The Economics and Finance of Hedge Funds: A Review of the Academic Literature

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Boston — Delft

Foundations and Trends® in Finance

Published, sold and distributed by:
now Publishers Inc.
PO Box 1024
Hanover, MA 02339
United States
Tel. +1-781-985-4510
www.nowpublishers.com
sales@nowpublishers.com

Outside North America:
now Publishers Inc.
PO Box 179
2600 AD Delft
The Netherlands
Tel. +31-6-51115274

The preferred citation for this publication is

V. Agarwal, K. A. Mullally and N. Y. Naik. *The Economics and Finance of Hedge Funds: A Review of the Academic Literature*. Foundations and Trends® in Finance, vol. 10, no. 1, pp. 1–107, 2015.

This Foundations and Trends® issue was typeset in LaTeX using a class file designed by Neal Parikh. Printed on acid-free paper.

ISBN: 978-1-68083-075-0

Foundations and Trends® in Finance

Volume 10, Issue 1, 2015

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Foundations and Trends® in Finance, 2015, Volume 10, 4 issues. ISSN paper version 1567-2395. ISSN online version 1567-2409. Also available as a combined paper and online subscription.

Foundations and Trends® in Finance
Vol. 10, No. 1 (2015) 1–107

DOI: 10.1561/0500000047

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Contents

1 Introduction **3**

2 Hedge Fund Performance **6**

2.1 Risks and rewards: Hedge funds versus mutual funds and other asset classes . . . 6
2.2 Hedge fund return-generating processes . . . 8
2.3 Manager skill in hedge funds . . . 17
2.4 Performance of funds of hedge funds . . . 25

3 Hedge Fund Characteristics and Performance **27**

3.1 Compensation and fund performance . . . 27
3.2 Managerial flexibility and fund performance . . . 31
3.3 Relation between fund size, investor flows, and fund performance . . . 36
3.4 Manager characteristics and fund performance . . . 42
3.5 Hedge fund families . . . 44
3.6 Hedge fund location and performance . . . 47
3.7 Fund distinctiveness and performance . . . 48
3.8 Other fund and manager characteristics . . . 49

4 Hedge Fund Risk-Taking and Risk Management **51**

4.1 Theoretical models of incentive contracts and risk-taking . 52

4.2 Compensation, career concerns, and risk-taking behavior of hedge fund managers 54
4.3 Operational risk, fraud, and agency problems 56
4.4 Funding liquidity risk 59
4.5 Liquidity risk 62
4.6 Tail risk 63
4.7 Risk management 66

5 Role of Hedge Funds in the Financial System 68
5.1 The role of hedge funds in crises and the propagation of systemic risk 69
5.2 Impact on asset prices 72
5.3 Hedge funds as suppliers of liquidity 74
5.4 Hedge fund activism 77

6 Database Biases 80
6.1 Reporting issues 81
6.2 Survivorship bias 82
6.3 Stale price bias 83
6.4 Self-selection, instant history and incubation biases 83

7 Concluding Remarks 87

References 88

Abstract

Hedge funds have become increasingly important players in financial markets. This heightened importance has spawned a large academic literature focused on issues pertinent to hedge fund managers, investors, regulators, and policymakers. Although the top four finance journals (the Journal of Finance, the Journal of Financial Economics, the Review of Financial Studies, and the Journal of Financial and Quantitative Analysis) published only 16 papers on hedge funds prior to 2005, they have published 105 papers on hedge funds since 2005. As a result, we felt that it is time to update the monograph published in 2005 [Agarwal and Naik, 2005]. This update, prepared with the help of new coauthor Kevin Mullally, extends the previous monograph along two dimensions. First, it includes reviews of recent studies on topics that were covered in the earlier monograph. Second, it summarizes research on new topics that were not part of the previous monograph. These new topics cover a broad gamut of issues ranging from hedge funds' use of leverage and exposure to different risks to their impact on various asset markets.

This monograph consists of five broad sections. The first section reviews the literature examining both the time-series and cross-sectional variation in hedge fund performance. Time-series performance studies cover return-generating processes, dynamic risk exposures, and determination of managerial skill. The second section covers studies focused on the cross-sectional relations between hedge funds' characteristics (including contractual features and time-varying features such as size and age) and fund performance. The third section analyzes the literature on the sources and nature of risks faced by hedge fund investors. In particular, we discuss risks that can arise from managerial incentives and sources of capital. The fourth section summarizes research on the role of hedge funds in the financial system. Specific

topics here include hedge funds' impact on systemic risk, asset prices, and liquidity provision in financial markets. The fifth and final section focuses on potential biases and limitations of hedge fund data sources.

V. Agarwal, K. A. Mullally and N. Y. Naik. *The Economics and Finance of Hedge Funds: A Review of the Academic Literature*. Foundations and Trends® in Finance, vol. 10, no. 1, pp. 1–107, 2015.

DOI: 10.1561/0500000047.

1

Introduction

Critics of hedge funds often label them as greedy, corrupt, and highly compensated villains who disrupt and pose threat to financial markets. Furthermore, some corporations may also be wary of hedge funds' aggressiveness in forcing them to change to policies deemed as value destroying. In contrast, proponents of hedge funds view them as informed traders who help improve market quality and corporate governance. Despite these divergent beliefs, the hedge fund industry has continued to grow at a phenomenal pace. Hedge Fund Research (HFR) estimates that the total assets under management (AUM) of the hedge fund industry increased from \$39 billion in 1990 to more than \$2.97 trillion as of the second quarter of 2015. During the same period, the total number of active hedge funds rose from 610 to over 10,000. Hedge funds also hold an increasingly large percentage of the stock market. A recent study by Cao et al. [2014a,b,c] finds that average holding of hedge funds in publicly traded stocks has risen over time from 3% during 2000–2003 to 9% in 2008–2012.

Given their increased influence on financial markets, it has become even more imperative to gather and disseminate information on hedge funds. However, this task is challenging due to the limited data available on the loosely regulated hedge fund industry. Despite this limitation, academic research by financial economists has kept up with the pace of growth in the hedge fund industry. While there were only 16 papers on hedge funds published in the premier finance journals (*JF, JFE, RFS*, and *JFQA*) prior to 2005, these journals have published 105 papers on hedge funds since 2005. Recent research has increasingly focused on new sources of risks in hedge funds, identification of managerial skill using different statistical approaches and databases, different manifestations of agency problems and their relation with the contractual features of hedge funds, and the impact of hedge fund activity on market stability and asset prices.

Our goal is to provide readers with a comprehensive update of the hedge fund research that has taken place in the past ten years. To that end, we will use the following format. For each topic, we will first summarize the findings of studies completed prior to 2005 and include references to that literature in footnotes. Readers interested in more detailed discussion of those studies should consult the previous version of this monograph article [Agarwal and Naik, 2005].[1] We will provide in-depth reviews of papers written since 2005. Finally, for each topic, we will summarize the current state of the literature and offer our views on avenues for future research.

The rest of the monograph is organized as follows. The first two sections summarize research on hedge fund performance including the factors that drive hedge fund returns, the dynamic and nonlinear nature of hedge fund risk exposures, performance persistence, and the relation between fund characteristics and performance. The third section of the monograph covers research on the sources and nature of risks faced by hedge fund investors. Examples of risks academics have recently studied include operational risk, funding liquidity risk, and tail risk. The fourth section summarizes research on the role of hedge funds in financial markets. Specific topics include hedge funds' contribution to systemic risk,

[1]We would also like to acknowledge and direct the attention of the readers to several other articles on hedge funds on specific issues (see Lo, 2001 on risk management; and Brav et al., 2010 on activism) and on general discussion and perspectives on the hedge fund industry [Fung and Hsieh, 2006, Stulz, 2007, Getmansky et al., 2014].

their impact on asset prices, and funds' liquidity provision. The fifth and final section discusses the research identifying potential biases and limitations of hedge fund data sources. In particular, we summarize the research on selection, backfilling, return smoothing, and survivorship biases.

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