electronic mode, significant presence of mutual funds, more active role assumed by the regulatory authorities are some of the features of present day investment environment. More and more linkages and interdependence of different financial systems are giving way to global financial markets and systems.

The subject matter of the present text, **Investment Management** is to explain the investment decision making and investment process. It focuses on the investment analysis. In an effort to link the theory and practice, the entire investment process has been discussed in the context of Indian Financial System. Frequent references to the regulatory mechanism of Securities and Exchange Board of India (SEBI) and the practices prevailing in the Indian Capital Market, have been the focal point of the discussion. It presents the concepts, theories, techniques and practices of investment management in simple, lucid and easy to understand language.

Gradually, several specialized areas have branched out from the financial management, including Investment Management, Portfolio Management, Management of Derivatives, *etc.* The present text deals with the investment in general and limited coverage of the portfolio management and derivatives. The unifying philosophy of the book has been to present the investment decision process in terms of the risk-return perspective of the investor.

Investment management, as an academic discipline, is constantly changing and stimulating. There is always a quest to discuss the subject matter with reference to the practices prevailing. The book has emerged out of the experience of teaching financial management and investment management and other related subjects to a wide variety of students including that of professional courses. The motivation for the book has been provided by the interaction and responses in the classroom.

The book has been designed as a first book on Investment management. The subject matter has been presented in 11 Chapters grouped in 5 Parts each dealing with a particular area.

The book is meant for the students preparing for a course in investment management and other related subjects at the under-graduate/post-graduate level, or for management courses such as MBA, PGDBM, CFA, *etc*.

Finally, I will like to acknowledge the contributions made to the literature by authors and researchers, and my teachers who have helped me a lot in understanding various issues and concepts in finance and related areas. I am thankful to my students who have provided the initiative and stimulus for writing this work. I also feel obliged to all my colleagues and teachers at different management institutes for their suggestions. Messers Sultan Chand and Sons, the Publishers, deserve a deep sense of gratitude to bring out the book well in time and in an elegant style.

Discussion in the present text is purely academic and neither attempt nor tantamount to expertise/professional service to the readers on the subject. Sufficient care has been taken to ensure the correctness of formulae, equations and calculations. Still, there might be some unintended errors. Further comments and suggestions for improving the quality of the book are welcome and will be gratefully acknowledged.

Dr. R.P. RUSTAGI

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Syllabus

## B.Com. (H.), UGCF-2022

based on NEP-2020

#### **Investment Management**

#### **Unit 1: Introduction to Investment**

Concept of Investment, Investment Decision Process; Avenues for investment – Features and Classes; Difference between Investment, Speculation, and Gambling; Primary Market – IPO, Secondary Markets – Trading of Securities; Security Market Indices; Return and Risk: Concept, Calculation, Trade-off between Risk and Return; Impact of Taxes and Inflation on Investments.

#### **Unit 2: Bond Analysis and Valuation**

Bond Fundamentals; Estimating Bond Yields; Bond Valuation and Malkiel Theorems; Bond Risks and Credit Rating; Present Scenario of Indian Debt Market.

#### **Unit 3: Equity Analysis and Valuation**

Fundamental Analysis; Technical Analysis and Efficient Market Hypothesis; Valuation of Equity Shares using Dividend Discount Model and P/E Ratio Model.

#### **Unit 4: Portfolio Management**

Portfolio Management – Concept and Need, Measurement of Portfolio Return and Risk; Diversification – Markowitz Theory; Capital Asset Pricing Model.

#### **Unit 5: Mutual Fund and Derivatives**

Mutual Fund – Concept and Types; Performance Evaluation; Overview of Financial Derivatives – Forwards, Futures and Options.

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	Exchange Traded and OTC Derivatives Participants in Derivatives Market Types of Financial Derivatives Forwards Forwards Futures Differences between Forwards and Futures Pricing of Futures. Options Difference between Futures and Options Types of Options Working of an Option Terminology of Options Option Premium Expiration Date Strike Price	$\begin{array}{c}272 \\273 \\273 \\273 \\274 \\275 \\276 \\276 \\278 \\279 \\280 \\281 \\281 \\281 \\281 \end{array}$
	Exchange Traded and OTC Derivatives	$\begin{array}{c}272 \\273 \\273 \\273 \\273 \\274 \\275 \\276 \\276 \\276 \\279 \\279 \\280 \\281 \\281 \\281 \\281 \\282 \end{array}$
	Exchange Traded and OTC Derivatives	$\begin{array}{c}272 \\273 \\273 \\273 \\273 \\274 \\275 \\276 \\276 \\278 \\279 \\280 \\281 \\281 \\281 \\281 \\281 \\282 \\282 \\282 \end{array}$
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# Abbreviations and Notations

Ь	Retention Ratio (1 – DP ratio)	GP	Gross Profit
$B_0$	Bond Value at present	HM Model	Harry Markowitz Model
*	Beta factor (CAPM)	HPR	Holding Period Return
$\beta$ BSE	Mumbai Stock Exchange	In R I or Int.	Interest
BV	Book Value (Also Balance		Risk-Free Rate of Interest
DV	Sheet Value)	I <sub>RF</sub> IRR	Internal Rate of Interest
$C_0$	Cost at Present (Initial Cost)	k	Rate of Discount/Required
CĂ	Current Assets		Rate of Return
CAPM	Capital Assets Pricing Model	$k_{\mathrm{d}}$	Cost of Debt
$\mathbf{CF}$	Cash Flows	$k_{\rm e}^{\rm u}$	Cost of Equity Capital
$\operatorname{CML}$	Capital Market Line	$k_o^{e}$	Overall Cost of Capital
COV.	Co-Variance	0	(also WACC)
CRISIL	Credit Rating Information Services India Ltd.	$k_{ m p}$	Cost of Preference Share Capital
CVAF	Cumulative Value Annuity	$k_{ m r}$	Cost of Retained Earnings
	Factor	$\dot{K}$	Strike Price (in Derivatives)
$\mathbf{CVF}$	Cumulative Value Factor	MCX	Multi Commodity Exchange
CV	Coefficient of Variation	MP	Market Price
D	Debt	n, N	Number of Years
$D^*$	Modified Duration of a Bond	NAV	Net Assets Value
Div.	<b>Dividend on Equity Shares</b>	NEAT	National Stock Exchange
$D_0$	Dividend for Current Year		Automated Trading
$D_1^{\circ}$	Dividend Receivable after	NP	Net Profit (also PAT)
	One Year	NPV	Net Present Value
DDB	Deep Discount Bonds	NSE	National Stock Exchange
DDM	Dividend Discount Model	NW	Net Worth
DP Ratio	Dividend Payout Ratio	OC	Operating Cycle
DPS	Dividend Per Share	OI	Open Interest (in Derivatives)
e	Base of Natural Logarithms	$P_0^{}$	Current Market Price of Share
E	Equity or Value of Equity	$P_1$	Market Price after 1 year
EBIT	Earnings Before Interest & Taxes (also NOP)	$P_{n}$	Market Price after $n$ years
EPS	Earnings Per Share	PD	Preference Dividend
ETF	Exchange Traded Fund	PE Ratio	Price Earnings Ratio
EIF F	Futures Value	PV	Present Value
F FV	Futures Value	PVAF	Present Value Annuity Factor
	Growth Rate	PVF	Present Value Factor
g	Growin Rate	ρ	Correlation Coefficient

xviii			Abbreviations and Notations
$\overline{r}$	Expected Rate of Return	SIP	Systematic Investment Plan
$R_{M}$	Rate of Return on Market	STP	Systematic Transfer Plan
	Portfolio	SWP	Systematic Withdrawal Plan
$R_S^{}$	Required Rate of Return of a	t	Tax Rate
	Security	$\mathrm{TR}$	Total Return
$\mathrm{RV}$	Redemption Value	W, w	Weight
σ	Standard Deviation	WACC	Weighted Average Cost of
$\sigma^2$	Variance		Capital, $k_0$
$\sigma_p$	Standard Deviation of	YTC	Yield to Call
_	Portfolio	YTM	Yield To Maturity
SENSEX Sensitivity Index of BSE		Zero Interest Fully Convertible Debenture	

### About the Book

'Investment Management' has been written to meet the need of the students taking B.Com. (H.) and other Undergraduate Courses in Finance in the light of NEP 2020. The scope of investment decision-making has substantially widened with new concepts appearing on the horizon. Appropriately, the syllabi of different courses have been modified and updated. Consistent with the objective, this book presents analytical framework of the related subject matter in the light of SEBI Rules, Regulations and Guidelines. Numerical examples and illustrations have been used extensively to explain the applications of different concepts.

### **Salient Features**

- Comprehensive and systematic coverage and analytical presentation of the subject matter.
- Reader-friendly and frequent references to Indian environment to enhance the understanding of the subject.
- Detailed exposition of Stock Exchange operations and latest developments and emerging trends in Indian capital market given in a capsulated form.
- Frequent references to SEBI Guidelines, Rules and Regulations.
- 'Chapter Theme' and 'Chapter Plan' given in the beginning of each chapter to present the bird's eye view of the contents of the chapter.
- More than 90 examples, nearly 250 solved illustrations, more than 280 assignments and around 120 problems given at the appropriate places.
- Important points, concepts and definitions given in the Side Boxes.
- Extensive use of charts, graphs and diagrams.
- About 200 Objective Type Questions (True/False) with answers given at the end of different Chapters.

### **About the Author**

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