

TOWARD FINANCE WITH MEANING
THE METHODOLOGY OF FINANCE:
WHAT IT IS AND WHAT IT CAN BE

By

GEORGE M. FRANKFURTER and
ELTON G. MCGOUN

Toward Finance With Meaning

*The Methodology of Finance:
What It Is and What It Can Be*

by **GEORGE M. FRANKFURTER**
Louisiana State University
and
ELTON G. MCGOUN
Bucknell University



JAI PRESS INC.

Greenwich, Connecticut

London, England

Library of Congress Cataloging-in-Publication Data

Frankfurter, George M.

Toward finance with meaning : the methodology of finance, what it is and it can be / by George M. Frankfurter and Elton G. McGoun.

McGoun.

p. cm. — (Contemporary studies in economic and financial analysis ; v. 80)

Includes bibliographical references (p.) and index.

ISBN 0-7623-0163-5

1. Finance. 2. Finance—History. 3. Risk. 4. Business mathematics. I. McGoun, Elton George, 1950- II. Title. III. Series.

HG173.F69 1996

332—dc21

96-04849

CIP

*Copyright © 1996 JAI Press Inc.
55 Old Post Road, No. 2
Greenwich, Connecticut 06836*

*JAI PRESS LTD.
38 Tavistock Street
Covent Garden
London, WC2E 7PB
England*

All rights reserved. No part of this publication may be reproduced, stored on a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, filming, recording, or otherwise, without prior permission in writing from the publisher.

ISBN: 0-7623-0163-5

Library of Congress Catalog Number: 96-40849

Manufactured in the United States of America

Preface

The idea of writing a book about the methodology of finance was a matter of both coincidence and necessity. Had it not been for a special session of the Eastern Finance Association on Alternative Perspectives on Finance, during the 1993 meetings in Richmond, Virginia, we most likely would have never met nor talked to each other. It happened that William Lane, who was the program chair at that meeting, showed a paper of Elton McGoun's to George Frankfurter and asked him his opinion. Lane was aware that Frankfurter had been seriously questioning the [non-existent] philosophical tenets of the field, and thought the McGoun article conveyed a similar message.

Indeed, the article was so appealing to Frankfurter that he decided to publish it in one of the early issues of *The International Review of Financial Analysis*. One thing led to another, and the two of us decided to cooperate on an article critiquing the methodology of finance. In a short time, we realized that it was impossible to cope with a subject so complex within the framework of a paper, even if we were assured (and we were not) that such a work would be published.

Soon it became clear that the only way to deal with this multifarious subject was to write a treatise. A brief search of the literature revealed that such work had not been done since the publication of Fred Weston's careful manuscript, *The Scope and Methodology of Finance*, published by Prentice Hall in 1966. A cursory reading of the Weston book revealed, however, that either by choice or timing, Weston covered almost nothing of the paradigm now widely accepted in the field. Consequently, we decided to fill the void by writing a book on the subject. After developing an outline and prospectus that served as a blueprint for the work here, we began our search for a publisher.

It soon became clear that finding a publisher who would pursue the project not strictly for wealth maximization would be more than difficult. Indeed, the main-stream textbook publishers (with one exception) shied away from the idea in an instant. Luckily, JAI Press, which specializes in treatises, was quick to respond with its support of the project.

During our search for a publisher, the editor of economics and finance at a major publisher of textbooks showed a keen interest in philosophy and personally tried his very best to underwrite the endeavor. His effort culminated in seven reviews, which he shared with us. We believe that excerpts from these reviews (some positive, some negative) would serve as a better testimony of the need for this book, and a justification for what follows, than a million of our own words.

The referees of our outline and prospectus are not known to us. They were numbered 1 to 7 by the textbook editor. We reproduce, herein, for ease of reference the prospectus that was sent to these referees.

TOWARD FINANCE WITH MEANING THE METHODOLOGY OF FINANCE:

What it is and What it Can be

Prospectus and Outline

By George M. Frankfurter and Elton G. McGoun In 1966, J. Fred Weston published his monograph, "The Scope and Methodology of Finance." Conspicuous by their absence from the list of references are articles by Markowitz (1952), Sharpe (1963, 1964), Miller and Modigliani (1961) and many others in print at that time. These papers are regarded as having shaped what has come to be known today as modern finance, or in the parlance of a leading school of thought: financial economics. Of course, the monograph makes no mention of Agency, Pecking Order and Signaling Theories and/or the burgeoning literature of Micro Structure and the Market for Corporate Control, all of which appeared subsequent to its publication.

Thus, nearly all of the dominant theories and models that are built on the paradigm upon which research in finance is conducted are missing from Weston's work. In spite of this, the book remains the most recent and possibly the only attempt to define the scope and methodology of finance. The purpose of the proposed work is to provide an up-to-date critique of the methodology of finance, and concurrently, to consider why it is that finance pays so little attention to what it is doing and why this subject has been largely ignored for 27 years.

It will be argued that modern finance is but a lax compilation of ad hoc theories and models, connected by little other than the presupposition that the only relevant human behavior is wealth maximization. Other factors that might explain the activities of corporations, investors, financial analysts and institutions but cannot coexist with this rationality of wealth

maximization are ignored. Any activity that contradicts this maxim is either overlooked or considered an anomaly.

The methodological thinking by which such theories and models are created and tested is based upon two doubtful canons: (1) that complex problems can be decomposed to simple parts which in turn can be mathematically expressed and manipulated to arrive at a solution after which they can be put back together again and (2) that the underlying human behavior can be inferred from the statistical analysis of aggregate market data.

While building the intricate structure of financial economics upon such dubious foundations is a serious problem, there are others. The present monograph will also explain that (1) the structure contains a number of internal contradictions, rendering it logically unsound, and (2) its methods of analysis are biased and distorted in ways which presuppose the outcomes, mocking scientific rigor.

Additionally, it will be shown that this state of affairs did not emerge by default or lack of recognition that the paradigm is fundamentally flawed. The current state is a result of an academic reward system in which the “production” of scientific papers and their subsequent publication in the “nobility” press is the gauge of intellectual capability—modern day jousting of sorts. Accordingly, the search for knowledge and understanding is subjugated to methods by which one can better enhance one’s vita. Articles published in the leading organs of the field become a measure of one’s marketability.

The concluding section of the proposed monograph offers some alternative ways and means of thinking to provide a new avenue for scientific research in finance.

OUTLINE¹

SECTION I. INTRODUCTION AND BACKGROUND

Chapter 1 Introduction: the purpose and structure of the monograph

Chapter 2 Modernism and scientism

SECTION II. THE METHODOLOGICAL FOUNDATIONS OF FINANCIAL ECONOMICS

Chapter 3 The philosophical justification: Friedman’s positivism.

Chapter 4 The critiques of Friedmanian positivism.

Chapter 5 The fundamental postulates of finance and their refutations.

SECTION III. LOGICAL INCONSISTENCIES AND FALLACIES

Chapter 6 The purpose of finance versus its methodology

Chapter 7 Probability and the concept and measurement of risk

Chapter 8 Economic rationality, epistemological rationality and statistical independence

SECTION IV. THE PRACTICE OF SELF DECEPTION

Chapter 9 The deceptive language of metaphors

Chapter 10 Deceptive statistical methods

SECTION V. THE SOCIOLOGY OF FINANCIAL ECONOMICS

Chapter 11 How and why this happened

SECTION VI. FINANCE WITH MEANING

Chapter 12 Observations and analyses of social phenomena

Chapter 13 Alternative methodologies and methods

Chapter 14 Suggestions for new avenues of research

Chapter 15 Concluding remarks

REFERENCES

Markowitz, Harry M. 1952. "Portfolio Selection." *Journal of Finance* 7:77-91.

Miller, Merton H. and Franco Modigliani. 1961. "Dividend Policy, Growth and the Valuation of Shares." *Journal of Business* 34:411-433.

Sharpe, William F. 1963. "A Simplified Model of Portfolio Analysis" *Management Science* 9:277-293.

———. 1964. "Capital Market Prices: A Theory of Market Equilibrium Under Conditions of Risk." *Journal of Finance* 14:425-442.

Weston, J. Fred. 1966. *The Scope and Methodology of Finance*. Englewood Cliffs: New Jersey.

Now, the reviews:

Wealth maximization, or any other form of optimization, is just but a convenient way to simplify and analytically track problems. Nobody ever claimed it IS [referee's capitals] reality but the litmus test is how closely reality fits the models derived from such blatantly flawed assumptions. That is why a significant portion of articles published actually deal with empirical tests of the models: this is the only way researchers get a degree of comfort with the models themselves.

... I do agree with the statement that the review process may be unduly biased toward "accepted" methodologies but I would certainly stay shy of blaming the reward system for this state of affairs (Referee #1)

If these passages had been written on Milton Friedman's lap, they could not have been truer to the spirit of the man who transplanted defunct positivism/instrumentalism into economics. Nevertheless, this referee thinks that "... the concern of the authors with the underlying assumptions in financial research is indeed warranted and it would be a very interesting contribution to the research process itself."

It is time for a synthesis, or is this the S&M of Finance?! Weston's work, *not cited in the prospectus* [it was—our italics] was significant at a time when managerial was displacing descriptive. Perhaps it is time for us to take another look at the scope and methodology of finance.

The topical outline of this proposal includes not only the "scope and methodology," something that will sell if packaged right, but possibly a "grilling" of the Finance journal "insiders" who have led the field astray. The latter half of the outline, always looking for a publication outlet, would be interesting and controversial. I cannot decide if this proposal is "leading edge" or "crackpot!" (Referee #2).

Is there a difference?

There are books, readings and journals that cover new theories as well as criticism and tests of those theories. Consider the impact of the Fama-French article dealing with the CAPM. It has stimulated numerous articles, books and dissertations. Therefore restating theories and controversies about them does not seem to warrant a book. While it is true that some of our methodology is flawed, stating that it is "mocking scientific rigor" is pushing it too far. Although I will concede that some journals are more rigorous than others. So what is the contribution of this monograph? Neither the prospectus nor the outline provided me with an answer to that question. (Referee #3)

The reference to the now-famous Fama and French (1992) article begs a comment. As Jahnke tells his story in *The Journal of Investing*:

The CRSP Seminars, as they were called, provided an ideological home for those desirous of promoting an efficient market agenda.... The few brave souls venturing to the CRSP seminars with evidence contradicting CAPM were met by a band of academics known as "Murderers Row," who usually made quick work of dispatching the heretic (Jahnke 1994, pp. 7-8).

Fama was not just a card-carrying member of that "band of academics," but one *primus inter pares*, and subsequently helped to extend the ranks of "Murderers Row" to include leading academic and professional journals in financial economics. The "Murderers" were instrumental, therefore, as early as the CRSP seminars, in suppressing work that not only anticipated their 1992 conclusions, but, on occasion, also rigorously demonstrated these conclusions. It is a sad commentary on the moral and intellectual state of the field that other academics consider the Fama and French (1992) work iconoclastic, rather than raise the moral and ethical question whether, of all people, these two were qualified to tear down their own church with the same method of analysis with which they erected it and ensured its sanctity for a quarter of a century.

In fairness to the authors, I am not sure what it is they want to do. For example, their proposal begins by belaboring the fact that Weston's "Scope and Methodology of

Finance" is out of date. Few students and faculty members are probably aware of this book nowadays; so, I wonder why it is considered a central deficiency.

...I distinguish "scope and methodology" from theoretical paradigms. For example, I would consider the study of capital markets to be part of the scope of finance; and, the use of statistical methods as part of the methodology. Likewise, I would consider the "efficient market" to be a central paradigm of modern finance. Now, if the authors are suggesting that psychological aspects of behavior should be included within the scope of financial theory, I don't think that's such an earth-shaking or even controversial notion; certainly, the main premise of agency theory is that the behavior of agents may be at odds with the preference of shareholders. Likewise a good deal of "modern" financial research is based on clinical (?) case studies which focus more on contractual arrangements than on statistical methods [sic]. So, I see nothing radically different there. (Referee #4)

The brief proposal for "Towards Finance with Meaning" has been a difficult one to me to evaluate. The statement in the 2nd paragraph that the dominant theories and models of finance are built upon a paradigm missing from Weston's work the authors take as a criticism of the models of finance. It seems to me more simply evidence that Weston's work was less than complete, or to be more charitable, evidence that Weston's work in 1966 was relatively soon after the 63 and 64 ground breaking work of Sharpe and so did not consider it as it might have done had Weston wrote a few years later. In any case, the fact that Weston did not include these things in a 1966 trade book, is not, to me, *prima facie* evidence that the whole paradigm of finance is fatally flawed. The authors seem to consider it as just such evidence. (Referee #5)

We reproduced the prospectus and the outline to show to the unbiased reader that we made no claim that there is anything wrong with the Weston monograph, except that the field evolved after his writing. Apparently, if there is freedom of speech, there must be freedom of reading, too. Accordingly, one can impute anything one wishes to the best of one's understanding.

Despite the authors' concern over the parochialism of finance scholarship, the outline does not suggest very convincingly that there is a way out. Is there a new unifying principle that can be applied to direct future research? How can one go about constructing theory that relies on alternative assumptions about wealth seeking behavior? Is there an alternative paradigm? What are the consequences of continuing the current course of research?

...What they seem to want to say is important, but I am unconvinced that they can say it in an alluring way. I suggest they organize a conference around the themes that are noted in the prospectus. (Referee #6)

We certainly hope that the reader of this work will conclude that we have answered some of the questions of this referee without having to organize a conference on the themes.

Fred Weston was a recognized pioneer in finance in 1966, and it thus was appropriate for him to author a monograph, *THE SCOPE AND METHODOLOGY OF FINANCE* in that year. Fred remains active, he continues to be a pioneer for finance, and it would be no less appropriate for him to prepare an update on the status of the finance field. In fact, I wish Fred would do that!

And, can the authors really ignore the fact that Professors Markowitz, Miller, and Sharpe shared the 1990 Nobel Prize in that year for that very work they propose to add in this monograph? That singular award suggests to me that finance as a discipline is much more coherent and focused. (Referee #7)

No, we cannot and will not ignore the fact, precisely because the 1966 pioneer did not talk about that work at all. By the way, if you see Fred, say hello to him from us. We also have great respect for him, although we vehemently disagree with many of his conceptualizations in the *Scope and Methodology of Finance*.

Perhaps the most shocking aspect of these critiques is not what they say, but what they do not say. It seems that none of these distinguished referees realize that we are challenging the philosophical tenets of the finance field—the very same foundations that they seem to accept for granted.

Extra Ecclesiam Nulla Salus (there is no salvation outside the church) has long been a canon of the Catholic church. In this book, we challenge the canon (as it pertains to finance), for the church of positive economics.

Several chapters of this book contain concepts and ideas we discussed in papers, both published and unpublished, that we wrote either jointly or separately. We feel that it is important to put these papers together in a volume that will reflect our perception of the field and the direction it is following at present.

The following is a partial list of material taken from our previous, published work, and the chapters in this book they appear:

McGoun:

"*Machomatics in Egonomics*." *The International Review of Financial Analysis*, forthcoming, Chapter II.

"The CAPM: A Nobel Failure." *Critical Perspectives on Accounting 1992*, Chapter VI.

"*The History of Risk Measurement*." *Critical Perspectives on Accounting 1995*, Chapter VIII.

"The New Pythagoreans: Metaphysical Mathematics in Finance." *Slovene Economic Review* 1994, Chapter IX, X.

"On the Knowledge of Finance." *The International Review of Financial Analysis* 1992, Chapter XII.

Bettner, Robinson, and McGoun:

"*The Case for Qualitative Research in Finance*." *The International Review of Financial Analysis* 1994, Chapter XIV.

Frankfurter:

"The End of Modern Finance?" 1993. *The Journal of Investing* Chapter VI.

"The Rise and Fall of the CAPM Empire." *Financial Markets, Institutions and Instruments* 1995, Chapter VI.

Frankfurter and Lane:

"The Rationality of Dividends." *International Review of Financial Analysis*, 1992, Chapter V.

Frankfurter and McGoun:

"The Event Study: An Industrial Strength Method." *The International Review of Financial Analysis*, 1993, Chapters IX, X.

"But It Looked So Good on My Vita." *The Journal of Financial Education* 1996, Chapters XI, XV.

Frankfurter and Philippatos:

"Financial Theory and the Growth of Scientific Knowledge: From Modigliani and Miller to An Organizational Theory of Capital Structure." *International Review of Financial Analysis*, 1992, Chapter V.

Frankfurter and Phillips:

"Normative Implications of Equilibrium Restricted Models: Homogeneous Expectations and Other Artificialities." *Journal of Economic Behavior and Organization*, Forthcoming, Chapter VI.

ACKNOWLEDGMENTS

We are grateful to many of our students, who were not only an inspiration, but also source of knowledge for us. Sincere thanks are due to Ms. Ivonne Lewis Day for her expert editing of this book. Also, we recognize the great help we received from our graduate assistants, Mr. Armand Kosedag and Ms. Kim Edwards. We are indebted to our friends-coauthors, Professors Bettner, Lane, Philippatos, Phillips and Robinson.

Without the fascinating debates we conducted with our colleagues at Bucknell University, Louisiana State University, and the University of Ljubljana on many of the topics covered in the book, and without their encouragement this work would have never seen the light of day. Last, but not least, our heartfelt gratitude is extended to our spouses who, for reasons unfathomable, put up with our chosen profession.

Although it might seem that we are too critical, the reader should know that this manuscript is a labor of love.

NOTE

1. We reproduce here the original outline, as it was sent for review, in the interest of authenticity. Naturally, as the manuscript evolved, changes had to be made which are reflected in the Table of Contents of the finished work.

CONTENTS

	Page
Preface	xiii

SECTION 1. INTRODUCTION AND PHILOSOPHICAL BACKGROUND

I. Introduction	3
Finance and Philosophy	4
Finance as Social Science	5
Finance Without Meaning	6
Toward Finance With Meaning	7
II. Scientism	9
Science as Philosophy	10
The Enlightenment	11
Medieval Scholasticism	11
The Philosophy of the Enlightenment	13
Post-Empiricism	16
Conclusion	18

SECTION 2. THE METHODOLOGICAL FOUNDATIONS OF FINANCIAL ECONOMICS

III. The Philosophical Justification: Friedman's Positivism	25
Logical Positivism	25
Friedmanian "Positivism"	26
Data	27
Assumptions	29
Concluding Remarks	32

	<i>Page</i>
IV. A Critique of Friedman's Positivism	35
Friedman and the Philosophy of Science	35
Popper _n and Popper _s	35
Popper and Friedman	36
The Pitfalls of Friedmanian Instrumentalism	38
Data	38
"Cordelia's Dilemma"	39
Data Mining	39
Data "Snooping"	40
Data Dredging	40
Data Conjuring	40
Data Storking	41
Assumptions	41
Summary	43
V. The Paradigms of Finance and their Evolution	45
Corporation Finance	47
The Irrelevance Contentions	47
The MM Theory of Cost-of-Capital—Irrelevance #1	47
Miller-Modigliani Dividend Policy Theory—Irrelevance #2	49
Post—MM Theories of Cost of Capital	50
The Trade-Off Theory	51
MM in General Equilibrium	52
Informational Asymmetry and Agency Theory	53
Ad Hoc Scenerios	54
An "Organizational" Theory of Capital Structure	55
Dividend Policy	56
Dividend Signaling	58
Agency Theory Explanations	58
Capital Asset Pricing	59
The EMH	61
The APT	62
Other Pricing Models	65
Pricing of Contingent Claims	66
Market Micro-Structure	

SECTION 3. LOGICAL INCONSISTENCIES: THE CASE OF FINANCE AND RISK

VI. Positive, Normative, and Useful Finance (or is it a Plane, a Bird, a Man): The History of the CAPM	73
The Alternative CAPMs	74

The Positive, and Normative CAPMs	76
CAPM-U	77
The Predecessors of the CAPM	79
The Expected Return-Variance Maxim	79
Testing the Normative Hypotheses	80
The Original CAPM	83
Tobin's Liquidity Preference Model	83
Sharpe's Original CAPM	84
The Maturing CAPM	86
Testing the CAPM	87
The CAPM Today	88
The Failure of the CAPM—P	88
More About the Useful CAPM	90
The Notoriety of the CAPM	92
The Sociological Explanation: Academics and Practitioners	92
The Psychological Explanation and the Academic Community	94
VII. Risk, Uncertainty, and Probability: Language and Concepts	99
Finance, Language, and Translation	99
Probability Theories	102
The Theories Defined	102
The Theories Explained	103
The Theories and the Languages	106
The Probability Calculus and Economic Risk	109
The Concepts	109
The Concepts, the Theories, and the Languages	111
VIII. The History of Risk Measurement	115
Probability and Risk in Economics until 1930	116
Interest Before 1900	116
Excitement from 1900 to 1920	118
Caution from 1920 to 1930	121
The Rejection of Probabilistic Measurement of Risk	123
The Restoration of the Probabilistic Measurement of Risk	124
Hick's Initial Reaction	124
The First Austrian Assault	126
The Brief Skeptical Backlash	128
The Triumph of Statistical Measurement of Risk	130
The Final Solution	132

SECTION 4. PRACTICE AND LANGUAGE

	Page
IX. The Language of Mathematics	139
Science and Mathematics	139
From Numerology to Science	139
From Science to Numerology	141
Mathematics in Theory Creation	142
Finance and Statistics	143
Hypothesis Testing in Event Studies	143
Problems with Statistical Significance	148
Other Problems with Statistical Significance	151
X. The Language of Finance: A Duality of Culture	157
Figures of Speech	157
The Jargon of the Street	157
Metaphors in Finance	159
Catch-All Metaphors in Finance	162
"Abnormal Returns—A Possible Mumpsimus?"	162
The Dangerous Metaphor—The Implicit	165
Equilibrium Assumption	168
The Duality of the Language—Academic Finance and	169
Practitioner Finance	169
World View and Content	172
Method	174
Style	175
Conclusion	175

SECTION 5. THE SOCIOLOGY OF FINANCIAL ECONOMICS

XI. How and Why this Happened	181
What is Useful and to Whom	182
If Practitioners Use It	182
If Academics Use It	184
The Rationale for the Positivist Methodology in Finance	185
XII. The Profession and Practice	189
A Model of Scientific Activity	190
The Elements	190
The Process	192
Modigliani and Miller: An Example	193
Influence on the Intellectual Environment	195

The Process	195
Modigliani and Miller	195
Informal Extractions from the Environment	196
The Process	196
The Case of Financial Economics	198
Modigliani and Miller	199
The Influence on the External Environment	200
The Process in Financial Economics	200
Modigliani and Miller	202
Implications for Finance	203
Beyond Positivism	203
The Methodology of Finance	204
Counterintuitive Macrobbehavior	205

SECTION 6. FINANCE WITH MEANING

XIII. Meaning	211
Meaning	212
Structuralism	212
Hermeneutics	214
Critical Theory	216
Modernity and Post-Modernity	218
XIV. Alternative Methods	223
The Quantitative Research Tradition	223
New Directions in Finance	229
Alternative Methods	231
Grounded Field Theory	231
Ethnographic Analysis	233
Historical Techniques	234
Case Study Research	234
Action Research	235
XV. Concluding Remarks	239
References	243
Index	255

Section 1

INTRODUCTION AND PHILOSOPHICAL BACKGROUND
