

Foundations and Trends® in
Entrepreneurship
9:4-5 (2013)

Venture Capital Investors and Portfolio Firms

Sophie Manigart and Mike Wright

now

the essence of knowledge

Venture Capital Investors and Portfolio Firms

Sophie Manigart

*Ghent University and Vlerick Business School
Belgium*

sophie.manigart@vlerick.com



Mike Wright

*Imperial College Business School
London, UK*

and

*Ghent University
Belgium*

mike.wright@nottingham.ac.uk

now

the essence of knowledge

Boston – Delft

Foundations and Trends[®] in Entrepreneurship

Published, sold and distributed by:

now Publishers Inc.
PO Box 1024
Hanover, MA 02339
USA
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 S. Manigart and M. Wright, Venture Capital Investors and Portfolio Firms, Foundations and Trends[®] in Entrepreneurship, vol 9, nos 4–5, pp 365–570, 2013.

ISBN: 978-1-60198-650-4

© 2013 S. Manigart and M. Wright

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

Photocopying. In the USA: This journal is registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by now Publishers Inc for users registered with the Copyright Clearance Center (CCC). The 'services' for users can be found on the internet at: www.copyright.com

For those organizations that have been granted a photocopy license, a separate system of payment has been arranged. Authorization does not extend to other kinds of copying, such as that for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. In the rest of the world: Permission to photocopy must be obtained from the copyright owner. Please apply to now Publishers Inc., PO Box 1024, Hanover, MA 02339, USA; Tel. +1-781-871-0245; www.nowpublishers.com; sales@nowpublishers.com

now Publishers Inc. has an exclusive license to publish this material worldwide. Permission to use this content must be obtained from the copyright license holder. Please apply to now Publishers, PO Box 179, 2600 AD Delft, The Netherlands, www.nowpublishers.com; e-mail: sales@nowpublishers.com

**Foundations and Trends[®] in
Entrepreneurship**
Volume 9 Issues 4–5, 2013
Editorial Board

Editors-in-Chief:

Zoltan J. Acs

George Mason University

zacs@gmu.edu

David B. Audretsch

Indiana University

daudrets@indiana.edu

Editors

Howard Aldrich, University of North Carolina

Sharon Alvarez, Ohio State University

Mark Casson, University of Reading

Per Davidsson, Queensland University of Technology

William B. Gartner, Clemson University

Sharon Gifford, Rutgers University

Magnus Henrekson, The Research Institute of Industrial Economics

Michael A. Hitt, Texas A&M University

Joshua Lerner, Harvard University

Simon Parker, University of Durham

Paul Reynolds, George Washington University

Kelly G. Shaver, College of William and Mary

David Storey, University of Warwick

Patricia Thornton, Duke University

Roy Thurik, Erasmus University

Gregory Udell, Indiana University

Sankaran Venkataraman, Batten Institute

Paul Westhead, Nottingham University Business School

Shaker Zahra, University of Minnesota

Editorial Scope

Foundations and Trends® in Entrepreneurship will publish survey and tutorial articles in the following topics:

- Nascent and start-up entrepreneurs
- Opportunity recognition
- New venture creation process
- Business formation
- Firm ownership
- Market value and firm growth
- Franchising
- Managerial characteristics and behavior of entrepreneurs
- Strategic alliances and networks
- Government programs and public policy
- Gender and ethnicity
- New business financing
 - Business angels
 - Bank financing, debt, and trade credit
 - Venture capital and private equity capital
 - Public equity and IPO's
- Family-owned firms
- Management structure, governance and performance
- Corporate entrepreneurship
- High technology
 - Technology-based new firms
 - High-tech clusters
- Small business and economic growth

Information for Librarians

Foundations and Trends® in Entrepreneurship, 2013, Volume 9, 6 issues. ISSN paper version 1551-3114. ISSN online version 1551-3122. Also available as a combined paper and online subscription.

Venture Capital Investors and Portfolio Firms

Sophie Manigart¹ and Mike Wright²

¹ *Ghent University and Vlerick Business School, Ghent, Belgium,
sophie.manigart@vlerick.com*

² *Centre for Management Buy-out Research, Imperial College Business
School, London, UK and Ghent University, Ghent, Belgium,
mike.wright@nottingham.ac.uk*

Abstract

The principal goal of this monograph is to provide an overview of relevant aspects and research findings pertaining to the period after the venture capital firm (also known as venture capitalist or VC) has made the decision to invest in a particular portfolio company (or entrepreneur). Drawing principally upon refereed journal papers in entrepreneurship, finance, and management, our review is divided into six principal areas: (1) what venture capital firms do, (2) the impact of VCs on portfolio firms and other stakeholders, (3) the role of syndication, (4) the nature and timing of exit from VC investment, (5) the role of VCs in portfolio companies that undergo an initial public offering (IPO), and (6) the returns from investing in VC. The monograph concludes with a detailed outline of an agenda for further research. We provide a summary of the main papers in this literature in a set of tables in which we identify the authors, publication date, the journal, the main research question, the theoretical perspective, data, and the principal findings.

Contents

1	Introduction	1
1.1	Focus of the Monograph	2
2	What Do Venture Capital Investors Do?	7
2.1	Monitoring, Information Asymmetries and Goal Incongruencies	8
2.2	Venture Capital Value-Adding	46
2.3	The Post-Investment Venture Capital Investor–Entrepreneur Relationship	52
3	The Impact of Venture Capital on Portfolio Companies and Stakeholders	61
3.1	Access to Financial Resources	61
3.2	Innovation	62
3.3	Venture Capital and Internationalization	80
3.4	Growth of Portfolio Firms	80
3.5	Venture Capital Process and Portfolio Company Outcomes	83
3.6	Venture Capital Effect on Stakeholders	84
4	Syndication	89
4.1	Motives for Syndication	109

4.2	Partner Selection	112
4.3	Managing the Syndicate	114
4.4	Syndication and Performance	116
5	Venture Capital Exits	119
5.1	Exit Type	132
5.2	Exit Timing	137
5.3	Initial Public Offering's Underpricing	138
5.4	Post-Initial Public Offering Performance and Venture Capital	153
6	Venture Capital Returns	157
6.1	Dimensions of Venture Capital Fund Returns	157
6.2	Venture Capital Returns and Risk	158
6.3	Determinants of Venture Capital Return and Risk	169
7	Conclusions and Future Research	171
7.1	The Nature and Processes of Venture Capital Activity	172
7.2	Syndication	175
7.3	Returns to Venture Capital	177
7.4	Exit	178
	Acknowledgments	183
	References	185

1

Introduction

It is well documented that venture capital is a special form of financing for an entrepreneurial venture, in that the venture capital firm is an active financial intermediary. This is in sharp contrast with most financial intermediaries such as banks, institutional, or stock market investors that assume a more passive role. Once the stock market investors invest in a company, they may monitor the performance of the company periodically but they seldom interfere with the decision making. In order to overcome the huge business and financial risks and the potential agency problems associated with investing in young, growth-oriented ventures (often without valuable assets but with a lot of intangible investments), venture capital firms specialize in selecting the most promising ventures and in being involved in the ventures once they have made the investment. The principal theme of this monograph is to provide an overview of relevant aspects and research findings pertaining to the period *after* the venture capital firm (or venture capitalist or VC) has made the decision to invest in a particular portfolio company (or entrepreneur).

The early papers on venture capital, venture capital investors, and the venture capital process started from the observation that venture

2 *Introduction*

capital cannot be considered as merely another category of financial intermediaries, which limit their activities to deciding on buying or selling shares, or on providing loans (Timmons and Bygrave, 1986). Given the high levels of information asymmetries and agency risk and given the low levels of collateral in the ventures which are the target of venture capital investors, venture capital investors are specialized in screening and valuing their investment targets, writing complex contracts, monitoring and adding value to their portfolio companies, and finally exiting their investments (Gorman and Sahlman, 1990). Importantly, venture capital investments often involve multi-stage decisions as investors typically provide funds to entrepreneurial investors over several investment rounds (Wright and Robbie, 1998).

1.1 Focus of the Monograph

We limit our overview of venture capital research to a narrow definition of venture capital and to specific topics. A broad definition of venture capital includes the range of entrepreneurial finance from early-stage “classic” venture capital through to later stage private equity for management buyouts and buy-ins. There has recently been an explosion of interest in private equity-backed buyouts, although the origins of this literature stretch back to the early 1980s. This literature has been the subject of detailed reviews elsewhere and is largely excluded here unless samples also include VC investments or raise general issues for the VC literature (for detailed reviews see for example Gilligan and Wright, 2010; Wright et al., 2009). Similarly, business angels which provide funding for entrepreneurial ventures as informal investors are also excluded. This extensive literature has also been reviewed elsewhere (for example Kelly, 2007). This book is therefore limited to the narrow definition of VC as investor in young growth-oriented companies.

We chose to focus on the later phases of the VC investment process, hence emphasizing monitoring, value-adding, and exiting activities. We thus take VC investment decisions and contracts as given (for introductions to this literature, see Wright et al., 2003). Further, we review the literature on the outcome of venture capital investment activities. What does venture capital contribute to portfolio companies, to entrepreneurs

and to economic (regional) development at large? How does the syndication of venture capital investments impact the relationships between VCs and portfolio companies? Does the financial return generated through these activities benefit investors in venture capital funds?

Even with this limited focus, the number of papers reviewed is substantial reflecting the explosion of the literature on post-investment venture capital over the past four decades (Figure 1.1). Of the over 240 venture capital papers reviewed here, only one was published in the 1970s. From 14 published in the 1980s, the number of papers published trebled in the 1990s and more than trebled again in the first decade of the 2000s. The literature reviewed here represents only about 16% of all papers on venture capital referenced in the Web of Science during this time period (Figure 1.2). The annual number of papers on venture capital has exploded in the last 15 years, to reach between 140 and 185 papers per year in the last five years. Interestingly, the growth in the number of papers on venture capital mirrors the importance of the venture capital industry, with a peak in publications following venture capital boom periods.

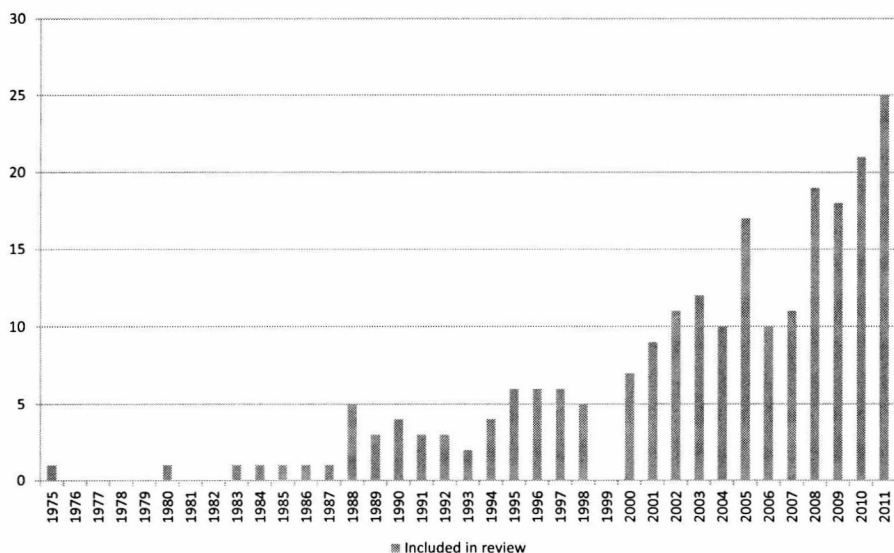


Fig. 1.1 Number of papers reviewed, per publication year.

4 Introduction

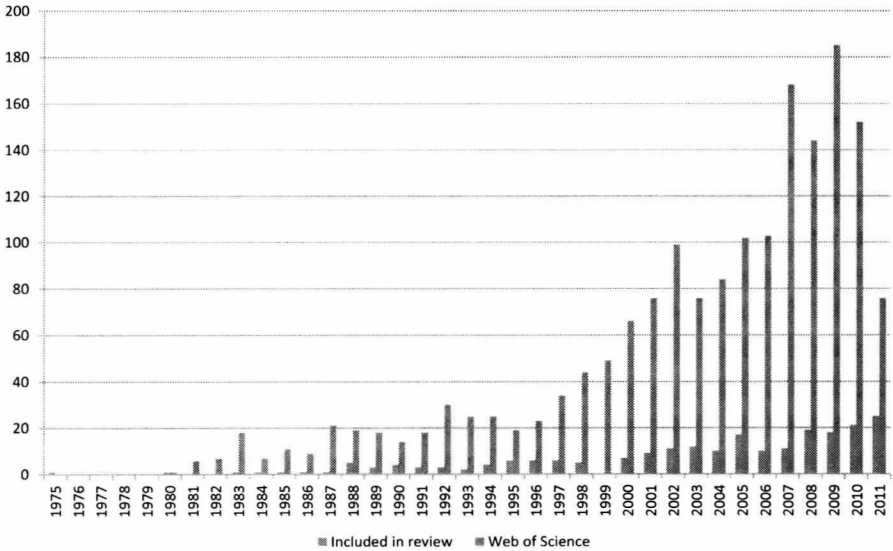


Fig. 1.2 Total number of venture capital papers published per year.

Source: Web of Science.

Our choice to focus on a limited number of topics implies that this monograph will not do justice to numerous excellent papers and important insights generated on topics like venture capital selection and contracting, but also on the insight that the venture capital industry is not uniform (Timmons and Bygrave, 1986). The dominant type of venture capital firm is an independent partnership managing one or more limited life, closed-end investment funds. VC firms act as general partners in managing the fund on behalf of the limited partners (e.g., pension funds). Other types of venture capital firms are often captive firms. Captive firms obtain their funding from a parent financial institution. Corporate VC firms are parts of trading corporations. Semi-captive VC firms obtain their finance partly from their parent and partly by raising closed end funds. Public sector funds obtain their finance mainly from government agencies. Some venture capital firms are also listed companies. Different goals, organizational forms, incentive schemes, and covenants mean that different types of venture capital firms develop specific investment strategies, activities, and outcomes (Cumming and Johan, 2009; Heughebaert and Manigart, 2012). These different types

of venture capital firms may be assessed on different criteria by their investors, which influences the type of deal selected, the time horizon of the investment, and the exit route (Chiplin et al., 1997; Mayer et al., 2005). This monograph focuses mainly on independent venture capital firms and captive investors with commercial objectives, hence largely ignoring the insights generated on, for example, public or university-related venture capital.

Further, recent studies have begun to focus on the relationship between venture capital and the institutional context, explaining variations in venture capital activity and involvement with portfolio companies worldwide based upon differences in the legal and social context (Cumming and Knill, 2012; Cumming et al., 2009; Cumming and Zambelli, 2010, 2012; Meuleman and Wright, 2011). In what follows, we highlight the differential effects of institutional context as appropriate.

We draw principally upon refereed journal papers in entrepreneurship, finance, and management. We therefore omit VC literature relating to other disciplines, notably law. Within the disciplines covered by our overview, we did not restrict our search only to a limited number of “top journals” primarily because of the subjectivity of deciding what constituted a top journal across disciplines. We incorporate theoretical and empirical papers and among empirical papers we include both qualitative and quantitative papers.

We also restrict our review principally to papers published or forthcoming in refereed academic journals and thus largely omit working papers and books or book chapters, as well as industry reports. In the chapters that follow, our review is divided into six principal areas: what venture capital firms do; the impact of VCs on portfolio firms and other stakeholders; the role of syndication; the nature and timing of exit from VC investments; the role of VCs in portfolio companies that undergo an initial public offering (IPO); and the returns from investing in VC. We conclude with a detailed outline of an agenda for further research in this area. To aid the reader wishing to pursue particular papers in more detail, we provide a summary of the main papers in this literature in a set of tables where we identify authors and date, journal, main research question, theoretical perspective, data, and principal findings.

2

What Do Venture Capital Investors Do?

Early research focused on how VCs differentiate from traditional financial intermediaries by describing what VCs do beyond investing in portfolio companies (e.g., Tyebjee and Bruno, 1984; Macmillan et al., 1989; Rosenstein, 1988), defining their roles and extent of involvement. Early descriptive evidence showed that there is a lot of variation with respect to both what VCs do and the extent of their involvement (Gorman and Sahlman, 1989; Macmillan et al., 1989), without explaining differences. Subsequent research examined the conditions under which VCs become more involved in their portfolio companies, especially with respect to variations in the characteristics of the portfolio companies. For example, the impact of greater agency risk (Gupta and Sapienza, 1994; Sapienza et al., 1996), business risk, and task uncertainty (Gupta and Sapienza, 1994) on VCs' interactions with the CEOs of their portfolio companies was highlighted. More recently, research acknowledges that the extent and impact of VCs' monitoring and value-adding is not only driven by portfolio company characteristics, but also by the VCs' characteristics. Resource dependence theory and the resource endowments of both VCs and entrepreneurs, such as their human, social, or intellectual capital (e.g., Baum and Silverman,

2004), have been used to explain the nature, level, and effectiveness of the interaction between VCs and entrepreneurs. Attention has also been paid to the nature and intensity of VCs' involvement in different parts of the world, showing that their behavior shows commonalities, but also differences driven by differences in institutional and cultural environments (e.g., Bonini et al., 2012; Bruton et al., 2005; Sapienza et al., 1996; Wright et al., 2005).

The early research on the post-investment relationship between VC and entrepreneur has revealed that VCs mainly engage in monitoring and value-adding activities (Table 2.1). Whereas these two broad types of activities overlap with one another, the assumptions underlying these activities are quite different. While monitoring relates to VCs' attempts to reduce agency risk between entrepreneur and venture capital investors, the focus on value-added relates to VCs' attempts to increase the upside potential of their investments. We first provide an overview of the literature on monitoring and value-adding. This is followed by a focus on process-related aspects of the venture capital-entrepreneur relationship.

2.1 Monitoring, Information Asymmetries and Goal Incongruencies

Research has indicated that an important aspect of the VC-entrepreneur relationship relates to the former's monitoring of the latter's actions in order to reduce agency risks by regularly evaluating the entrepreneur's behavior and performance through information transfer (Barry et al., 1990; Bergemann and Hege, 1998; Gorman and Sahlman, 1989; Sapienza and Korsgaard, 1996; Sahlman, 1990). A VC's involvement in monitoring activities stems from the presence of *goal incongruencies* coupled with *information asymmetries* between the two parties. Agency theory suggests that this may lead to moral hazard problems, in which the agent does not exert sufficient effort on behalf of the principal or lacks capabilities to do so (Eisenhardt, 1989).

First, VCs and entrepreneurs may not always have the same goals (Turcan, 2008). For example, firm survival or generating a personal income, rather than value creation, may be of primary importance for

Table 2.1. What do venture capital investors do?

Panel A: Roles of Venture Capital Investors								
Year	Authors	Journal	Title	Data source	Sample	Theoretical framework	Research question	Findings
1984	Tyebjee, Bruno	Management Science	A model of venture capital investment activity	Questionnaire	41 U.S. VCs		What are the activities of VCs?	Post-investment activities include recruiting key executives, strategic planning, locating financing, orchestrating M&A, or IPO.
1986	Timmons, Bygrave	Journal of Business Venturing	VC's role in financing innovation for economic growth	Venture Economics, field interviews	1,501 U.S. portfolio firms, 464 U.S. VC firms		What differentiates VCs backing high and low innovative companies?	The cooperative relationship between a VC and an entrepreneur is more important to the success of the business than the capital itself.
1988	Florida, Kenney	Research Policy	VC-financed innovation and technological change in USA	Case studies, interviews		Information flows		A small group of high-quality VCs help to find key management team members, provide legitimacy, and help to shape strategy. They increase the speed with which innovations are brought to the market. VCs reduce risk through their networks with important gatekeepers, which facilitate information flows
(Continued)								

(Continued)