

# Multiple Criteria Decision Making

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# Financial Decision Aid Using Multiple Criteria

Recent Models and Applications

 Springer

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ISSN 2366-0023                      ISSN 2366-0031 (electronic)  
Multiple Criteria Decision Making  
ISBN 978-3-319-68875-6              ISBN 978-3-319-68876-3 (eBook)  
<https://doi.org/10.1007/978-3-319-68876-3>

Library of Congress Control Number: 2017956268

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Printed on acid-free paper

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The registered company is Springer International Publishing AG  
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

*To whoever has taught me one letter*

# Preface

Multiple criteria decision making (MCDM) includes a group of operational research methods pursuing making choices in the presence of multiple criteria, goals, or objectives. MCDM started to emerge in the 1950, and since then, it has experienced a growing development. The objective of this book, edited by Prof. Hatem Masri, from the University of Bahrain (Bahrain), Prof. Blanca Pérez-Gladish from the University of Oviedo (Spain), and Prof. Constantin Zopounidis, from the Technical University of Crete (Greece), is to bring together recent challenges and developments with regard to this field presenting attractive and new methodological contributions and real applications of MCDM in finance.

The book was thought to summarize some of the main scientific contributions in the field of financial decision making taking into account multiple dimensions presented at the International Conference on Multidimensional Finance, Insurance and Investment. This conference is devoted to the recent developments and applications of the multi-criteria decision aid tools in the field of finance and insurance. This scientific event disseminates recent methods and procedures designed to solve problems related to finance, insurance, and portfolio selection formulated through a mathematical programming framework and for which a stack of conflicting and incommensurable objectives (criteria, attributes) is simultaneously optimized. The aim of this conference is to bring together researchers and practitioners from all over the world to discuss recent theoretical and methodological developments of multi-attribute portfolio selection, insurance, and investment. Given the popularity of the financial portfolio optimization topic within the fields of finance and operational research, and the large number of active researchers, the idea of organizing an international workshop on multi-attribute portfolio selection (MAPS) was initiated in Helsinki in 2005 and chaired by Pekka Korhonen. The second edition of this scientific event took place in Montreal and was organized by Belaid Aouni in 2007. The third edition was organized by Alejandro Balbas in Madrid in 2009. The international committee has decided to replace the MAPS workshops by an International Conference on Multidimensional Finance, Insurance and Investment (ICMFII) with a 2 years periodicity. The 2011 edition of the ICMFII was held on April 14–16 in Hammamet (Tunisia) and chaired by Fouad Ben Abdelaziz.

The fifth edition of the ICMFII was organized on November 25–27, 2013, in Bahrain and chaired by Minwir Al-Shammari. The sixth edition of this conference, ICMFII'2016, was held on June 26–29, 2016, at the Campus d'Alcoi of the Universitat Politècnica de València (Spain). More than 100 researchers from a wide range of countries attended the conference, and more than 60 papers were presented covering a broad range of topics regarding multiple criteria decision aid in finance. The oral presentations were completed with three outstanding plenary talks delivered by Prof. Ralph Steuer, University of Georgia; Prof. Belaid Aouni, University of Qatar; and Prof. Michael Doumpos, University of Crete.

In December 2014, Prof. Fouad Ben Abdelaziz and Prof. Hatem Masri kindly invited Prof. Blanca Pérez-Gladish to organize this event. We were pleased to accept for several reasons. On one hand, the numerous editions of this conference have been all very successful. For us, researchers and practitioners trying to develop and apply MCDM tools to the field of finance and insurance, this event constituted a great opportunity to exchange with colleagues and to learn from each other. On the other hand, this edition of the conference was devoted to the memory of Professor Enrique Ballester. Professor Ballester (1928–2014, Arganda del Rey, Madrid) was a versatile and brilliant intellectual: teacher, economist, mathematician, member of the Spanish Parliament (1979–1989), abstract painter, and writer. But above all, as Professor Carlos Romero acknowledged a few years ago, in the Foreword of Professor Ballester's last book (*Socially Responsible Investment: A Multi-Criteria Decision Making Approach*), he was our teacher, colleague, and friend.

In his name and in our own names, we would like to thank all the participants in the conference and all the authors of the works presented in this book for their contribution in making both the conference and this book a big success and a warm tribute to the memory of our dear mentor.

Sakhir, Bahrain  
Oviedo, Spain  
Chania, Greece

Hatem Masri  
Blanca Pérez-Gladish  
Constantin Zopounidis

# Acknowledgments

We would like to thank the Universitat Politècnica de València Campus de Alcoy for organizing the ICMFII' 16. Also, we would further like to thank the conference scientific committee who helped us in editing this book:

- Alejandro Balbás (University Carlos III of Madrid, Spain)
- Ana Garcia-Bernabeu (Polytechnical University of Valencia, Spain)
- Antonio Benito (Polytechnical University of Valencia, Spain)
- Belaid Aouni (Laurentian University, Canada)
- Blanca Pérez-Gladish (University of Oviedo, Spain)
- Bouchra M'Zali (UQAM, Canada)
- Carlos Romero (Technical University of Madrid, Spain)
- Cinzia Colapinto (Ca' Foscari University, Italy)
- Constantin Zopoundis (Technical University of Crete, Greece)
- David Pla-Santamaria (Polytechnical University of Valencia, Spain)
- Davide La Torre (University of Milan, Italy)
- Dylan Jones (University of Portsmouth, UK)
- Fouad Ben Abdelaziz (Rouen Business School, France)
- Francisco Ruiz (University of Málaga, Spain)
- Hatem Masri (University of Bahrain, Bahrain)
- Jaap Spronk (Erasmus University, Netherlands)
- Jamal Ouenniche (University of Edinburgh, UK)
- Jose Manuel Cabello (University of Málaga, Spain)
- Khamoussi Halioui (University of Imam Muhammed ben Saud, KSA)
- Mila Bravo (Polytechnical University of Valencia, Spain)
- Minwir Al-Shammari (University of Bahrain, Bahrain)
- Moez Bennouri (Montpellier Business School, France)
- Rafael Caballero (University of Málaga, Spain)
- Ralph Steuer (University of Georgia, USA)
- Sabri Boubaker (Champagne School of Management, ESC Troyes, France)
- Sami Attaoui (NEOMA Business School, France)
- Slaheddine Hallara (University of Tunis, Tunisia)
- Vicente Liern (University of Valencia, Spain)



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