Risk and Foreign Direct Investment

Colin White and Miao Fan

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By Colin White and Miao Fan

palgrave
macmillan

First published 2006 by
PALGRAVE MACMILLAN
Houndmills, Basingstoke, Hampshire RG21 6XS and
175 Fifth Avenue, New York, N. Y. 10010
Companies and representatives throughout the world

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ISBN-13: 978–1–4039–4564–8 hardback
ISBN-10: 1–4039–4564–0 hardback

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources.

A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data
White, Colin (Colin M.)
Risk and foreign direct investment / by Colin White and Miao Fan.
p. cm.
Includes bibliographical references and index.
ISBN 1–4039–4564–0 (cloth)
1. Investments, Foreign. 2. Country risk. 3. Risk. I. Fan, Miao, 1976– II. Title.

HG4538.W4145 2006
332.67'3–dc22 2005052283

10 9 8 7 6 5 4 3 2 1
15 14 13 12 11 10 09 08 07 06

Printed and bound in Great Britain by
Antony Rowe Ltd, Chippenham and Eastbourne

Preface

The present book is the result of an interest of one of the authors which has persisted throughout his career in different forms, Colin White, an interest in risk – its identification and measurement and even more its role in the historical development of different economies. All of his previous work has reflected this interest, but to a varying degree. The views expressed therefore are a distillation of what wisdom the author has acquired over a long career teaching and writing about such topics. The second author, Miao Fan, completed in 2004 a PhD thesis at Swinburne University of Technology, entitled Country Risk and its Impact on the FDI Decision-making Process from an Australian Perspective, Swinburne University of Technology 2004, which had at its core a survey of Australian managers and their attitude to country and other types of risk. She has just started a career in a bank pursuing the more practical side of risk management. She has worked over the last few years with her co-author on a number of conference papers which have progressively set out the main outline of the book.

Both authors would like to give their thanks to those whose help, whether academic or otherwise, has made such an enterprise possible. As the dedication shows, this is most of all the families of the two authors. We live in a risky world, but families reduce that risk. A life of reflection and writing is initiated with the help of parents and made very much easier by the assistance of loving partners. Colleagues are often there to discuss an interesting point and to provide the reality test to which all ideas must at some time be exposed. Universities provide the facilities critical to research, the preparation and giving of papers at conferences and the whole-hearted commitment of time and effort to the completion of a text. To all responsible for the necessary inputs many thanks.

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1 Introduction

> The aim is to establish a structure for decision-making that produces good decisions, or improved decisions, defined in a suitable way, based on a realistic view of how people can act in practice.
>
> (Aven 2003: 96)

This book is an exploration of the way in which risk influences the process of decision making relating to foreign direct investment. Its initial premise is that country risk is, and should be, a major deterrent to such investment. Since FDI is of increasing significance for the promotion of economic development in countries with a low level of economic development and for the maintenance of continuing growth in developed countries, it is important to understand how risk of various types constrains the flow of such investment. FDI is much more important than trade in delivering goods and services abroad (UNCTAD 2003: xvi). In 2002 global sales by multilateral enterprises reached $US18 trillion, as compared with world exports of $US8 trillion. In the same year the value added by foreign affiliates of multinational companies reached $US3.4 trillion, about one tenth of world GDP, twice the level of 1982. Because risk is a significant determinant of foreign investment there is a need for the relevant decision makers to identify, estimate and assess the relevant risk and to respond to it (Baird and Thomas 1985: 234).

There are several books which have had an important influence on the authors. Hull, as early as 1980, anticipated most of the relevant issues. Moosa (2002) provides the conventional view about the use of present value for appraisal of international investment projects. Broader in its scope than Moosa's text, since it incorporates the real options approach, is a book by Buckley (1996), which claims to be the first book on international capital budgeting (Buckley 1996: vii). The main innovation since the publication of Hull's book has been the application of a valuation of real options to investment appraisal. A pioneering book is that by Dixit and Pindyck (1994). Probably the best introduction is a set of essays edited by Schwartz and Trigeorgis (2001). This literature has the virtue of building into an investment appraisal both uncertainties concerning future performance and interdependencies between investment projects over time.

The book is neither solely an instructional manual on how to make an international investment decision in conditions of risk, as Hull's book (1980) might be regarded, nor solely a research monograph, as the book by Dowd (1998), on the concept of value at risk, might be viewed. It is more like the book by Moosa (2002), which is intermediate between a primer and a review of existing theory. It goes much further than Moosa in considering the problem of valuation of investment, in particular how uncertainty affects that valuation. The book is therefore similar to both a review of theory, one with a critical slant, and a primer, an updating of Hull's approach to FDI, with strong indications of how an investment decision should be made. It is also like a research monograph in that it develops a treatment which brings together ideas not previously combined.

It is easy to see the elegance of the financial theory used in the 'hard' risk literature but to realise its limitations (Bernstein 1996). In this theory, there is a clear prescription on how to effect an investment appraisal, which needs to be examined. However, it is also easy to see the importance of good strategy making to the success of an individual project and to the overall performance of the relevant enterprise. All successful enterprises have good strategies, which include appropriate procedures for making decisions on which projects to run with, procedures which take full account of any interdependencies between projects of a different timing. An appropriate approach clearly requires the insights of both the financial theorist and the strategist. In an important sense, to be developed in the book, strategy should have precedence over capital budgeting, but it is always sensible to base strategy on sound quantitative foundations, where this is possible. The book does this.

The first section of this book is introductory, including three chapters which establish the context for the main arguments. In sequence they discuss and critique the existing theory relevant to risk control, explore the general nature of risk and indicate the tendency of FDI flows to be lower than expected, that is the existence of a pronounced home country bias. The second section introduces the present value formula for appraising investment projects, initially in conditions of certainty but then under uncertainty or risk. It tackles the appraisal of investment projects from three different perspectives – the financial, the strategic and the organisational. There are chapters devoted to each of these perspectives. The third section concentrates on the identification and measurement of risk, particularly country risk. It includes three chapters which deal in sequence with types of systematic risk other than country risk, country risk itself and the risk specific to an enterprise or a project. The final section comprises two chapters, showing how risk should be incorporated into an investment appraisal and how the response to risk has clearly kept aggregate FDI flows much lower than might be anticipated.

Part I

Risk and Home Country Bias

> It is hardly surprising that less investment occurs in countries that managers perceive to be risky ... this finding tells us nothing about the fundamental sources of risk.
>
> (Henisch 2002: 9)

The aim of the introductory section is twofold, to indicate the importance of risk in economic decision making, notably investment decisions, and to emphasise the prevalence throughout the world of a home country bias in the location of investment: the link between the two is a major focus of the book.

There are three chapters. The first explores the conventional treatment of risk and investment. The second considers in more detail the nature and role of risk, including country risk, in decision making relating to investment. The third considers the level of FDI in the contemporary economy, particularly how to judge whether it is large or small. This chapter shows that there is considerable evidence of a pronounced home country bias in the location of investment, as of other economic activities.

2
A Review of Theory Concerning Risk and the Foreign Investment Decision

> Possibly one of the biggest reasons for the failure of management science models in business is the management scientist's tendency to want to make his model as 'sophisticated' and as 'realistic' as possible without taking due account of how it will fit into this company's decision-making processes at their current stage of evolution.
>
> (Hull 1980: 134)

This chapter considers the platform of existing theory on which an acceptable treatment of risk and FDI can be built.[1] It is appropriate to consider at some length the way in which risk is treated in the financial literature and to show its limited relevance to the appraisal of foreign direct investment. It is also necessary to place the FDI decision in the context of the investment decision-making process in general.

There are five sections to this chapter:

- In the first section there is a review of the different approaches to risk.
- The second provides a statement and critique of the 'hard' risk approach.
- The third section analyses how risk is usually measured, notably as variance and as the impact of extreme events.
- Section four offers a critique of this approach in the context of the foreign direct investment decision.
- Section five considers the distinguishing characteristics of foreign direct investment and how they influence the treatment of risk.

Different approaches to risk

It is possible to conceptualise risk in different ways. There are three main approaches (Culp 2001: chapter 1).

- according to its multifarious sources, focusing on the incidence of specific unanticipated risk-generating events or behavioural changes;
- according to the impact of risky events on a key performance indicator, distinguishing risk which is systematic in its impact, affecting all the members of a defined group, and risk which is idiosyncratic and non-systematic, that is specific to an enterprise or a project;
- according to a distinction between risk and uncertainty, or more broadly between financial and business risk, the former amenable to estimation of the relevant probabilities of relevant outcomes, the latter not so and requiring a specialised knowledge to be manageable at all.

The conventional 'hard' risk literature argues:

- that the first approach is irrelevant to risk management – the sources of risk are of no significance, since it is the impact on a key performance indicator such as profit or the value of the relevant enterprise, which is important,
- that the central focus of any risk control is systematic market risk but this is conditional on a stable degree of vulnerability to market risk for any particular enterprise,
- that the third approach is unnecessary since there is only risk and no uncertainty – all probabilities are already known or can be derived from subjective assessments.

Most analysis of risk in the 'hard' literature short-circuits both the need to consider the source of risk and to make a clear and consistent distinction between risk and uncertainty, and therefore between financial and business risk. Such analysis avoids tracing the sequence of events which results in risk for the enterprise, concentrating on performance outcomes without considering the causative chains which produce those outcomes. It assumes that all possible outcomes can be measured as probabilities, albeit subjective probabilities, and that only risk is under analysis, not uncertainty.

For our analysis the source of risk is important since understanding that source allows risk to be mitigated as well as managed. In this book,