

भारतीय वित्त संस्थान

# INDIAN INSTITUTE OF FINANCE

45 A Knowledge Park III, Greater Noida 201310, NCR Delhi, INDIA

9999321585-86, 9811971002, admission@iif.edu ; info@iif.edu

Estd. : 1987

## 37

Yrs. in the  
Service of  
the Nation

www.iif.edu

IIF founded, in 1987 at Ashok Vihar Delhi, as **Non-profit** equal opportunity educational institution is very well known internationally. It is unique, **emerging centre of excellence, a base for scholarship and high quality professionally oriented education**, research and training. Its Alumni holds senior positions in Banks, Financial Institutions, Corporate, Governments & Academia. IIF Signed 75+ MOUs with Universities Worldwide.

IIF has strong international & industry linkages including with ASSOCHAM, CII, FICCI, PHDCCI & Media, IIF Faculty is regularly invited and attends ADB-BOG meetings, World Bank-IMF Annual Meetings & OECD Meetings

**Full Time Regular PGPs**

Management of Business Finance (MBF) - 2 Yrs  
Fellow Program in Finance (FBA Finance) - 3 Yrs Research Program  
Short Term Research Program (STRP) - 6 Mts to 2 Yrs Research Program

**Week-End Full Time Regular & Virtual Working Executive PGPs**


Executive Management of Business Finance (EMBF) - 3 Yrs  
Post Graduate Program in Management (PGPM) - 11 Mths

**Distance Learning Online Working Executive PGPs**

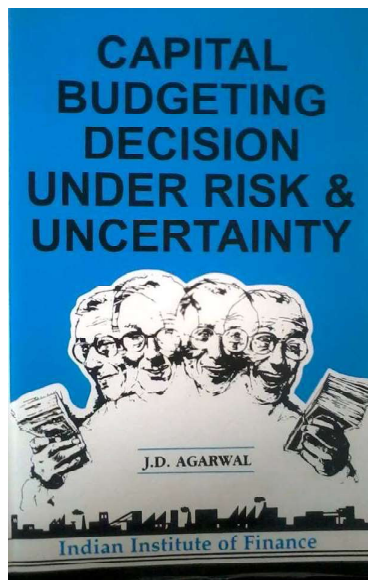
Basic Business Finance (1 Yr)  
Management of Business Finance (2 Yrs)  
Executive Management of Business Finance (3 Yrs)

**Executive Education, MDP & Training Programs (Regular, Virtual & Online)**

Ranking	Placements
<p><b>IIF Ranked</b> in Top 5% B-Schools at 108th out of 2638+ Univ./Inst. in Global Ranking in Asia &amp; Top 45% in World from 22,068+ World Univ./Inst. by <i>Cybermatic Labs, Spain</i>; as India's Leading B-School by <i>Dun &amp; Bradstreet, A++</i> by <i>Business India</i> &amp; in Top 100 B-School in India in 2018-2023.</p> <p style="text-align: center;"><b>Faculty</b></p> <p><b>Distinguished Renowned Faculty</b> educated and/or worked in some of the best Institutions : IIT Delhi; SRCC (Delhi Univ.); Delhi School of Economics; Columbia Univ. (USA); Cleveland State Univ.(USA); London School of Eco.(UK); London Bus. School (UK); ABU (Nigeria); SIDA(Sweden); ANU (Australia); USP (FIJI); World Bank (USA)</p> <p>Faculty engaged in Teaching &amp; Research has published 140 books; edited 120+ issues of Finance India. 250+ articles; 120+ Bibliographies (25+ pages each); 600+ book reviews; Participated in 1000+ conferences, organised/lectures in 550+ MDPs, participated as Experts in 1,000+ Radio/TV talks/Panel Discussions on economic issues, National Dailies covered views &amp; opinions more than 3000+ times.</p> <p>Faculty travelled widely to lecture or address conferences in 50+ countries from North to South, East to West including USA, UK, almost whole of Western &amp; Eastern Europe, Russia, Uzbekistan, Japan, China, Australia, East Asia, Fiji, Brazil, Chile and Africa. Provided academic assistance to 100+ Universities/Institutions.</p> <p style="text-align: center;"><b>Research &amp; Publications</b></p> <p>IIF Publishes its prestigious (400 pages) refereed <b>Quarterly Journal of Finance - FINANCE INDIA</b> since 1987 regularly to promote Research in Finance. Eminent experts include <b>Nobel Laureates</b> are on its Editorial Board. Indexed &amp; abstracted by over 37+ institutions internationally. Has SJIF impact factor of 7.262 &amp; is included in UGCc, ABDc, JEL, Cabbels, SCOPUS.</p> <p>IIF is engaged in research studies &amp; published 20+ Books.</p>	<p>Well established <b>Placement Centre</b> to facilitate &amp; assist in proper placements. More than 5,000 Alumni Network World Over. IIF Alumni include Ex-Chief Election Commissioner of India; Ex-Secretary Defense Finance, GOI; Ex-CEO, Noida Authority &amp; FCI; MDs, CEOs, Senior Managers, Entrepreneurs; Bankers &amp; Winner of Beauty Peagents: Mrs India Global International 2017-18 and Mrs. International Global 2018 Goodwill Ambassador as Mrs. Women Empowerment crowned in Malaysia.</p> <p>IIF Chairman, Prof. J.D. Agarwal's ex-students include Cabinet Ministers, a Judge in Supreme Court of India, dozens of IAS/IPS/IRS, CEOs of Banks, Fls &amp; PSUs, leading CAs, CS, CFOs, COOs, Lawyers, Vice-Chancellors and Deans of Foreign &amp; Indian Universities, Media Personalities and successful Entrepreneurs.</p> <p style="text-align: center;"><b>Knowledge Centers</b></p> <p><b>Excellent Library</b> housed in 65,000 sq feet with over 55,000 book volumes &amp; 950+ national &amp; international journals; over 120 doctoral dissertations, 5000 financial statements of 550+ Companies, Government reports. Is depository Library for UN, WIDER, IMF, OECD &amp; 25+ central banks &amp; institutions.</p> <p><b>Modern Computer Centre</b> in a Wifi Campus.</p> <p style="text-align: center;"><b>IIF Programs</b></p> <p><b>Pioneered the Business Finance education</b> in India. Offers Regular Programs and Online DLP Working Executive Programs matching MBA of International standards. Focus is on Total Personality Development at <b>Modest Fee</b>.</p> <p>IIF Signed 45+ MOUs with Universities Worldwide.</p> <p style="text-align: center;"><b>Scholarship &amp; Fee Concessions</b></p> <p>Offered for deserving candidates on <b>Merit / Means</b> basis since 1987 for University / College Toppers; Sports Personnel, Army Wards, Actors, Artists &amp; EWS Category and others.</p>



**IIF founded in 1987 is An Island of Excellence in the World of Finance**



## Capital Budgeting Decision under Risk & Uncertainty

### Contents

- Nature & Meaning of Capital Budgeting
- Techniques of Evaluating Capital Budgeting Decisions
- Capital Budgeting Decisions and Multiple Objectives
- CBD, Multiple Objectives & Indian Firms
- Lexicographic Model of Ranking of Multiple Objectives
- Goal Programming Model for Capital Budgeting Decisions
- A Stochastic Goal Programming Model for Capital Budgeting Decisions under Uncertainty
- Summary and Conclusions
- Bibliography
- Subject Index ; Author Index

### About the Author

**Prof. J.D. Agarwal, Ph.D. (Delhi School of Economics); Hony. Ph.D. (TFI, Uzbekistan); Hony. D.Litt., Doctorem Honoris Causa (SZIU, Hungary), ITP (LBS London)**



Prof. Agarwal, Distinguished Professor of Finance, is the founder Chairman & Director of Indian Institute of Finance (IIF) , Founder Chairman, IIF Business School (IIFBS) , Founder Chairman, IIF College of Commerce and Management Studies (IIFCCMS) & Editor-in-Chief of Finance India. He is a leading economist & financial expert. In the past he has taught at Shri Ram College of Commerce (Delhi University), Delhi School of Economics, Indian Institute of Technology IIT Delhi, Ahmadu Bello University, Nigeria & Cleveland State University, USA. He has written over 18 books (authored over 5600 pages), edited over 130 volumes of Finance India (edited more than 50,000 pages), published more than 211 research papers, authored more than 38 book reviews, 500 case studies & working papers. He has been supervisor of several Ph.Ds, M.Tech (Systems & Management) dissertations, MBA & M.Sc. (Finance) dissertations & SRTP research projects by senior government officials sponsored by GoI on study leave at IIF. Numerous Government policies like Budget time change to Fornoon, Education Cess, Money Laundering Act (FEMA), KYC Norms & many others have been based on his works. His news, analysis & comments on economic & financial issues appear on AIR, TV & National Dailies. Dr. Agarwal's ex-students include two Cabinet Ministers, a Former Judge in Supreme Court of India, Ex Chief Election Commissioner of India; Ex-Secretary Defense Finance, GoI; Ex CEO, Noida Authority & FCI, dozens of IAS/IPS/IRS, CEOs of Banks, FIs & PSUs, leading CAs, CS, CFOs, COOs, Lawyers, Vice-Chancellors and Deans of Foreign & Indian Universities, Media Personalities and successful Entrepreneurs.

ISBN : 81-85225-00-1

For Orders and Bulk Discount(s) Contact :

Pages : 168

**IIF Publication**

Price: ₹ 280/- + Postage

**Indian Institute of Finance**

**Discount 40%**

## IIF Faculty Publications

<b>Library Editions:</b>		<i>No. of Pages</i>	<i>Price Rs. US\$</i>	
1.	<b>Literature in Finance-I : Corporate Finance</b> J.D. AGARWAL & AMAN AGARWAL	pp 198	280	43
2.	<b>Literature in Finance-II : Accounting</b> J.D. AGARWAL & AMAN AGARWAL	pp 118	200	35
3.	<b>Literature in Finance-III : Fin. Sys. &amp; Mkts</b> J.D. AGARWAL & AMAN AGARWAL	pp 230	310	46
4.	<b>Literature in Finance-IV : Specialised Finance</b> J.D. AGARWAL & AMAN AGARWAL	pp 218	410	56
5.	<b>Literature in Finance-V : Management</b> J.D. AGARWAL & AMAN AGARWAL	pp 154	310	46
6.	<b>Literature in Finance-VI : Economics</b> J.D. AGARWAL & AMAN AGARWAL	pp 178	270	42
7.	<b>Capital Budgeting Decision Under Risk &amp; Uncertainty</b> J.D. AGARWAL	pp 168	280	43
8.	<b>Working Capital Management</b> J.D. AGARWAL	pp 303	350	50
9.	<b>Readings in Financial Management</b> J.D. AGARWAL	pp 497	350	50
10.	<b>Accounting for Financial Analysis</b> J.D. AGARWAL	pp 435	280	43
11.	<b>International Finance</b> MANJU AGARWAL	pp 264	180	33
12.	<b>Economics for Decision Making</b> MANJU AGARWAL	pp 317	180	33
13.	<b>Tax Incentives &amp; Investment Behaviour</b> MANJU AGARWAL	pp 179	175	32
14.	<b>Organisation Behaviour</b> J.D. AGARWAL	pp 227	150	30
15.	<b>Quant. Tech. Financial Analysis I</b> J.D. AGARWAL & SAGARIKA GHOSH	pp 281	290	44
16.	<b>Quant. Tech. Financial Analysis II</b> J.D. AGARWAL & SAGARIKA GHOSH	pp 292	290	44
17.	<b>Capital Structure Decisions under Multiple Objectives</b> YAMINI AGARWAL	pp 223	950	80
18.	<b>Finance India</b> QUARTERLY JOURNAL OF FINANCE	pp 1200	5000	500 (4 Issues)
<b>Students Editions: (Subsidised)</b>				
1.	<b>Literature in Finance-I : Corporate Finance</b> J.D. AGARWAL & AMAN AGARWAL	pp 198	200	35
2.	<b>Literature in Finance-II : Accounting</b> J.D. AGARWAL & AMAN AGARWAL	pp 118	120	27
3.	<b>Literature in Finance-III : Fin. Sys. &amp; Mkts</b> J.D. AGARWAL & AMAN AGARWAL	pp 230	230	38
4.	<b>Literature in Finance-IV : Specialised Finance</b> J.D. AGARWAL & AMAN AGARWAL	pp 218	330	48
5.	<b>Literature in Finance-V : Management</b> J.D. AGARWAL & AMAN AGARWAL	pp 154	230	38
6.	<b>Literature in Finance-VI : Economics</b> J.D. AGARWAL & AMAN AGARWAL	pp 178	270	42
7.	<b>Capital Budgeting Decision Under Risk &amp; Uncertainty</b> J.D. AGARWAL	pp 168	190	34
8.	<b>Working Capital Management</b> J.D. AGARWAL	pp 303	280	43
9.	<b>Readings in Financial Management</b> J.D. AGARWAL	pp 497	220	37
10.	<b>Accounting for Financial Analysis</b> J.D. AGARWAL	pp 435	180	33
11.	<b>Organisation Behaviour</b> J.D. AGARWAL	pp 227	150	30
12.	<b>International Finance</b> MANJU AGARWAL	pp 264	120	27
13.	<b>Security Analysis</b> J.D. AGARWAL	pp 423	450	45
14.	<b>Economics for Decision Making</b> MANJU AGARWAL	pp 317	100	25
15.	<b>Quant. Tech. Financial Analysis I</b> J.D. AGARWAL & SAGARIKA GHOSH	pp 281	290	44
16.	<b>Quant. Tech. Financial Analysis II</b> J.D. AGARWAL & SAGARIKA GHOSH	pp 292	290	44

Please send  
your order to:

**INDIAN INSTITUTE OF FINANCE**  
45A, Knowledge Park III, Greater Noida - 201310, UP

# FINANCE INDIA

Published Since 1987

www.financeindia.org

ISSN 0970-3772

## SUBSCRIPTION FORM

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE & EMAIL : \_\_\_\_\_

PAYMENT DETAILS : \_\_\_\_\_

AMOUNT \_\_\_\_\_ (Indian Rs./US \$/EURO)

SUBSCRIPTION \_\_\_\_\_ (Individual/Institutional)

EFFECTIVE FROM \_\_\_\_\_ (Vol.) OR (Year )

### SUBSCRIPTION RATES for ONE YEAR \*

(Four Issues: March, June, September & December)

	IN INDIA	ABROAD
Institutions	Rs. 5000	EURO / US\$ 500
Individuals	Rs. 4000	EURO / US\$ 400

\* Back Issues Available since 1987.

All Payments are to be made through

- (a) Bank Transfer : for India : NEFT to Indian Institute of Finance; A/c No. 65075795019; State Bank of India, Greater Noida, IFSC Code : SBIN0050830; for Overseas : Branch : 50830; SWIFT : SBININBB881; IFSC : SBIN0050830 or
- (b) PAYTM using any UPI App : <https://www.iif.edu/paytm.htm> or
- (c) Demand Draft/Banker's Cheque in favour of "Indian Institute of Finance" payable at Delhi, India

### THE JOURNAL IS INDEXED / ABSTRACTED IN

- Cabells Directory of Publishing Opportunities in Accounting, Economics and Finance 1997-98
- International Bibliography of Social Sciences of the London School of Economics & Political Sciences
- EconLit
- JEL on CD
- e-JEL
- the Journal of Economic Literature
- Ulrich's Periodicals Directory™
- ISID Research Reference of Institute of Studies in Industrial Development
- GALE Directory of Publications & Broadcast Media
- FI-ICP
- All India Index to Periodical Literature by Nexus Information Services Company (NISC)
- Google Scholars
- ProQuest
- UGC India [Group II 2020; Group A UGC-CARE List 2019 No 75 & Code 1972 & 8198 (till May 2018)]
- Information Bulletin on Management (IM-A)
- BASE - Bielefeld Academic Search Engine
- British Library for Development Studies at IDS
- SCOPUS Indexed Journal
- Online Public Access Catalogue of IIM-A
- Economic Journals on the Web
- SOASEA (South Asian Eco. Abstracts) of Info. Res. Gp.
- FinanceWise
- Social Science Information Gateway (SoSIG)
- FinancialStep
- UGC Uzbekistan
- EDIRC
- Scientific Journal Impact Factor (SJIF)
- ABDC (Australian Business Deans Council)
- International Scientific Indexing (ISI)
- French AERES (National Asso. for Scientific Research)
- UGC Hungary
- Indian Citation Index (ICI)
- EBSCO Publishing
- Index Copernicus International (ICI)
- WORLDCAT
- CITEFACTOR
- MIAR
- Bibliothekssystem UniversitÄt Hamburg, RESURCHIF
- Index Copernicus International (ICI)
- Scientific Index Services (SIS) Scientific Group
- Academic Buleted Journals by the Polish Ministry of Science and Higher Education
- WIKIDATA
- INFLIBNET
- ECONBIZ
- Vrije Universiteit, Amsterdam
- Academic Resource Index ResearchBib
- Open Academic Journals Index (OAJI)
- WISE, Jordan

### FINANCE INDIA

Indian Institute of Finance

45 A, Knowledge Park III, Greater Noida 201310 (NCR Delhi), UP, INDIA

Phone: +91-9811971002; 9999321585-86

Editorial E-mail : [editorial@financeindia.org](mailto:editorial@financeindia.org) ; [aa@financeindia.org](mailto:aa@financeindia.org)

Subscription E-mail : [subscribe@financeindia.org](mailto:subscribe@financeindia.org) ; [nl@iif.edu](mailto:nl@iif.edu) ; [info@iif.edu](mailto:info@iif.edu)

**The Quarterly Journal of Finance of Indian Institute of Finance**