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FINANCE

EDITED BY KRISHNA PAUDYAL

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Krishna Paudyal
University of Strathclyde

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Dedication

I would like to dedicate this edition of the *Wiley Encyclopedia of Management* to Professor Chris Argyris, who passed away last year. Professor Argyris and I were co-editors of the first edition, where we worked together, while I was on sabbatical, at Harvard Business School, to highlight the main structure, disciplines and functional areas of management that would be the template for future editions of the Encyclopedia. Chris was an outstanding scholar in management, probably the best known thinker in the field and renowned for his state-of-the-art management books and innovative management theories, but more important he was a wonderful person, who supported and nurtured all he worked with. I remember strolling with him on a number of occasions in Hyde Park, London, when he was in England, talking to him about his latest ideas and insights. Even in his eighties, he bubbled with enthusiasm. He was truly inspirational, and I, and his many colleagues worldwide, will miss him dearly.

Professor Sir Cary L. Cooper, CBE
The Editor-in-Chief

Preface

Although finance is considered to be a relatively new area of study within business education, its importance has grown exponentially. Its relevance is not only reflected in the academic world but also in each individual's financial activities, use of finance jargon in day-to-day life, and the strength of financial markets to make or break national and global economies. Consequently, understanding of finance has become critically important for policy makers, financial market professionals, as well as individuals. Such developments have created a demand for a comprehensive source of knowledge in the field. The earlier two editions of this encyclopedia have been instrumental in disseminating enhanced knowledge of finance and financial markets to people from all walks of life that are concerned with finance. However, financial markets and its scientific paradigms are evolving and expanding rapidly. Therefore, a revised version of encyclopedia incorporating more recent innovations and developments in the field of finance is needed and the current edition aims to fill this void.

Personally, it has been a great pleasure for me to be entrusted with the responsibility of updating this highly successful encyclopedia. As an editor, I do not claim that this edition incorporates all finance topics of modern times. This is primarily because the topics and issues in finance have grown so wide that it is not feasible to include articles covering all of them. However, an attempt has been made to represent a range of topics of contemporary importance. In this edition some articles are from previous editions, some are rewritten, whiles others are newly added. Completion of this edition would not have been feasible without the support and commitment of contributing authors – I am very grateful to you all.

All articles are written by leading authors in the field and provide insightful discussions on relevant topics. Therefore, this volume is anticipated to be useful for university students, policy makers, and financial market participants as well as for individuals in developing understanding of the complex financial markets in simple terms.

Krishna Paudyal

About the Editors

Editor-in-Chief
Professor Sir Cary L. Cooper, CBE, is Distinguished Professor of Organizational Psychology and Health at Lancaster University Management School, UK. He is the author of over 100 books, Founding Editor of the *Journal of Organizational Behavior*, Founding President of the British Academy of Management, and Chair of the Academy of Social Sciences (comprises 46 learned societies and nearly 90,000 social scientists).

Volume Editor
Krishna Paudyal (MSc, Ph.D.) is a Professor of Empirical Finance and the Head of Department of Accounting and Finance at the University of Strathclyde, Glasgow. Prior to returning to Strathclyde, he was Professor of Finance at Glasgow Caledonian University, Durham University, and the University of Leeds. Krishna has published extensively in journals of international standing such as *Journal of Financial and Quantitative Analysis*; *Journal of Banking and Finance*; *Journal of Financial Research*; *Journal of International Money and Finance*; *Journal of Business Finance & Accounting*; and *European Financial Management*. Prior to joining academia, Krishna worked for Nepal Rastra Bank, the central bank of Nepal, for several years.

Contributors

Reena Aggarwal
Georgetown University, Washington, DC, USA

Lakshman A. Alles
Curtin University of Technology, Bentley, Western Australia, Australia

Paul Barnes
Macquarie University, Sydney, Australia

Giovanni Barone-Adesi
U.S.I., Lugano, Switzerland and City University Business School, London, UK

Ramaprasad Bhar
University of Technology, Sydney, Australia

David Blake
City University London, London, UK

John Board
University of Reading, Reading, UK

David Brookfield
University of Liverpool, Liverpool, UK

Nusret Cakici
City University of New York, NY, USA

David Camino
Universidad Carlos III de Madrid, Madrid, Spain

John Capstaff
University of Strathclyde, Glasgow, UK

Philip C. Chang
University of Calgary, Calgary, Alberta, Canada

Derek F. Channon (deceased)
Formerly of University of Manchester, Manchester and Late of Imperial College Business School, London, UK

Iain Clacher
Leeds University Business School, Leeds, West Yorkshire, UK

Nick Collett
University of Manchester, Manchester, UK

Oscar Couwenberg
University of Groningen, Groningen, The Netherlands

Susan J. Crain
Missouri State University, Springfield, MI, USA

Peter J. DaDalt
The University of Rhode Island, Kingston, RI, USA

Ian Davidson
De Montfort University, Mill Lane, Leicester, UK

Istemi S. Demirag
University of Keele, Keele, Staffordshire, UK

Steven A. Dennis
Kent State University, Kent, OH, USA

Paul Draper
Leeds University Business School, Leeds, West Yorkshire, UK

Heber Farnsworth
Washington University, St. Louis, MO, USA

Emilios C. Galariotis
Audencia Nantes School of Management, Nantes, France

Ian Garrett
University of Manchester, Manchester, UK

Gerald T. Garvey
Claremont Graduate University, Claremont, CA, USA

Gordon Gemmill
University of Warwick, Coventry, UK

Debra A. Glassman
University of Washington, Seattle, Western Australia, USA

Leslie M. Goldschlager
Monash University, Clayton, Victoria, Australia

Christian Haefke
Universitat Pompeu Fabra, Barcelona, Spain

Ian R. Harper
Melbourne Business School, Carlton, Victoria, Australia

Christian Helmenstein
Institute for Advanced Studies, Vienna, Austria

Phil Holmes
University of Leeds, Leeds, UK

Stuart Hyde
University of Manchester, Manchester, UK

Vasileios Kallinterakis
University of Liverpool, Liverpool, UK

Nikunj Kapadia
NYU: Stern School of Business, New York, NY, USA

Paul Kofman
The University of Melbourne, Victoria, Australia

Meziane Lasfer
Cass Business School, City University London, London, UK

Ricardo Leal
Federal University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil

Edward Lee
University of Manchester, Manchester, UK

Jae H. Lee
Sungkyunkwan University, Seoul, Korea

Joakim Levin
Stockholm School of Economics, Stockholm, Sweden

Weimin Liu
Nottingham University Business School, Nottingham, UK and Nottingham University Business School, Ningbo, China

Steven V. Mann
University of South Carolina, Columbia, SC, USA

Patrick McColgan
University of Strathclyde, Glasgow, UK

Ginette V. McManus
St. Joseph's University, Philadelphia, PA, USA

Arie L. Melnik
University of Haifa, Haifa, Israel

S. Nagarajan
Formerly of University of Hyderabad, Hyderabad, India

Jeffry Netter
University of Georgia, Athens, GA and University of Minnesota, Minneapolis, MN, USA

Anthony Neuberger
University of Warwick, Coventry, UK

David P. Newton
Nottingham University, Nottingham, UK

Gregory R. Niehaus
University of South Carolina, Columbia, SC, USA

Joseph P. Ogden
University at Buffalo, SUNY, Buffalo, NY, USA

Per Olsson
Duke University, Durham, NC, USA

James Owers
Formerly of Georgia State University, Atlanta, GA, USA

Aydin Ozkan
Hull University Business School, Hull, UK

Dean A. Paxson
University of Manchester, Manchester, UK

Steven Peterson
Virginia Commonwealth University, Richmond, VA, USA

Julio Pindado
University of Salamanca, Salamanca, Spain and University of Leeds, Leeds, UK

Steven E. Plaut
University of Haifa, Haifa, Israel

Sunil Poshakwale
University of Birmingham, Bedford, England

Vesa Puttonen
Helsinki School of Economics and Business Administration, Helsinki, Finland

Ignacio Requejo
Universidad de Salamanca, Salamanca, Spain

Klaus Sandmann
Institute for Economics and Social Sciences, Bonn, Germany

Sudipto Sarkar
McMaster University, Hamilton, Ontario, Canada

Charles Schell
Vancouver Island University, Nanaimo, British Columbia, Canada and University of Manchester, Manchester, UK

C. W. Sealey
University of North Carolina at Charlotte, Charlotte, NC, USA

Paul Seguin
University of Georgia, Athens, GA and University of Minnesota, Minneapolis, MN, USA

Tyler Shumway
University of Michigan Business School, Ann Arbor, MI, USA

Richard W. Sias
Washington State University, Pullman, Western Australia, USA

Thomas F. Siems
Federal Reserve Bank of Dallas, and Southern Methodist University, Dallas, TX, USA

Joseph F. Sinkey, Jr.
University of Georgia, Athens, GA, USA

Avanidhar Subrahmanyam
UCLA Anderson School of Management, Los Angeles, CA, USA

Charles Sutcliffe
University of Reading, Reading, UK

Stephen J. Taylor
Lancaster University Management School, Lancaster, Lancashire, UK

David C. Thurston (deceased)
Formerly of Henderson State University, Arkadelphia, AR, USA

Allan Timmermann
University of California, San Diego, CA, USA

A. Tourani-Rad
AUT University, Auckland, New Zealand

Alexander Triantis
University of Maryland, College Park, MD, USA

Agnieszka Trzeciakiewicz
Hull University Business School, Hull, UK

Ruey S. Tsay
University of Chicago, Chicago, IL, USA

Chris Veld
Monash University, Caulfield, Victoria, Australia

Premal Vora
Penn State Harrisburg, Middletown, PA, USA

Ed Vos
University of Waikato, Hamilton, New Zealand

Charles Ward
University of Reading, Reading, UK

Nick Webber
De Montfort University, Leicester, UK

Ivo Welch
Yale University, New Haven, Connecticut, CT, USA

Jonathan Williams
Bangor Business School, Bangor, Gwynedd, UK

Contents

A

agency theory

Steven V. Mann

When human interaction is viewed through the lens of the economist, it is presupposed that all individuals act in accordance with their self-interest. Moreover, individuals are assumed to be cognizant of the self-interest motivations of others and can form unbiased expectations about how these motivations will guide their behavior. Conflicts of interest naturally arise. These conflicts are apparent when two individuals form an agency relationship: one individual (principal) engages another individual (agent) to perform some service on his or her behalf. A fundamental feature of this contract is the delegation of some decision-making authority to the agent. Agency theory is an economic framework employed to analyze these contracting relationships. Jensen and Meckling (1976) present the first unified treatment of agency theory.

Unless incentives are provided to do otherwise or unless they are constrained in some other manner, agents will take actions that are in their self-interest. These actions are not necessarily consistent with the principal's interests. Accordingly, a principal will expend resources in two ways to limit the agent's diverging behavior: (i) structure the contract so as to give the agent appropriate incentives to take actions that are consistent with the principal's interests and (ii) monitor the agent's behavior over the contract's life. Conversely, agents may also find it optimal to expend resources to guarantee they will not take actions detrimental to the principal's interests (i.e., bonding costs). These expenditures by principal and/or agent may be pecuniary/nonpecuniary and are the costs of the agency relationship.

Given costly contracting, it is infeasible to structure a contract so that the interests of both the principal and agent are perfectly aligned. Both parties incur monitoring costs and bonding costs up to the point where the marginal benefits equal the marginal costs. Even so, there will be some divergence between the agent's actions and the principal's interests. The reduction in the principal's welfare arising from this divergence is an additional cost of an agency relationship (i.e., "residual loss"). Therefore, Jensen and Meckling (1976) define agency costs as the sum of (i) the principal's monitoring expenditures; (ii) the agent's bonding expenditures; and (iii) the residual loss.

Barnea, Haugen, and Senbet (1985) divide agency theory into two parts according to the type of contractual relationship examined: the economic theory of agency and the financial theory of agency. The economic theory of agency examines the relationship between a single principal who provides capital and an agent (manager) whose efforts are required to produce some goods or service. The principal receives a claim on the firm's end-of-period value. Agents are compensated for their efforts by a dollar wage, a claim on the end-of-period firm value, or some combination of the two.

Two significant agency problems arise from this relationship. First, agents will not put forward their best efforts unless provided the proper incentives to do so (i.e., the incentive problem). Second, both the principal and the agent share in the end-of-period firm value and as this value is unknown at the time the contract is negotiated, there is a risk sharing between the two parties (i.e., the risk sharing problem). For example, a contract that provides a constant dollar compensation for the agent (principal) implies that all the risk is borne by the principal (agent).

Contracts that simultaneously solve the incentive problem and the risk-sharing problem are referred to as first-best. First-best contracts provide agents with incentives to expend an optimal amount of effort while producing an optimal distribution of risk between principal and agent. A vast literature examines these issues (e.g., Ross, 1973; Shavell, 1979; Holmstrom, 1979).

The financial theory of agency examines contractual relationships that arise in financial markets. Three classic agency problems are examined in the finance literature: (i) partial ownership of the firm by an owner-manager; (ii) debt financing with limited liability; and (iii) information asymmetry. A corporation is considered a nexus for a set of contracting relationships (Jensen and Meckling, 1976). Not surprisingly, conflicts arise among the various contracting parties (manager, shareholder, bondholders, etc.).

When the firm manager does not own 100% of the equity, conflicts may develop between managers and shareholders. Managers make decisions that maximize their own utility. Consequently, a partial owner-manager's decisions may differ from those of a manager who owns 100% of the equity. For example, Jensen (1986) argues that there are agency costs associated with free cash flow. Free cash flow is discretionary cash available to managers in excess of funds required to invest in all positive net present value projects. If there are funds remaining after investing in all positive net present value projects, managers have incentives to misuse free cash flow by investing in projects that will increase their own utility at the expense of shareholders (Mann and Sicherman, 1991).

Conflicts also arise between stockholders and bondholders when debt financing is combined with limited liability. For example, using an analogy between a call option and equity in a levered firm (Black and Scholes, 1973; Galai and Masulis, 1976), one can argue that increasing the variance of the return on the firm's assets will increase equity value (due to the call option feature) and reduce debt value (by increasing the default probability). Simply put, high variance capital investment projects increase shareholder's wealth through expropriation from the bondholders. Obviously, bondholders are cognizant of these incentives and place restrictions on shareholder's behavior (e.g., debt covenants).

The asymmetric information problem manifests itself when a firm's management seeks to finance an investment project by selling securities (Myers and Majluf, 1984). Managers may possess some private information about the firm's investment project that cannot be credibly conveyed (without cost) to the market due to a moral hazard problem. A firm's securities will command a lower price than if all participants possessed the same information. The information asymmetry can be resolved in principle with various signaling mechanisms. Ross (1977) demonstrates how a manager compensated by a known incentive schedule can use the firm's financial structure to convey private information to the market.

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